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COMBINED GROUNDWATER MONITORING AND PERFORMANCE EVALUATION REPORT FIRST SEMI-ANNUAL 2019 COOPER DRUM COMPANY SUPERFUND SITE 9313 RAYO AVENUE SOUTH GATE, CALIFORNIA

by
Haley & Aldrich, Inc.
Costa Mesa, California

for
Cooper Drum Cooperating Parties Group

File No. 130072-024
August 2019

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30 August 2019
File No. 130072-024

United States Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, California 94105

Attention: Ms. Karen Jurist
California Site Cleanup Section 3

Subject: Combined Groundwater Monitoring and Performance Evaluation Report
First Semi-Annual 2019
Cooper Drum Company Superfund Site
9313 Rayo Avenue
South Gate, California

Dear Ms. Jurist:

Haley & Aldrich, Inc., is submitting the enclosed Combined Groundwater Monitoring and Performance Evaluation Report for the first semi-annual 2019 period on behalf of the Cooper Drum Cooperating Parties Group for the Cooper Drum Company Superfund Site at 9313 Rayo Avenue, South Gate, California. This report presents the results of the groundwater monitoring program and performance monitoring of the remedial systems from 1 January 2019 through 30 June 2019.

Please contact Mr. Peter Bennett at 510.879.4547 should you have any questions or require additional information regarding this report.

Sincerely yours,
HALEY & ALDRICH, INC.

Adrian Fure, PhD
Senior Engineer

Peter Bennett, CHG
Project Manager

Enclosures

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Cooper Drum Cooperating Parties Group; Attn: Mr. John Lang
Cooper Drum Cooperating Parties Group; Attn: Mr. Kyle Christy
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Cooper Drum Living Trust; Attn: Mr. Federico Cabo
Los Angeles Unified School District; Attn: Mr. Anthony Espinoza
Leland R. Weaver Library, Site Repository – South Gate Library; Attn: Eileen M. Tokar
City of South Gate Public Works Department, Attn: Mr. Chris Castillo
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List of Acronyms and Abbreviations

1,1-DCA	1,1-dichloroethane
1,2-DCA	1,2-dichloroethane
1,2-DCP	1,2-dichloropropane
1,2,3-TCP	1,2,3-tricholoropropane
µg/L	microgram(s) per Liter
µg/m^3	micrograms per cubic meter
ACB	Aerobic Cometabolic Biodegradation
ARAR	Applicable or Relevant and Appropriate Requirements
bgs	below ground surface
cDCE	cis-1,2-dichloroethene
CDCPG	Cooper Drum Cooperating Parties Group
City	City of South Gate
CMT	continuous multichannel tubing
COCs	chemicals of concern
Consent Decree	Consent Decree issued by the United States District Court Central District of California, Western Division, Case 2:15-cv-09931
CPT	Cone Penetrometer Test
CSIA	Compound-Specific Isotope Analysis
DPA	Drum Processing Area
DPE	dual-phase extraction
DWR	California Department of Water Resources
EPA	U.S. Environmental Protection Agency
gpd	gallons per day
gpm	gallons per minute
GWE	groundwater extraction
GWMP	Final Groundwater Monitoring Plan for Phase 1 Operable Unit 1
GWMP Update	Second Semi-Annual 2015 Groundwater Monitoring Report and Groundwater Monitoring Plan Update
Haley & Aldrich	Haley & Aldrich, Inc.
HiPOX Tech Memo	“Technical Memorandum: Removal of Advanced Oxidation (HiPOX) Treatment System”
HWA	Hard Wash Area
IWDP	Industrial Wastewater Discharge Permit
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
LGAC	liquid phase granular activated carbon

List of Acronyms and Abbreviations

(continued)

Modification Tech Memo	"Technical Memorandum: Modifications to Off-Property Extraction Well Network"
mV	millivolts
MNA	monitored natural attenuation
MNA Tech Memo	"Monitored Natural Monitored Attenuation Technical Memorandum"
MNA Work Plan	Monitored Natural Attenuation Assessment Work Plan
NAVD 88	North American Vertical Datum of 1988
NPL	Superfund National Priorities List
ORP	oxidation-reduction potential
OU1 or OU2	Operable Unit 1 or Operable Unit 2
ppbv	parts per billion by volume
PCE	tetrachloroethene
PER	Performance Evaluation Report
RA	Remedial Action
RAA	Remedial Action Area
Rebound Tech Memo	"Soil Vapor Extraction Rebound Testing Technical Memorandum"
ROD	Record of Decision for Cooper Drum Company Superfund Site
SAIA	Southern Avenue Industrial Area
SAP	Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Groundwater Sampling, Operable Unit 1
Site	the Cooper Drum Company Superfund Site
SVE	soil vapor extraction
SVMP	Final Soil-Vapor Monitoring Plan for Phase 1 Operable Unit 2
TCE	trichloroethene
the Property	a 2.4-acre portion of the Site
Up-Gradient Tech Memo	"Technical Memorandum: Up-Gradient Groundwater Monitoring Well Installation"
VC	vinyl chloride
VOCs	volatile organic compounds
VPs	vapor monitoring points
WDR	Waste Discharge Requirements
Work Plan Addendum	"Addendum to the Aerobic Cometabolic Biodegradation Pilot Test Work Plan"

1. Introduction

Haley & Aldrich, Inc., (Haley & Aldrich) prepared this Combined Groundwater Monitoring and Performance Evaluation Report (PER) on behalf of the Cooper Drum Cooperating Parties Group (CDCPG). This PER was prepared in accordance with the Statement of Work of the Consent Decree (Consent Decree) entered by the United States District Court Central District of California, Western Division, Case 2:15-cv-09931 on 20 April 2016 for the Cooper Drum Company Superfund Site, at 9313 Rayo Avenue (formerly 9316 South Atlantic Avenue) in South Gate, California (the Site; Figure 1). This PER summarizes groundwater monitoring, vapor monitoring, and remediation performance for Operable Unit 1 (OU1) and Operable Unit 2 (OU2) during the first semi-annual 2019 reporting period. A response to the U.S. Environmental Protection Agency's (EPA) comments on the "Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018" (Haley & Aldrich, 2018b) and "Monitored Natural Attenuation Technical Memorandum" (Haley & Aldrich, 2018c), dated 3 June 2019, is included as Appendix A.

The OU1 Remedial Action (RA) was designed to be implemented in two phases over two Remedial Action Areas (RAAs). The Phase 1 RAA includes the 9313 Rayo Avenue property and the downgradient area north of Southern Avenue (Figure 2). The Phase 2 RAA includes the area south of Southern Avenue and north of McCallum Avenue. The Phase 1 RA consists of groundwater extraction (GWE) from the Gaspur aquifer and is described in the following documents:

- "Final Remedial Action Work Plan for Phase 1 Operable Unit 1" (AMEC, 2010), approved by the EPA in draft form on 24 March 2010 subject to modifications that included an investigation for siting off-Site extraction wells, to be provided in a follow-up submittal (addendum).
- "Final Addendum to the Final Remedial Action Work Plan for Phase 1 Operable Unit 1" (AMEC 2011a), approved by the EPA on 11 May 2011.
- "Final Groundwater Monitoring Plan for Phase 1 Operable Unit 1" ([GWMP]; AMEC 2011b), approved by the EPA on 11 May 2011.
- "Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Groundwater Sampling, Operable Unit 1" ([SAP]; AMEC, 2011f).
- "Proposed Modifications to Off-Site Extraction Well Network" (AMEC, 2012), approved by the EPA on 10 July 2012.
- A "Technical Memorandum: Modifications to Off-Property Extraction Well Network" (Modification Tech Memo) was submitted to EPA on 16 May 2014 on behalf of CDCPG, (Haley & Aldrich, 2014a) to document the basis for modifying the design of the GWE well network and conveyance piping. The modifications included:
  - Replacing wells MW-15 and EW-8 with an extraction well (EW-A) drilled at a 45-degree angle from vertical, starting at the southeastern corner of the Site and terminating below the eastern side of Rayo Avenue;
  - Completing two horizontal directional bores that originate on the Site and travel beneath Rayo Avenue to extraction wells EW-5, EW-7A, and EW-7B; and
  - Retaining wells MW-15 and EW-8 to use as monitoring wells.

EPA approved the Modification Tech Memo on 6 June 2014. Draft plans for the conveyance piping to be installed across Rayo Avenue using directional drilling methods were submitted to the City of South Gate (City) on 6 June 2014 and approved on 10 June 2014. The license agreement between the CDCPG and the City for constructing the conveyance piping was adopted by the City Council on 25 November 2014.

The construction of the angled extraction well (EW-A), two horizontal directional bores, and associated piping and electrical work was completed in April through July 2015. Extraction well testing and a hydraulic test were completed in the fourth quarter 2015, and extraction wells EW-A, EW-5, EW-7A, and EW-7B were brought online in November 2015.

A "Technical Memorandum: Removal of Advanced Oxidation (HiPOX) Treatment System" (HiPOX Tech Memo) was submitted to EPA on 28 July 2014 on behalf of CDCPG to document the background, description, and technical basis for removing the Advanced Oxidation Process (HiPOx) unit from the groundwater treatment system (Haley & Aldrich, 2014b). EPA agreed to the proposed changes to the treatment system and the HiPOx unit was removed on 30 July 2014. EPA approved the HiPOX Tech Memo on 18 November 2014.

In accordance with the Consent Decree, a two-year Monitored Natural Attenuation (MNA) evaluation program was completed for the Phase 2 RAA to evaluate the feasibility of MNA. The MNA evaluation was detailed in the "Monitored Natural Monitored Attenuation Technical Memorandum" (MNA Tech Memo) submitted on 17 September 2018 (Haley & Aldrich, 2018c). The MNA evaluation program is described in the following documents:

- "Monitored Natural Attenuation Assessment Work Plan" ([MNA Work Plan]; AMEC, 2011e).
- "Second Semi-Annual 2015 Groundwater Monitoring Report and Groundwater Monitoring Plan Update" ([GWMP Update]; Haley & Aldrich, 2016a).

EPA provided comments on the MNA Tech Memo on 3 June 2019. A response to EPA's comments is included in Appendix A.

The Consent Decree required that additional up-gradient groundwater monitoring wells be installed to monitor off-Site groundwater chemicals of concern (COCs) in the Shallow, Intermediate, and Lower zones of the Gaspur aquifer. Three new monitoring wells (MW-63, MW-64A, and MW-64B) were installed in the Shallow, Intermediate, and Lower Gaspur in March 2018. Prior to finalizing monitoring well locations and screen intervals, cone penetrometer test (CPT) borings and depth-discrete groundwater sampling were completed at four locations (CPT-56 to CPT-59). The up-gradient investigation and well installation are documented in "Technical Memorandum: Up-Gradient Groundwater Monitoring Well Installation" ([Up-Gradient Tech Memo]; Haley & Aldrich, 2018a)

The RA for OU2 consists of soil vapor extraction (SVE) and dual-phase extraction (DPE) and is described in the following documents:

- "Final Remedial Action Work Plan for Phase 1 Operable Unit 2" (AMEC, 2009), approved by the EPA on 26 February 2010.
- "Final Addendum to the Final Remedial Action Work Plan for Phase 1 Operable Unit 2" (AMEC, 2011c), approved by the EPA on 21 February 2011.

- "Final Soil Vapor Monitoring Plan for Phase 1 Operable Unit 2" ([SVMP]; AMEC, 2011d), approved by the EPA on 21 February 2011.

A "Soil Vapor Extraction Rebound Testing Technical Memorandum" was submitted on 28 June 2019 ([Rebound Tech Memo], Haley & Aldrich, 2019a). Consistent with recent PERs, the Rebound Tech Memo concluded that while concentrations have been reduced by one to three orders of magnitude since startup, the SVE system has reached its technological limits, having reached an asymptotic condition whereby appreciable increases in mass removal rate or appreciable decreases in vapor concentrations is unlikely. The Rebound Tech Memo therefore proposes the initiation of a rebound testing program for the SVE/DPE system followed by a risk assessment as described in the Consent Decree. The outcome of the risk assessment will be used to determine whether additional remediation and/or institutional controls are warranted to protect future indoor air and groundwater receptors.

The organization and general content of this report are summarized below:

- Section 1 (Introduction) presents general project information and report organization.
- Section 2 (Background) summarizes background information relevant to the report.
- Section 3 (Description of Remedial Actions) describes the components and operation of the OU1 and OU2 RAs.
- Section 4 (Performance Monitoring) describes the performance monitoring programs for OU1 and OU2.
- Section 5 (OU1 Performance Evaluation) evaluates the groundwater monitoring results and performance of the OU1 RA.
- Section 6 (OU2 Performance Evaluation) evaluates the soil vapor monitoring results and performance of the OU2 RA.
- Section 7 (Performance Summary and Recommendations) includes a summary of OU1 and OU2 RA performance, recommendations for modifying the operational strategy for the OU1 or OU2 RA (if applicable).
- Section 8 (Planned Second Semi-Annual 2019 Activities) describes the planned activities for the second half of 2019.
- Field sampling records, laboratory analytical data, concentration trend charts, and other supporting data are included as appendices.

2. Background

The Site includes a 2.4-acre portion of land (the Property) formerly occupied by the Cooper Drum Company to recondition 55-gallon drums (Figure 1). Land surface is relatively flat at an approximate elevation of 105 feet above mean sea level. Figure 2 shows the locations of the former Hard Wash Area (HWA) and former Drum Processing Area (DPA). Drums were washed and the wastes collected at the former HWA in the northeastern portion of the Property; reconditioning operations were later moved from the HWA to the DPA in the southwest portion of the Property. Only the vacant DPA structure remains at the Property.

In June 2001, the EPA added the Site to the Superfund National Priorities List (NPL) of hazardous wastes sites requiring remedial action. The Record of Decision (ROD), dated 27 September 2002, defined the RA and divided the Site into two Operable Units, as follows.

- OU1 is limited to groundwater containing Site-related COCs within the Gaspur aquifer.
- OU2 is limited to Site-related COCs in unsaturated soil (vadose zone) and saturated soil (perched groundwater) overlying a portion of OU1.

Two other NPL sites are nearby: The Jervis B. Webb and Southern Avenue Industrial Area (SAIA) Superfund sites. The locations of these other NPL sites are shown on Figure 1. Groundwater beneath both of these other NPL sites has been impacted by many of the same COCs as found in the vicinity of the Cooper Drum Site, including trichloroethene (TCE) and cis-1,2-dichloroethene (cDCE), which have been reported at concentrations more than ten times higher than the historical highest concentrations of TCE and cDCE at Cooper Drum. The Record of Decision for the Cooper Drum Site states: “Due to its proximity, the groundwater contamination from Jervis Webb may already have commingled and impacted the Cooper Drum plume.”

2.1 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

The geologic and hydrogeologic conditions at the Site are summarized as follows:

- OU2 includes unsaturated soil and perched groundwater above OU1 within the Bellflower aquiclude. (Note that the term “aquiclude” is used in this report for consistency with historical reports, including California Department of Water Resources ([DWR]; 1961); however, the term “aquitard” is more appropriate based on the physical characteristics of this unit observed near the Site).
- The Bellflower aquiclude extends from ground surface to a depth of approximately 57 feet below ground surface (bgs), where it contacts the Gaspur aquifer. The Bellflower aquiclude is composed primarily of recent floodplain and aeolian deposits of clay and silt (DWR, 1961).
- A prominent layer of silty sand that has historically contained perched groundwater exists within the Bellflower aquiclude between approximately 32 and 40 feet bgs; perched groundwater has also been encountered in deeper sand zones to depths of approximately 48 feet bgs but has generally been absent since 2015.
- OU1 is contained entirely within the Gaspur aquifer.

- The Gaspur aquifer (OU1) comprises a heterogeneous package of alluvial sands, gravels, silts, and clays associated with sedimentation along the ancestral Los Angeles River (DWR, 1961).
- The base of the Gaspur aquifer near the Site is interpreted to lie at depths between 110 and 120 feet bgs where sediments are predominantly fine-grained.
- The Gaspur aquifer has been divided into three depth intervals for the groundwater monitoring program, herein referred to as the Shallow Gaspur, Intermediate Gaspur, and Lower Gaspur aquifer.
- The potentiometric surface for OU1 occurs at approximately 60 feet bgs and has been interpreted to slope toward the south in the Gaspur aquifer.
- The Exposition aquifer appears to be hydraulically separated from the overlying Gaspur aquifer by a layer of low permeability fine-grained soils.

2.2 CHEMICALS OF CONCERN AND CLEANUP GOALS

The COCs for soil gas (OU2) are tetrachloroethene (PCE), TCE, cDCE, trans-1,2-dichloroethene, 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA), vinyl chloride (VC), 1,1-dichloroethene, 1,2-dichloropropane (1,2-DCP), 1,2,3-trichloropropane (1,2,3-TCP), and benzene. For remediation purposes, the same COCs apply to OU1 groundwater with the addition of 1,4-dioxane. Cleanup levels for each COC are included in Table 1. Many of the same COCs impacting groundwater near the Site are the same as those associated with former releases at nearby sites, including the Jervis B. Webb and SAIA sites (e.g. TCE, cDCE, 1,4-dioxane, 1,1-DCA and 1,2-DCA). The former releases at these and/or other sites have likely contributed to groundwater impacts at the Site based on the recent up-gradient investigation.

The ROD specifies that soil gas cleanup goals are to be determined based on transport modeling. Haley & Aldrich completed the modeling and developed Site-specific cleanup goals for soil gas based on risk to groundwater and indoor air receptors. The report, entitled “Soil Gas Cleanup Levels” was submitted to EPA on 20 February 2013 (Haley & Aldrich, 2013). Soil gas cleanup goals were derived for two soil gas sampling intervals: a shallow interval level (less than 25 feet bgs) and a deep interval level (greater than 25 feet bgs). The shallow interval cleanup levels were developed using the Johnson & Ettinger vapor intrusion model; the deep interval cleanup levels were developed using the VLEACH model, which models the potential impact to groundwater from vadose zone soil and soil vapor impacts. The proposed Site-specific soil gas cleanup goals have not been formally approved by EPA; but, as suggested by EPA in its comment on the “First Semi-Annual 2014 Performance Evaluation Report” (EPA, 2015a), the 2013 Site-specific soil gas cleanup goals are appropriate for use as interim cleanup goals.

During a Site planning meeting on 18 August 2015, EPA indicated that its default soil gas screening levels for industrial (on-Property) and residential (off-Property) land use, which were not available when the ROD was finalized, and are not Site-specific, are preferred by EPA as final cleanup goals for soil gas. EPA default soil gas screening levels are included in Table 1. The soil gas screening levels were calculated by multiplying EPA’s recommended default soil gas to indoor air attenuation factor (0.03; EPA, 2015b) by the indoor air Regional Screening Levels for residential and industrial land use (EPA, 2015c); where appropriate, California-specific target indoor air levels are used in place of Regional Screening Levels.

The Consent Decree specifies that, consistent with the ROD, VLEACH (or comparable) modeling be performed to ensure residual COC concentrations in soil gas are protective of groundwater receptors after SVE has been completed. For soil gas, the Consent Decree specifies that:

"Consistent with current EPA Vapor Intrusion assessment procedures, currently the 2013 Vapor Intrusion Guidance update, soil gas sample results can also be used along with indoor air and groundwater sampling results to derive the respective screening levels by media to support a multiple lines of evidence approach for vapor intrusion."

In September 2017, EPA released an updated version of the Johnson and Ettinger model for assessing the vapor intrusion potential posed by COCs in soil gas. Haley & Aldrich therefore updated the interim soil gas cleanup goals for the shallow interval using the new Johnson and Ettinger model and incorporated relevant updates to the target indoor air screening levels for each COC. These updated interim cleanup goals are summarized in Table 1. Model results, assumptions, and input parameters were included as Appendix C in the "First Semi-Annual 2018 Combined PER" (Haley & Aldrich, 2018b).

In its 3 June 2019 comments on the First Semi-Annual 2018 Combined PER, EPA recommended using its default soil gas screening levels to evaluate rebound testing (Appendix A). The Rebound Tech Memo was being finalized when EPA issued its comments on the First Semi-Annual 2018 Combined PER. The Rebound Tech Memo, submitted on 28 June 2019, proposes:

- A total COC concentration of 1,000 parts per billion by volume (ppbv) as an appropriate metric for entering rebound testing for on-Property soils to depths of up to 30 feet bgs,
- VLEACH-based soil gas cleanup levels for on-Property soil gas deeper than 30 feet bgs, to be protective of groundwater,
- EPA default soil gas screening levels as metrics for evaluating rebound at off-Property SVE and DPE wells, and
- At the end of the rebound period, SVE operations will permanently cease, and a risk assessment will be performed. The outcome of the risk assessment will be to determine whether additional remediation and/or institutional controls are warranted to protect future indoor air and groundwater receptors.

The SVE system continues to operate in a cyclical mode pending EPA approval of the Rebound Tech Memo.

3. Description of Remedial Actions

The following sections describe the major components and operations associated with the OU1 and OU2 RAs.

3.1 OU1 REMEDIAL ACTION

As described above, OU1 includes two RAAs. GWE from the Gaspur aquifer is ongoing in the Phase 1 RAA. An Aerobic Cometabolic Biodegradation (ACB) pilot test involving groundwater reinjection is also being implemented in the Phase 1 RAA. In accordance with the Consent Decree, a two-year evaluation period was completed in June 2018 to evaluate the feasibility of MNA for the Phase 2 RAA; the results are summarized in the MNA Tech Memo submitted on 17 September 2018 (Haley & Aldrich, 2018c).

3.1.1 OU1 Monitoring Well Network

The monitoring well network summarized in Table 2 and shown on Figure 2 includes 74 monitoring wells. The up- and cross-gradient areas include monitoring wells located north and northeast of the HWA, near the up-gradient boundary of the Site. The Phase 1 OU1 RAA includes monitoring wells north of Southern Avenue; the Phase 2 OU1 RAA includes monitoring wells on and south of Southern Avenue to McCallum Avenue. Monitoring wells screened in the Exposition aquifer are used to monitor groundwater below OU1 (i.e., OU1 groundwater is limited to the Gaspur aquifer).

The EPA previously installed 20 monitoring wells for the SAIA Superfund site (SAIA-MW-01A/B/C, SAIA-MW-02A/B/C, SAIA-MW-03A/B/C, SAIA-MW-04A/B/C, SAIA-MW-05A/B/C, SAIA-MW-06A/B/C, SAIA-MW-07, and SAIA-MW-08), as shown on Figure 2, and has monitored those wells.

In accordance with the GWMP (AMEC, 2011b), all accessible monitoring wells in the network are gauged on a semi-annual basis to assess the prevailing groundwater flow direction and hydraulic gradients. In accordance with the GWMP, the sampling frequency for the monitoring wells may change to annual or semi-annual if the COC concentrations decrease or increase relative to cleanup goals. If COC concentrations decrease at a certain monitoring well to below cleanup levels for two consecutive events, the semi-annual sampling frequency would decrease to annual at that monitoring well; if the COC concentrations increase above cleanup levels, the annual sampling frequency would increase to semi-annual. As of the first semi-annual 2019 event, 15 monitoring wells are sampled on an annual basis, conducted during the second semi-annual event, and 47 monitoring wells are sampled on a semi-annual basis as described in the GWMP (AMEC, 2011b). The sampling frequency for each well, as described in the update to the GWMP (Haley & Aldrich, 2016a), is listed in Table 2.

3.1.2 Groundwater Extraction System

The GWE consists of two primary components: a network of GWE wells and an aboveground treatment system. These two components are described in the following sections.

3.1.2.1 Groundwater Extraction Wells

The latest EPA-approved configuration of the OU1 GWE well network includes six extraction locations at various depths within the Gaspur aquifer. Two GWE wells, EW-2 and EW-4, are installed on the Property near the HWA and DPA, respectively. Extraction well EW-A was installed on 26 March 2015 at a 45-degree angle from vertical, starting at the southeastern corner of the Property and terminating below the eastern side of Rayo Avenue.

The other three GWE wells (EW-5, EW-7A, and EW-7B) were installed between 24 October 2012 and 31 October 2012 and are located across Rayo Avenue. Well locations and a construction summary of existing wells are included on Figure 2 and Table 2, respectively. These wells were connected to the treatment system in May and June 2015 through two horizontal directional bores originating on the Property and traveling beneath Rayo Avenue.

Hydraulic testing of extraction wells EW-A, EW-5, EW-7A, and EW-7B was completed in September and October 2015. These extraction wells were brought online on 8 November 2015. A construction inspection meeting was held with EPA on 10 November 2015. During the meeting, preliminary GWE rates were presented based on a numerical groundwater flow model. The preliminary modeling results indicated that a total groundwater flow rate of 11 gallons per minute (gpm) for all six operating extraction wells would provide adequate hydraulic containment.

3.1.2.2 Groundwater Treatment System

Prior to July 2014, extracted groundwater was routed to two 1,000-gallon equalization tanks and then passed through two bag filter units to remove solids, followed by treatment with an advanced oxidation system that used ozone and hydrogen peroxide to oxidize COCs (HiPOx unit). Residual COCs in the effluent from the HiPOx unit were removed with two 3,000-pound liquid phase granular activated carbon (LGAC) vessels in series. Treated water was discharged to the sanitary sewer in accordance with the Industrial Wastewater Discharge Permit (IWDP) approved by the Los Angeles County Sanitation District (LACSD) on 22 March 2012. The IWDP specified a maximum average discharge rate of 14,400 gallons per day (gpd) and a peak flow rate of 28 gpm. On 1 February 2013, LACSD approved a modification to the IWDP to increase the discharge capacity to 50,400 gpd with a 50 gpm peak flow rate.

The HiPOx unit was disconnected from the groundwater treatment system in July 2014 with EPA approval. All recovered soil vapor condensate and extracted perched groundwater has been routed to the LGAC vessels for treatment prior to discharge to the sewer; perched groundwater has not been produced since early 2016 when the perched zone became completely dewatered. Groundwater pumped from OU1 GWE wells (EW-2, EW-4, EW-5, EW-7A, EW-7B, and EW-A) is routed to a 1,000-gallon holding tank and then discharged to the sewer.

A revised IWDP reflecting changes to the treatment process and a decreased discharge rate was issued on 27 October 2014. The revised IWDP specifies a maximum average discharge rate of 14,400 gpd and a peak flow rate of 35 gpm. Discharge to the sanitary sewer is performed in accordance with the IWDPs as approved by LACSD.

3.1.2.3 Groundwater Extraction Operation Summary

Substantive events regarding the operation of the GWE system occurred on the following dates:

- 16 July 2012: GWE well EW-2 was brought online and began pumping intermittently at rates up to approximately 10 gpm, which was the limit of the original IWDP.
- 12 February 2013: GWE well EW-4 was brought online at approximately 8 gpm, and the extraction rate at GWE well EW-2 was increased to approximately 27 gpm. The system was operated under a revised IWDP permit with a discharge limit of 35 gpm.
- 24 July 2014: the pumping rates at GWE wells EW-2 and EW-4 were reduced to approximately 7 gpm and 3 gpm, respectively. The groundwater flow modeling performed in the OU1 "Final Remedial Action Work Plan Addendum" recommended scaling back pumping at extraction wells EW-2 and EW-4 after approximately 10.4 million gallons of groundwater were extracted (AMEC, 2011a). The 10.4 million gallons of groundwater were recovered from the Gaspur aquifer by June 2014.
- 14 November 2015: pumping at the new GWE wells EW-5, EW-7A, EW-7B, and EW-A began. The target extraction rates for EW-2, EW-4, EW-5, EW-7A, EW-7B, and EW-A have been 1.0, 1.0, 1.5, 2.5, 3.5, and 1.5 gpm respectively since November 2015.

3.1.3 Aerobic Cometabolic Biodegradation Pilot Study

The Consent Decree states that within 6 months of entering the Consent Decree, the CDCPG will assess the criteria for meeting the substantive requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB) Waste Discharge Requirements (WDR) for reinjecting treated groundwater. If feasible and consistent with substantive requirements of the WDR permit, a portion of the treated groundwater from OU1 may be discharged via reinjection. The feasibility of reinjection is to be determined within one year of entry of the Consent Decree (i.e., by 20 April 2017).

CDCPG met with EPA on 7 December 2016 and discussed the feasibility of reinjection. It was agreed that reinjecting treated groundwater could be technically feasible and conducted in accordance with substantive requirements; however, there was some uncertainty on how to proceed with reinjection in a manner that could expedite Site cleanup. CDCPG recommended completing a pilot test in 2017 to assess the feasibility of focused reinjection in areas with higher COC concentrations while adding amendment to promote in situ degradation of COCs. EPA agreed with this path forward and an "Aerobic Cometabolic Biodegradation Pilot Test Work Plan" was submitted to EPA on 20 April 2017 (Haley & Aldrich, 2017). The ACB Work Plan was approved by EPA in an email dated 15 September 2017.

ACB is the fortuitous breakdown of contaminants by enzymes or cofactors that are produced during microbial metabolism of another compound and oxygen. The proposed pilot test includes GWE, where extracted groundwater will be passed through two, 3,000-pound LGAC vessels and then amended with propane, oxygen, and/or hydrogen peroxide, followed by reinjection to stimulate in situ ACB of COCs.

In order to obtain a list of substantive requirements for the ACB pilot test, a WDR application package was submitted to the LARWQCB on 20 October 2017. The LARWQCB issued a letter Potential Applicable or Relevant and Appropriate Requirements (ARAR letter) for conducting the pilot test on 18 March 2019. This ARAR includes additional monitoring requirements. Haley & Aldrich submitted an "Addendum to the Aerobic Cometabolic Biodegradation Pilot Test Work Plan" ([Work Plan Addendum]; Haley & Aldrich,

2019b) on 1 July 2019 to update the performance monitoring program in accordance with the ARAR letter and to also adjust the well construction. EPA approved the Work Plan Addendum in an email dated 16 July 2019. The pilot test will be implemented in the second half of 2019.

3.2 OU2 REMEDIAL ACTION

The OU2 RA includes three major components: 1) a vapor extraction and treatment system, 2) a network of SVE and DPE wells, and 3) a network of vapor monitoring wells and piezometers. These components are described below.

3.2.1 Vapor Extraction and Treatment System

A 1200 standard cubic feet per minute (scfm) blower skid is used to extract soil vapor from the SVE/DPE well network. The blower skid has a knockout tank to remove condensate, an air-cooled heat exchanger, associated instrumentation, and a controller. The vapor stream is then directed to two 2,000-pound vapor phase GAC vessels connected in series to reduce the volatile organic compounds (VOCs) concentrations prior to discharge to the atmosphere through a vent riser. The blower skid has an active South Coast Air Quality Management District (SCAQMD) Various Locations Permit that provides the operation and monitoring requirements associated with the blower.

3.2.2 Network of SVE and DPE Wells

Soil vapor is extracted by directing the vacuum from the blower to 10 SVE wells (SVE-3 through SVE-12), generally constructed with well screen from approximately 10 to 30 feet bgs, and 14 DPE wells (DPE-1 through DPE-14), generally screened from approximately 30 to 48 feet bgs, except for DPE-1 and DPE-7, which are screened from 8 feet bgs to 43 and 48 feet bgs respectively. Perched groundwater, when present, is extracted from each DPE well using a bottom-loading, pneumatically operated submersible pump connected to tubing installed within the vacuum conveyance line to provide secondary containment. The HWA extraction well network consists of six SVE and 11 DPE wells; the DPA extraction network consists of four SVE wells and three DPE wells. SVE and DPE well locations are shown on Figure 3. Well construction information is included in Table 3.

3.2.3 Network of Vapor Monitoring Wells and Piezometers

A network of multi-level monitoring devices (continuous multichannel tubing [CMT] wells) and two piezometers installed within the Bellflower aquiclude are used to monitor COC concentrations in soil gas and perched groundwater elevation. The CMT wells have either three or seven depth-discrete sampling ports. Vapor monitoring points (VPs) VP-5 and VP-6 are three-port CMTs and have sampling ports at approximately 10, 20, and 30 feet bgs designated as A, B, and C, respectively. In the seven-port CMTs, the upper four sampling ports (ports A, B, C, and D) are used to monitor soil vapor at depths of approximately 10, 20, 30, and 35 feet bgs. Vapor monitoring points VP-7 through VP-15 are 7-channel CMT wells.

Perched groundwater elevations are measured using two piezometers (PZ-5 and PZ-6, co-located with VP-5 and VP-6, respectively) and sampling ports D, E, F, and G of VP-7 through VP-15. The D and E ports are in the upper perched zone (approximately 35 to 40 feet bgs), while ports F and G are in the lower perched zone (approximately 42 to 48 feet bgs). Figure 3 shows the locations of the vapor monitoring points. Well construction information is summarized in Table 3.

3.2.4 OU2 Operation Summary

The operational history for the OU2 RA (SVE/DPE) is summarized in Table 4. Substantive events regarding the startup and initial operation of the OU2 RA include:

- February 2011: The SVE system began operating with 10 SVE/DPE wells (SVE-3 to SVE-10 and DPE-1 and DPE-7) operating with vapor recovery only (i.e., no perched groundwater recovery at this time).
- September 2011: Vapor recovery ceased at DPE-1 and DPE-7 when these wells were retrofitted for perched groundwater recovery.
- October 2011: SVE wells SVE-11 and SVE-12, located south of the Property, were connected to the vapor treatment system after access was granted by the landowner (Los Angeles Unified School District).
- April 2012: Vapor and perched groundwater recovery was initiated at DPE wells DPE-1 through DPE-14.

Beginning in September 2013, different optimization efforts have been implemented to try to improve COC mass recovery rates and reduce COC concentrations in the VPs. These efforts are summarized in Table 4 and have included:

- **Focused Extraction:** Wells with low COC mass removal rates are temporarily closed to direct blower capacity to wells with higher COC mass removal rates.
- **Venting:** Select extraction wells are converted to vent wells by opening the wellhead to the atmosphere. The objective of this optimization step is to increase airflow through the treatment zone.
- **Cyclical Operation:** This involves turning groups of extraction wells on for fixed duration extraction cycles (e.g., one week) following by a fixed duration rebound period (e.g. three weeks). The objective of cyclical operation is twofold: one, operating a smaller number of wells allocates more blower capacity to the individual wells; second, the rebound period would allow time for COC mass to diffuse out of lower permeability zones into higher permeability zones where it could be more easily extracted using the SVE system.

A cyclical operation program was implemented at the Site during the reporting period. The cyclical program consisted of two weeks of operation followed by a six-week period where the extraction wells were not operating. Extraction periods occurred from 27 December 2018 to 9 January 2019, 20 February 2019 to 6 March 2019, 17 April 2019 to 1 May 2019, and 12 June 2019 to 26 June 2019.

During the two-week extraction periods, all the DPE wells were opened and the SVE wells were closed except for SVE-10. [1] Historically, operating the system with only the DPE wells open to vacuum has been more effective than operating the system with all wells (SVE and DPE) opened to vacuum based on the following:

[1] SVE-10 was not opened during the 27 December 2019 to 9 January 2019 extraction period but was opened during the other three extraction periods that occurred during the reporting period.

- Mass removal rates from the DPE wells have historically been much greater than from the SVE wells. Directing increased vacuum/blower capacity to the DPE wells has resulted in increased mass removal compared to operating all the wells simultaneously.
- DPE-1 and DPE-7, formerly referred to as SVE-1 and SVE-7, are longer-screened extraction wells with screen intervals from 8 feet bgs to 43 and 48 feet bgs, respectively. Because DPE-1 and DPE-7 are screened across the same depth interval as the other SVE wells, “DPE only” extraction is therefore also extracting mass from the shallow depth horizons.

4. Performance Monitoring

Sampling and monitoring activities were completed in accordance with the "Final Soil Vapor Monitoring Plan" (AMEC, 2011d), the GWMP (AMEC, 2011b), and the "Sampling and Analysis Plan for Soil Vapor Monitoring" (AMEC, 2011f). Sampling and data validation activities are described in the following sections.

4.1 SOIL VAPOR MONITORING

Soil vapor samples were collected from select VPs (VP-5A, VP-7C, VP-9D, VP-10B, VP-13B, VP-14A, VP-14B, VP-14C, and VP-14D) on 20 February 2019 before the start of a two-week extraction period. On 12 June 2019, the same VPs were again sampled before a two-week extraction period with the exception of VP-14A. These locations have historically had more elevated concentrations compared to other locations.

Soil vapor samples were collected at the treatment system inlet at the beginning and end of each of the two-week extraction periods except for 17 April 2019[2].

Vapor samples were submitted to American Analytics, Inc., for VOC analysis using EPA Method TO-15. Laboratory results for DPE, SVE, and VP samples are summarized in Table 5; vapor treatment system sampling results are summarized in Table 6; and laboratory analytical reports are included in Appendix B.

4.2 GROUNDWATER MONITORING

Groundwater monitoring was conducted in accordance with the GWMP, SAP, and the GWMP Update (AMEC, 2011b, AMEC, 2011f, and Haley & Aldrich, 2016a). As described in Section 3.1.1 and summarized in Table 2, 47 wells are currently sampled on a semi-annual basis and an additional 15 wells are sampled on annual basis as part of the second semi-annual event.

Haley & Aldrich retained Blaine Tech Services, Inc., to gauge and sample the monitoring wells. Quarterly monitoring of newly installed up-gradient wells (MW-63, MW-64A, and MW-64B) was completed on 13 March 2019. The first semi-annual well gauging and sampling were completed from 10 June through 14 June 2019. All monitoring wells listed with a semi-annual monitoring frequency (Table 2) were sampled during the monitoring event. Monitoring wells MW-2A, MW-33A, and MW-59A were dry and therefore could not be sampled. Groundwater sampling was conducted using low-flow purging methods in accordance with the GWMP and the SAP with the exception of MW-23A because there was insufficient water in the well for sampling using a pump. Well MW-23A was sampled using a disposable bailer after removing approximately three well volumes.

[2] A treatment system inlet sample was planned to be collected on this date; however, a mistake was made by the field sampling subcontractor and the sample was not collected. The absence of this sample had minimal effect on the OU2 performance evaluation.

Well gauging was conducted using an electronic water-level indicator (sounder). Water quality parameters, including dissolved oxygen, oxidation-reduction potential (ORP), temperature, pH, specific electrical conductance (SEC), and turbidity were monitored in the field using a multi-probe meter and recorded during purging and prior to sampling each well. Groundwater samples were collected, labeled, placed in an ice-filled cooler, and shipped to American Analytics, Inc., a California-certified laboratory, for VOC analysis using EPA Method 8260B and for 1,4-dioxane using EPA Method 8270C-isotope dilution.

Purged groundwater and decontamination water generated during the sampling event were temporarily stored in 55-gallon drums and transferred to the on-Property water treatment system. Quality assurance/quality control procedures were followed during sampling activities in accordance with the SAP (AMEC, 2011f). Groundwater elevations, water quality parameters, and analytical results are summarized in Tables 7 through 9, respectively. Groundwater monitoring, well gauging, and sampling field records are included as Appendix C; laboratory reports are included as Appendix B. The results of this sampling event are discussed in Section 5.

Perched groundwater elevations were measured on a quarterly basis during this reporting period and are included in Table 10. Groundwater sample collection was attempted from all DPE wells in April 2019 and June 2019. None of the DPE wells had sufficient water to collect a sample for laboratory analysis, indicating the DPE system has successfully dewatered the perched zone. Historical OU2 groundwater sampling data is included in Table 11.

Water samples have historically been collected at the influent, mid-stream, and effluent of the groundwater treatment system. However, because the perched zone has been effectively dewatered, no groundwater was extracted from the perched zone during the reporting period and therefore no treatment system samples were collected. Historical analytical results for groundwater treatment system samples are provided in Table 12.

4.3 REMEDIATION SYSTEMS OPERATION AND MAINTENANCE DATA

Periodic operation and maintenance visits occurred during the reporting period to observe system performance, change operational settings as required, collect field readings, and collect samples for laboratory analysis as required. Flow rates, inlet concentrations, and estimated mass removal rates for the vapor treatment system are summarized in Table 13. Combined flow rates, inlet concentrations, and estimated mass removal rates for the groundwater treatment system are summarized in Table 14.

When operating, the following field measurements are collected from the SVE system during operation and maintenance visits:

- Wellhead vacuum using a digital manometer;
- Air flow rate using a handheld digital velocity meter; and
- Total VOC concentration using a handheld photoionization detector calibrated to 50 parts per million by volume hexane.

Field measurements for the vapor treatment system, SVE wells, and DPE wells are included in Appendix D. Flow totals and estimated flow rates for OU1 GWE wells are also summarized in Appendix D.

4.4 SUMMARY OF ANALYTICAL DATA QUALITY REVIEW

During this reporting period, 17 quarterly soil gas samples, 14 OU2 soil vapor treatment system samples, 12 OU1 groundwater treatment system samples, and 54 groundwater quarterly and semi-annual samples (plus 7 duplicate samples, 9 equipment blanks, 3 field blanks, and 5 trip blanks) were collected and analyzed. Haley & Aldrich performed an EPA Region 9 Tier 2 data quality review on these samples, and an EPA Region 9 Tier 3 data quality review on 10 percent of the OU1 semi-annual sample data. A total of 6,576 data records were evaluated during the data quality review. Qualifiers "J" or "UJ" were applied to 74 data records (1.4 percent) as estimated values. The details of the data quality evaluation are described in Appendix E and summarized in Table 15. Overall, the data generated during the first semi-annual 2019 performance monitoring events are acceptable and suitable for decision-making purposes. No data were rejected during the data quality evaluation.

5. OU1 Performance Evaluation

This section discusses performance monitoring for the OU1 RA.

5.1 GROUNDWATER EXTRACTION SYSTEM

System Uptime: All extraction wells operated continuously during the reporting period except during routine well maintenance.

Treatment Efficiency: Groundwater pumped from GWE wells (EW-2, EW-4, EW-5, EW-7A, EW-7B, and EW-A) was routed into a 1,000-gallon holding tank and then discharged to the sewer. As shown in Table 12, COC concentrations discharged to the sewer system were below the IWDP limit of 1 milligram per liter.

Flow Rates: The average GWE flow rates for individual extraction wells are provided in Appendix D. Average flow rates were estimated by subtracting flow totalizer (cumulative flow) measurements between readings and dividing by the motor hours for the extraction pumps.

5.2 GROUNDWATER DEPTH AND ELEVATION

Groundwater elevations were calculated based on the depth to groundwater in monitoring wells and the surveyed top-of-casing elevation (feet above North American Vertical Datum of 1988 [NAVD 88]; Table 7). Groundwater elevations ranged from 39.60 to 42.24 feet above NAVD 88 in the Shallow Gaspur monitoring wells, 39.52 to 43.03 feet above NAVD 88 in the Intermediate Gaspur monitoring wells, and 39.06 to 41.08 feet above NAVD 88 in the Lower Gaspur monitoring wells. Groundwater elevations in Shallow, Intermediate, and Lower Gaspur monitoring wells have decreased by average values of 6.49 feet, 6.50 feet, and 6.38 feet, respectively, since the startup of the modified GWE system in November 2015.

Groundwater elevations in the Exposition aquifer monitoring wells ranged from 34.42 to 36.51 feet above NAVD 88. Since semi-annual groundwater monitoring began in June 2011, water levels have declined by 9 to 12 feet across the entire Site in Gaspur and Exposition aquifer monitoring wells (Table 7). Water levels have decreased in the Gaspur aquifer by more than 20 feet since 1998 at MW-4 (Table 7), or at a rate of about 1 foot per year. In the past 6 months, the median decrease in water levels was 0.44 foot and the largest decrease in water levels was a drop of 1.5 feet at monitoring well MW-42. Three monitoring wells screened in the upper portion of the Shallow Gaspur, MW-2A, MW-33A, and MW-59A, were dry during the June event. The long decline in water levels is an indication of a water balance deficit in the Gaspur and Exposition aquifers. The Gaspur aquifer is now unconfined beneath the Site, with the water table occurring beneath the base of the Bellflower unit.

5.3 HYDRAULIC GRADIENT AND FLOW DIRECTION

The potentiometric surface maps for the Shallow and Intermediate depth intervals of the Gaspur aquifer are shown on Figures 4 and 5, respectively. The groundwater elevations for the Lower Gaspur and Exposition aquifers are shown on Figure 6A; potentiometric surface maps for Lower Gaspur and Exposition aquifer were not shown because of irregular water levels. For example, water levels in the Lower Gaspur aquifer, north of Southern Avenue, show water level elevations decreasing towards the

north, opposite of the expected southerly flow direction for the Gaspur aquifer. The following geological and screen interval observations shown on Figure 6B provide an explanation for this:

- Geologic conditions are different at these locations: at MW-60B, the Gaspur aquifer is mostly sand between elevations of +40 and 0 NAVD 88, but several fine-grained intervals appear to separate the Lower Gaspur from the coarse-grained intervals of the Shallow Gaspur at MW-23B and MW-64B in this elevation range. This may promote the development of stronger downward gradients at MW-23B and MW-64B compared to at MW-60B, which may equilibrate more efficiently with the Shallow Gaspur sands.
- The well screen intervals are at different elevations, with MW-64B being the deepest, followed by MW-23B and MW-60B. Where downward gradients exist, deeper well screens will have lower water levels.

The overall trends show a horizontal hydraulic gradient direction generally towards the south in the shallow and intermediate zones of the Gaspur aquifer, consistent with the direction observed in previous groundwater monitoring events. The water levels measured in the Lower Gaspur and Exposition monitoring wells exhibit high spatial variability due to the position of the screen and influence of vertical gradients, as described above. For these reasons, these water levels do not show a consistent flow direction. The flow directions in the Lower Gaspur and Exposition aquifer are also expected to be generally to the south, consistent with the intermediate and shallow zones of the Gaspur aquifer.

Except for well pairs MW-2B/2C, MW-4/4B, MW-15/15B, MW-42/43/44, and MW-47/48, all vertical gradients were downward within the Gaspur aquifer and between the Gaspur and Exposition aquifers. The vertical gradient between the Lower Gaspur and the Exposition aquifer ranged from 0.18 in well pair MW-15B/16 to 0.22 in well pair MW-31B/32. The steep vertical gradients are an indication of lower permeability sediments separating the Gaspur from the Exposition aquifer as discussed in Section 5.4.3.4.

The numerical groundwater flow modeling described in the "Second Semi-Annual 2015 PER" (Haley & Aldrich, 2016a) has shown that capture can be maintained with a total pumping rate of approximately 11 gpm under a variety of different combinations of extraction rates at individual wells. The total extraction rate is distributed over six extraction wells to allow greater control of the capture area. This results in relatively low extraction rates at each well, which spreads the drawdown over a large area (as opposed to a single well) without a pronounced cone of depression. During the reporting period, the average extraction rate was estimated to be 9.2 gpm, or slightly below the target extraction rate of 11 gpm; the lower flow rate is attributed to biofouling in the extraction wells, primarily at EW-5. Haley & Aldrich is evaluating options to decrease downtime from biofouling of extraction wells.

5.4 GROUNDWATER MONITORING WELL SAMPLING RESULTS

5.4.1 Water Quality and Redox Parameters

Groundwater quality parameters are summarized in Table 8 and can be described as follows:

- ORP values were less than 0.0 millivolt (mV) in 67 percent of the 51 samples collected from the Gaspur aquifer, with an average value of -49 mV. The ORP values greater than 0.0 mV ranged from 4 mV to 111.7 mV. This suggests that the Gaspur aquifer is primarily under reducing redox

conditions, which is consistent with previous geochemical sampling completed as part of the MNA evaluation program (Haley & Aldrich, 2016b; Haley & Aldrich, 2016c).

- Specific electrical conductance ranged from 1.61 to 7.22 milliSiemens per centimeter, indicating a wide range in total dissolved solids content.
- pH ranged from 6.26 to 7.69, which is close to neutral and not inhibitory for naturally occurring biodegradation.
- Turbidity ranged from 1 to 691 Nephelometric Turbidity Units.
- Temperature ranged from 21.1 to 26.2 degrees Celsius.

5.4.2 Chemicals of Concern Analytical Results

The analytical data for the 12 COCs are summarized in Table 9 and TCE, cDCE, and 1,4-dioxane concentrations are shown on Figures 7 through 10 for the Shallow Gaspur, Intermediate Gaspur, Lower Gaspur, and the Exposition aquifer, respectively.

TCE, cDCE, and 1,4-dioxane[3] concentrations were reported below laboratory reporting limits and/or their respective cleanup levels in two OU1 monitoring wells located directly within the HWA (MW-2C and MW-59C) and three other Gaspur aquifer monitoring wells (MW-23A, MW-57B, and MW-64B) located upgradient of the HWA.

PCE was not detected above the laboratory reporting limit in any groundwater sample collected during this monitoring event. 1,2-DCP was detected above the laboratory reporting limit in two groundwater samples from monitoring wells MW-20 and MW-21, and 1,2,3-TCP was detected above the laboratory reporting limit the groundwater sample from monitoring well MW-20 (Table 9). Per the Consent Decree, a cleanup level for 1,4-dioxane has not yet been established and will be determined based on a future decision document promulgated by the EPA or during the first 5-year review for the Site.

COCs detected above cleanup levels in Gaspur aquifer groundwater samples from monitoring wells within and immediately south (downgradient) of the HWA during the first semi-annual 2019 monitoring event include the following, with respective concentrations presented in Table 9:

- MW-2B – Benzene, cDCE, and VC;
- MW-20 – TCE, cDCE, 1,1-DCA, and 1,2-DCA;
- MW-20B – cDCE and VC;
- MW-21 – cDCE, 1,1-DCA, 1,2-DCA and VC;
- MW-33B – cDCE; and
- MW-59C – 1,2-DCA.

5.4.3 Chemicals of Concern Distribution and Trends

Figures 11 through 13 present the most recent groundwater concentration data versus the maximum historical detected TCE, cDCE, and 1,4-dioxane concentrations for OU1 monitoring wells located: up-

[3] Cleanup level for 1,4-dioxane to be determined, all samples below laboratory reporting limits for 1,4-dioxane.

gradient, in the Phase 1 RAA, and in the Phase 2 RAA, respectively. Total COC concentration and COC composition versus time plots for OU1 monitoring wells from 2006 through December 2018 are shown on Figures F-1 through F-7 of Appendix F. The current dataset is the eighth sampling event since the expanded extraction well system began operating in November 2015. The concentration trend analysis data for OU1 groundwater monitoring wells are summarized in Table 16 and based on the concentration trend analysis plots included in Appendix G.

5.4.3.1 Up- and Cross-Gradient Monitoring Wells

The following observations pertain to groundwater monitoring wells near the up-gradient Phase 1 OU1 RAA as shown in Figure 11:

- TCE concentrations are above the cleanup level in monitoring well MW-23;
- cDCE concentrations are above the cleanup level in monitoring wells MW-19 and MW-23; and
- 1,4-dioxane concentrations currently detected above the laboratory reporting limit range between 1.6 J micrograms per liter (µg/L) and 14 µg/L.

As can be seen in Figure F-1 in Appendix F and Table 9, up-gradient, Gaspur monitoring wells MW-57A, MW-58, and MW-63 had detections of benzene, among other COCs. In March 2018, monitoring wells MW-63, MW-64A, and MW-64B were installed up-gradient of the Site. The March 2019 monitoring event was the final of four quarterly monitoring events. A groundwater investigation conducted by the EPA in June and October 2015, summarized in the "Up-gradient Groundwater Monitoring Well Installation Work Plan" (Haley & Aldrich, 2016c), indicated that benzene was detected in a groundwater sample from a CPT boring (JW-CPT11) immediately north and up-gradient of MW-57A and MW-58 in the Shallow Gaspur. This investigation indicated that the continued presence of COCs in up-gradient monitoring wells, including TCE, cDCE, benzene, 1,2-DCA, and 1,4-dioxane, are related to up-gradient COC sources that are impacting Site groundwater. This is also supported by concentrations detected in the newly installed monitoring wells MW-63, MW-64A, and MW-64B.

Mann-Kendall and Theil-Sen trend analysis data for up- and cross-gradient wells (Table 16, Appendix G) indicate that there was an increasing trend at MW-23 for TCE, cDCE, and 1,4-dioxane. This is one of the only two OU1 monitoring wells at the Site that has an increasing trend for all three COCs.

5.4.3.2 Phase 1 OU1 Remedial Action Area Monitoring Wells

The following observations pertain to groundwater monitoring wells in the Phase 1 OU1 RAA as shown in Figure 12:

- Most TCE concentrations were below the cleanup level, except in samples from monitoring wells MW-17 and MW-20. Groundwater samples were not collected at MW-2A, MW-33A, and MW-59A during this event because the wells were dry;
- Most cDCE concentrations were above the cleanup level, indicating that biotransformation from TCE can explain the low TCE concentrations described above; and
- The highest 1,4-dioxane concentrations were observed at monitoring well MW-20 (280 µg/L); the concentrations in the remaining wells ranged between non-detect and 36 µg/L.

Trend analyses for 27 Phase 1 OU1 RAA monitoring wells (Table 16, Appendix G) indicate an increasing TCE trend at one well (MW-17), where increasing trends for cDCE and 1,4-dioxane were reported at 6 and 5 wells, respectively. The increasing TCE trend at MW-17 may be an indication of the Jervis Webb plume in this area; the COC composition of the sample at MW-17 is similar to MW-23 (Figures F-1 and F-2A of Appendix F). Decreasing trends were observed for TCE, cDCE, and 1,4-dioxane in 21, 14, and 9 of the wells, respectively. No significant trends for TCE, cDCE, or 1,4-dioxane were observed in the remaining wells.

The decreasing trend at MW-21 represents an order of magnitude drop in total COC concentrations since 2017 (Figure F-2C of Appendix F). As shown in Figure F-7 of Appendix F, COC concentrations were relatively stable at about 1,000 µg/L total COCs prior to 2017. The steep decline in COC concentrations at MW-21 coincided with water levels below an elevation of approximately 43.5 feet NAVD 88 at MW-21 in 2017 (i.e., when water levels dropped to depths greater than 62 feet bgs). This is an indication that most of the COC mass in the shallow Gaspur aquifer near MW-21 is near the base of the Bellflower aquiclude, in the uppermost portion of OU1. The steep decline in COC concentrations at MW-21 is likely due to dewatering of the upper portion of the Gaspur aquifer and bottom of the Bellflower aquiclude where most of the COC mass occurs.

5.4.3.3 Phase 2 OU1 Remedial Action Area Monitoring Wells

The following observations pertain to the ten groundwater monitoring wells in the Phase 2 OU1 RAA as shown on Figure 13:

- All TCE concentrations were below the cleanup level;
- cDCE concentrations in MW-25, MW-25B, MW-28, MW-29, and MW-37 exceeded the cleanup goal but were less than the historical maximum concentration; and
- Detected 1,4-dioxane concentrations ranged from 1.2 J to 10 µg/L.

Trend analyses for nine Phase 2 OU1 RAA wells are provided in Table 16 and Appendix G; MW-29A has not had COC detections, so trend analysis is not valid for this well. An increasing trend was observed for cDCE in one of the wells (MW-30); however, this increase is clearly due to the transformation of TCE to cDCE, a reductive dechlorination trend consistent with the natural attenuation of TCE. An increasing trend was also observed for 1,4 dioxane in MW-30; however, total COCs have decreased at MW-30 since 2006 (Appendix F, Figure F-3). No monitoring wells in the Phase 2 OU1 RAA exhibited an increasing trend for TCE. Decreasing trends were observed for TCE, cDCE, and 1,4-dioxane, in 8, 4, and 3 of the 10 Phase 2 RAA monitoring wells, respectively. No significant trends for TCE, cDCE, and 1,4-dioxane were observed at 2, 5, and 6 of the 10 wells, respectively. These results indicate that COCs are attenuating in the Phase 2 OU1 RAA.

5.4.3.4 Exposition Aquifer Monitoring Wells

The only COCs detected above cleanup levels in groundwater samples from monitoring wells screened in the Exposition aquifer were cDCE, VC, and 1,2-DCA in monitoring well MW-55, where 1,4-dioxane was also reported at a concentration of 4.1 µg/L (Table 9). EPA has expressed concerns over increasing trends at MW-55 and other Exposition aquifer monitoring wells and has requested a deeper explanation of COC concentrations reported in Exposition aquifer monitoring well samples (Appendix A).

In response to EPA's request, Site stratigraphy was further analyzed using modern fluvial depositional model concepts consistent with EPA's issue paper: "Best Practices for Environmental Site Management: A Practical Guide for Applying Environmental Sequence Stratigraphy to Improve Conceptual Site Models" (Shultz, et al., 2017). Three cross-sections (Figures 14A, 14B and 14C) were prepared along the section lines shown in Figure 10. The soil behavior type generated from the CPT borings was assigned to five unconsolidated lithology types or "facies" based on decreasing grain size. The CPT borings show the Gaspur aquifer as numerous fining-upward fluvial accumulation cycles forming a complex association of coarse-grained channel deposits (bars and channel-fills), levee deposits, and fine-grained floodplain material (crevasse splay and overbank clays). An interval of fine-grained sediments sits immediately below the Gaspur aquifer and correlates across all CPT borings as shown Figures 14A, 14B and 14C. This interval (shown as a cross-hatched interval) appears to dip slightly toward the south (Figure 14A) and west (Figures 14B and 14C) and is interpreted to be a regional aquitard separating the Gaspur and Exposition aquifers. These cross sections are used as a guide to further interpret the monitoring results at each of the five Exposition aquifer monitoring wells below.

MW-16: Although COCs are below cleanup goals at MW-16, a statistically significant increasing trend is apparent for cDCE and 1,4-dioxane (Table 16). We have reviewed the well construction posted on the boring log for this well and note that the bottom of the sanitary seal is shown at a depth of 108 feet bgs, which is within the Lower Gaspur aquifer; the boring log for MW-16 shows #60 transition sand was used to backfill the annular space of the well bore from 108 to 113 feet bgs, followed by #3 filter sand to the bottom of the well bore at 135 feet bgs. This well construction likely creates a vertical conduit between the Gaspur and Exposition aquifers as shown on Figure 14A. In addition to the transition sand, the top of the #3 sand at 113 feet bgs would short-circuit much of the lower permeability aquitard sediments. Given that the hydraulic head in the Gaspur aquifer is several feet above that of the Exposition aquifer, it is likely that the groundwater samples from MW-16 are influenced by downward movement of groundwater inside the annular space of the wellbore from the Gaspur aquifer rather than migration through the aquitard.

MW-18: Like MW-16, a statistically significant increasing trend is apparent for cDCE and 1,4-dioxane (Table 16). We have also reviewed the well construction log for this well and note that the bottom depth of the sanitary seal is also shown to terminate at a depth of 108 feet bgs, like MW-16 (MW-18 is not shown on Figure 14A because it is located north of the section line). The increases in COC concentrations at MW-18 may also be related to well construction. Further, COCs beneath the former Cooper Drum facility are primarily isolated to the shallow portions of the Gaspur aquifer; downward COC migration from the shallow Gaspur aquifer to the Exposition aquifer at MW-18 does not seem feasible unless a conduit is present.

COCs have been detected in the Exposition aquifer east of MW-18, on the ELG Metals property (Gilbane, 2018). COC detections in the vicinity of MW-18, if not related to a well construction conduit pathway, could also be related to the Exposition aquifer COCs identified further east on the ELG Metals property, during investigations for the Jervis Webb Company Superfund Site (Gilbane, 2018).

MW-26 and MW-32: No statistically significant evidence of a trend in 1,4-dioxane or cDCE is reported based on sampling results through June 2019 for both of these wells (Table 16). There is a statistically significant decrease in TCE concentration at MW-32 and no past detections of TCE at MW-26. Both of these Exposition aquifer monitoring wells appear to be constructed with filter packs below the aquitard (Figure 14B), with the top of the filter pack at 119 feet bgs for both MW-26 and MW-32. Therefore, these wells do not appear to act as conduits between the Lower Gaspur and the Exposition aquifers.

MW-55: A statistically significant increasing trend in cDCE and 1,4-dioxane is apparent at MW-55; VC has also been detected in samples from MW-55, with the highest concentrations reported in 2018 (40 and 41 µg/L in June and December, respectively; Table 9). The June 2019 concentration of VC was 3.4 µg/L (Table 9). VC is the anaerobic degradation product of cDCE, which in turn, is the anaerobic degradation product of TCE and PCE.

It is difficult to reconcile detections at MW-55 with COCs originating from Cooper Drum, for the following reasons:

1. The aquitard increases in thickness between the Cooper Drum Site and MW-55 (Figure 14A), indicating that, based on our geologic interpretation, it is less likely that COCs would move down into the Exposition aquifer from the overlying Gaspur aquifer by migrating through the aquitard. The aquitard appears to be approximately seven feet in vertical thickness at MW-26, where no COCs are detected, and at least thirteen feet in vertical thickness at MW-55 (Figure 14A).
2. The total COC concentrations at MW-55 (up to 108 µg/L; June 2018) are comparable to total COC concentrations at nearby lower Gaspur aquifer monitoring wells MW-37 and MW-30 (Appendix F, Figure F-3). If groundwater were moving downward through the aquitard into the Exposition aquifer, substantial attenuation of COC concentrations would be expected to occur. Since essentially no concentration attenuation is apparent between MW-37 and MW-55, downward migration of COCs into the Exposition seems implausible, unless the aquitard is absent in the vicinity of MW-55 (absence of an aquitard at MW-55 is not supported by the correlations between nearby CPT logs shown in Figures 14A and 14C, but these logs are located 80 feet or more away from MW-55).

Other plausible explanations for the COC detections at MW-55 include:

1. **The COC detections at MW-55 may be related to sources east and north of Cooper Drum**. The COC concentrations at MW-55 are an order of magnitude higher than those reported in the four aforementioned Exposition aquifer monitoring wells closer to the Cooper Drum Site but are comparable to COC concentrations reported in Exposition aquifer monitoring well JMW-11C, east of Cooper Drum. Although the flow direction in the Exposition aquifer near the Site has not yet been ascertained, a southwest flow direction in the Exposition aquifer is possible and consistent with regional trends (Gilbane, 2018). The origin of Exposition aquifer COCs beneath the ELG Metals property and south of the Jervis Webb site will be further explored in the Remediation Investigation Report for the Jervis Webb site (Gilbane, 2018). In the meantime, without a more accurate determination of groundwater flow direction in the Exposition aquifer, the COC detections at MW-55 may be attributed to sources east and north of Cooper Drum.
2. **MW-55 may be acting as a conduit from the lower Gaspur aquifer**. Based on the reported well construction at MW-55 (bottom of annular seal at 126 feet bgs), MW-55 does not appear to be constructed as a conduit (Figure 14C). Nonetheless, problems can occur during well installation (e.g., borehole sloughing) that, if undetected, would not be reported in the construction records. The similarity in COC concentrations between MW-55 and nearby lower Gaspur aquifer monitoring well MW-37 may occur if downward migration of COCs were occurring along the well bore of MW-55.

Based on the analysis above, additional lines of evidence are needed to determine whether COCs detected in samples from MW-55 are related to migration through the aquitard, migration along the wellbore, or other sources impacting the Exposition aquifer. CDCPG would like to meet with EPA to discuss options for collecting additional lines of evidence with the goal of further understanding the origin of COCs at MW-55.

5.5 COC CONCENTRATIONS IN EXTRACTION WELLS AND MASS REMOVAL RATE

Prior to pumping EW-2 beginning in July 2012, EW-2 was monitored since December 2000 (Table 9). When EW-2 is not operating, groundwater samples from this well are likely to be more representative of groundwater of the perched zone and/or shallow Gaspur aquifer (the well screen for EW-2 is from 38.5 to 78.5 feet bgs). The sharp decline in COC concentrations at EW-2 follows the start of groundwater extraction in July 2012 (Table 12; Figure F-7 of Appendix F). Since the Intermediate Gaspur aquifer appears to be coarser-grained and likely more transmissive compared to the shallow Gaspur and perched groundwater zone of the Bellflower unit, groundwater extraction at EW-2 likely draws in a higher proportion of groundwater from the Intermediate Gaspur relative to the shallow Gaspur aquifer and perched groundwater zone. For this reason, COC concentrations are much lower in EW-2 after July 2012. However, the recent decrease in COC concentrations at extraction well EW-2 (e.g., TCE, cDCE, and 1,4-dioxane concentrations of 0.48J µg/L, 7.3 µg/L, and 7 µg/L, respectively, in June 2019) coincides with overall decreasing water levels in the Gaspur aquifer likely due to drought conditions (Figure F-7 of Appendix F). With a total COC concentration of 18.58 µg/L in June 2019, down from the maximum of 2,744 µg/L in 2004, continued operation of EW-2 will be discontinued when the pilot test starts as outlined in the approved Pilot Test Work Plan.

Concentrations of COCs in extraction well EW-4 have been decreasing since startup in February 2013 with all COC concentrations below cleanup goals during the last two sampling events. With total COC concentrations of 0.36 µg/L in December 2018 and 1.1 µg/L in June 2019, down from the maximum of 85.8 µg/L in 2013, operation of EW-4 should be discontinued.

At extraction well EW-5, located off-Property and east of Rayo Avenue, total COC concentrations have nearly doubled since groundwater extraction began in November 2015, from 55.9 µg/L on 9 December 2015 to 96.6 µg/L on 12 June 2019. EW-5 has produced groundwater with the highest COC concentrations of the six operating extraction wells. COC concentrations have also increased at angled extraction well EW-A, which draws water from the lower Gaspur aquifer beneath Rayo Avenue, where total COC concentrations were 83.2 µg/L in June 2019, compared to 56.0 µg/L at startup in December 2015. COC concentrations have recently decreased slightly at EW-7A and EW-7B since operation began in November 2015 (Table 9). Influent concentrations shown in Table 12 are lower than total COC concentrations at EW-5 and EW-A, similar to concentrations at EW-7A and EW-7B, and much higher than at EW-2 and EW-4. Therefore, increasing pumping rates at the off-Property extraction wells relative to the on-Property wells will increase the overall mass removal rate; however, this change in pumping also may promote the capture of COCs from other sites.

The combined cumulative mass removal from OU1 and OU2 GWE has been approximately 25.4 pounds of COCs from March 2011 through June 2019. Total estimated groundwater extraction since startup is approximately 42 million gallons (Table 14). This mass removal efficiency is low (0.6 pound of COCs removed for every million gallons of groundwater extracted) because COC concentrations are low in the extracted groundwater. Although mass removal is low, the extraction system provides hydraulic containment of COCs that exceed cleanup goals at off-Property extraction wells.

5.6 RECOMMENDATIONS FOR OU1

Recommendations for OU1 include:

- A technical meeting with EPA is recommended to discuss options for further evaluating concentration trends at Exposition Aquifer monitoring well MW-55.
- EW-2 will be decommissioned and replaced with a new well as part of the pilot test system.
- COC concentrations at EW-4 are below cleanup goals and continued operation may not be worthwhile. The groundwater flow model presented in the "Second Semi-Annual 2015 PER" (Haley & Aldrich, 2016d) indicated a total extraction rate of 11 gpm was sufficient for hydraulic containment purposes. Decreasing water levels in the Gaspur aquifer since model calibration represent a decrease in transmissivity, so the 11 gpm total extraction rate is becoming more conservative as water levels decline in the Gaspur aquifer. Based on these changes, it is recommended that the groundwater extraction rates assigned to each extraction well are re-evaluated with the groundwater model based on 2019 hydraulic conditions.
- It is recommended that the ACB pilot test be implemented in the second half of 2019.

6. OU2 Performance Evaluation

6.1 SOIL VAPOR TREATMENT SYSTEM AND BLOWER

Compliance with Substantive Requirements: Effluent concentrations from the SVE system were compliant with the substantive requirements, which are based on the South Coast Air Quality Management District Various Locations Permit.

System Uptime: The SVE system operated continuously (100 percent uptime) during each two-week extraction event that occurred during the reporting period. Including the scheduled non-operation time for cyclical operation, the system operated at 29 percent uptime.

Total Vapor Extraction Rate and Vacuum: As described above, when the system was operating, all of the DPE wells and SVE-10 were opened to vacuum. The average flow rate during the reporting period was approximately 520 standard cubic feet per minute. The average vacuum at the system inlet was 90 inches of water. The average vacuum individual extraction well was 85 inches of water.

6.2 COC CONCENTRATION TRENDS AND MASS REMOVAL

Figures 15 through 18 depict vapor concentrations of PCE, TCE, cDCE, and 1,1-DCA (the COCs typically present at higher concentrations in soil gas in VP samples) at depth intervals of 10, 20, 30, and 35 feet bgs. Data are shown for all VP locations sampled during the first semi-annual 2019 reporting period. Figure 19 is a plot of the most recent total COC concentrations in soil vapor versus the historical maximum concentration. Vapor concentration trend plots are included in Appendix H. These figures illustrate that:

- As shown on Figures 15 and 16, none of the shallow VP samples exceed the Site-specific vapor intrusion screening levels calculated with the 2017 updated Johnson & Ettinger model for PCE, TCE, cDCE, and 1,1-DCA. Because the updated interim cleanup goals for shallow soil gas are Site-specific, the fact that most COCs are well below interim soil gas cleanup goals provides a line of evidence in the overall multiple lines of evidence approach that soil gas concentrations at the end of SVE may not pose an unacceptable risk to hypothetical future indoor air receptors on the Property.

  The Site-specific cleanup goal for 1,2,3-TCP is orders of magnitude lower than the other Site COCs. The vapor concentration of 1,2,3-TCP at VP-5A (13 micrograms per cubic meter [$\mu g/m^3$]) exceeded the 6 $\mu g/m^3$ interim cleanup goal for 8.5 feet bgs during the February 2019 sampling event. Concentrations of 1,2,3-TCP were non-detect (less than 3 $\mu g/m^3$) during the June 2019 sampling event. The vapor concentration of 1,2,3-TCP at VP-10B (24 $\mu g/m^3$) exceeded the 13 $\mu g/m^3$ interim cleanup goal for 18.5 feet bgs during the February 2019 sampling event. Concentrations of 1,2,3-TCP were non-detect (less than 3 $\mu g/m^3$) during the June 2019 sampling event.

- As shown on Figures 17 and 18, there were no exceedances of the interim cleanup goals for risk to groundwater calculated with VLEACH, indicating residual COCs in OU2 soil vapor do not pose a threat to the Gaspur aquifer.

- Soil vapor concentrations at most locations have decreased by 1 to 3 orders of magnitude since startup of the SVE system (Figure 19). This is an indication that SVE has been effective for COC source removal, as intended.
- Figure 19 and trend plots in Appendix H, when viewed together, indicate that while vapor concentrations have decreased in VPs by 1 to 3 orders of magnitude since startup of the SVE system, concentration reductions, like mass recovery rates, have reached an asymptotic level where additional concentration reductions with continued SVE operation are unlikely.

Figure 20 depicts cumulative COC mass removal from the initiation of SVE in February 2011 through the current reporting period. This figure illustrates that:

- The mass removal rate was highest upon startup of the SVE, as expected. Mass removal rates declined rapidly during the first months of operation. The initial phase of SVE operation (2011 through 2012) resulted in approximately 213 pounds of COCs being removed, or 36 percent of the total mass removed to date.
- Mass removal rates increased again when the DPE system was brought online in the second half of 2012 because of the dewatering of the perched zone and the corresponding expansion of the volume of soil treated with vapor extraction. This second phase of operation resulted in an additional 156 pounds of COCs being recovered, or 27 percent of the total recovered to date.
- After mass removal rates decreased again following startup of the DPE system, various optimization strategies were employed in late 2013 and 2014 to increase mass recovery rates, as described in Section 3.2.4. These optimization efforts focused vapor extraction on higher producing wells by temporarily closing low producing wells and resulted in an additional 150 pounds of COCs being recovered, or 26 percent of the total COCs removed to date.
- Since early 2015, mass removal rates have remained low despite various optimization efforts (e.g. venting, cyclical operation). Only 66 pounds of COCs has been recovered since the early part of 2015, or 11 percent of the total COCs recovered to date. This demonstrates that SVE/DPE system has reached a point of asymptotic mass recovery.

In summary, the SVE/DPE system has reached it technological limits, having reached an asymptotic condition whereby appreciable increases in the mass removal rate or appreciable decreases in vapor concentrations measured at the VPs is unlikely.

6.3 PERCHED ZONE DEWATERING

DPE was initiated in April 2012. The perched zone has been dry/effectively dewatered since June 2015. The total groundwater volume extracted from the DPE wells from April 2012 (initiation of perched GWE) through June 2015 was more than one million gallons. The stated goal of the perched groundwater recovery system was to dewater the perched zone to extend the depth of vapor recovery by vacuum extraction. This goal has been accomplished, and there is no longer a risk of COCs in perched groundwater impacting the Gaspur aquifer.

6.4 RECOMMENDATION FOR OU2

As described above, while concentrations have been reduced by 1 to 3 orders of magnitude since startup, the SVE system has reached its technological limits, having reached an asymptotic condition whereby appreciable increases in mass removal rate or appreciable decreases in vapor concentrations is

unlikely. The Rebound Tech Memo therefore proposes the initiation of a rebound testing program for the SVE/DPE system followed by a risk assessment as described in the Consent Decree. The outcome of the risk assessment will be used to determine whether additional remediation and/or institutional controls are warranted to protect future indoor air and groundwater receptors.

7. Performance Summary and Recommendations

As described in Section 5, the OU1 RA has shown decreasing concentration trends in samples collected from extraction wells EW-2 and EW-4 and it is recommended that the extraction well network be re-evaluated in light of the recent groundwater sampling results. EW-2 will be turned off in the second half of 2019 per the approved ACB Work Plan. It is also recommended that EW-4 be turned off and the flow rates at EW-5, EW-7A/B and EW-A be re-assessed with capture zone simulations calibrated to current water level conditions in the Gaspur aquifer. Mass removal rates from GWE wells in the Shallow Gaspur, just downgradient of the HWA, are low compared to COC concentrations in surrounding Shallow Gaspur monitoring wells, indicating GWE in the shallow Gaspur is inefficient in terms of COC mass removal. A pilot study will be implemented in the second half of 2019 for this area to evaluate the potential for reinjecting treated groundwater with ACB to accelerate cleanup, and EW-2 will be replaced with a new well as part of the pilot test system. Decreasing concentration trends in the Phase 2 OU1 RAA indicate MNA is likely an effective remedy for the Phase 2 OU1 RAA provided the increasing COC trends at MW-55 can be adequately explained.

The performance of the OU2 RA can be summarized as follows:

- System uptime was 100 percent during each two-week extraction event.
- None of the shallow VP samples exceeded the Site-specific vapor intrusion screening levels calculated with the 2017 updated Johnson & Ettinger model for PCE, TCE, cDCE, and 1,1-DCA.
- None of the deep VP samples exceeded the interim cleanup goals for risk to groundwater calculated with VLEACH.
- The Site-specific cleanup goal for 1,2,3-TCP is orders of magnitude lower than the other Site COCs. Vapor concentrations of 1,2,3-TCP exceeded the Site-specific cleanup goals at VP-5A and VP-10B during the reporting period.
- While vapor concentrations have decreased in VPs by 1 to 3 orders of magnitude since startup of the SVE system, concentration reductions, like mass recovery rates, have reached an asymptotic level where additional concentration reductions with continued SVE operation is unlikely.

The following recommendations are based on this performance evaluation:

- A technical meeting is recommended with EPA to discuss:
  - Options for further evaluating COCs in the Exposition aquifer at MW-55;
  - EPA's review of the Rebound Tech Memo, if EPA has completed its review in time for the meeting.
- Discontinue GWE at EW-2 and EW-4 and re-evaluate groundwater extraction rates assigned to each extraction well with the groundwater model based on 2019 hydraulic conditions.
- The ACB pilot test be implemented in the second half of 2019. The ACB is targeting the area near MW-21 in the Shallow Gaspur near the Property.

8. Planned Second Semi-Annual 2019 Activities

Remediation activities planned for the next reporting period include:

- Continued operation of the GWE system.
- Continued cyclical operation of SVE system until EPA approves rebound testing program described in the Rebound Tech Memo.
- Implementation of the ACB pilot study.

These tasks and the monitoring results for the second semi-annual 2019 period will be discussed in the next PER to be submitted in February 2020.

References

1. AMEC Geomatrix, Inc., 2009. “Final Remedial Action Work Plan for Phase 1 Operable Unit 2, Cooper Drum Company Superfund Site, South Gate, California,” 6 November.

2. AMEC, 2010. “Final Remedial Action Work Plan for Phase 1 Operable Unit 1, Cooper Drum Company Superfund Site, South Gate, California,” 13 April.

3. AMEC, 2011a. “Final Addendum to the Final Remedial Action Work Plan for Phase 1 Operable Unit 1, Cooper Drum Company Superfund Site, South Gate, California,” 11 May.

4. AMEC, 2011b. “Final Groundwater Monitoring Plan for Phase 1 Operable Unit 1, Cooper Drum Company Superfund Site, South Gate, California,” 11 May.

5. AMEC, 2011c. “Final Addendum to the Final Remedial Action Work Plan (Dual Phase Extraction Pilot Test Report) for Phase 1 Operable Unit 2, Cooper Drum Company Superfund Site, South Gate, California,” 21 February.

6. AMEC, 2011d. “Final Soil Vapor Monitoring Plan, Operable Unit 2, Cooper Drum Company Superfund Site, South Gate, California,” 21 February.

7. AMEC, 2011e. “Monitored Natural Attenuation Assessment Work Plan, Cooper Drum Company Superfund Site, South Gate, California,” October.

8. AMEC, 2011f. “Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Soil Vapor Monitoring, Operable Unit 2, Cooper Drum Company Superfund Site, South Gate, California,” 4 May.

9. AMEC, 2012. “Proposed Modifications to Off-Site Extraction Well Network, Cooper Drum Company Superfund Site, South Gate, California,” 5 June.

10. California Department of Water Resources (DWR), Southern District, 1961. Bulletin No. 104: Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A: Ground Water Geology.

11. Haley & Aldrich, Inc., 2013. “Soil Gas Cleanup Levels, Cooper Drum Company Superfund Site, 9413 Rayo Avenue, South Gate, California,” 20 February.

12. Haley & Aldrich, Inc., 2014a. “Technical Memorandum: Modifications to Off-Property Extraction Well Network, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California,” 16 May.

13. Haley & Aldrich, Inc., 2014b. “Technical Memorandum: Removal of Advanced Oxidation (HiPOx) Treatment System, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California’” 28 July.

References
(continued)

14. Haley & Aldrich, Inc., 2016a. "Second Semi-Annual 2015 Groundwater Monitoring Report and Groundwater Monitoring Plan Update, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 29 February.

15. Haley & Aldrich, Inc., 2016b. "First Semi-Annual 2016 Groundwater Monitoring Report and Groundwater Monitoring Plan Update, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 31 August.

16. Haley & Aldrich, Inc., 2016c. "Up-gradient Groundwater Monitoring Well Installation Work Plan, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California,"

17. Haley & Aldrich, Inc., 2016d. "Second Semi-Annual 2015 Performance Evaluation Report, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 31 August.

18. Haley & Aldrich, Inc., 2017. "Aerobic Cometabolic Biodegradation Pilot Test Work Plan, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 20 April.

19. Haley & Aldrich, Inc., 2018a. "Technical Memorandum: Up-Gradient Groundwater Monitoring Well Installation, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 23 July.

20. Haley & Aldrich, Inc., 2018b. "Combined Groundwater Monitoring and Performance Evaluation Report – First Semi-Annual 2018, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California," 30 August.

21. Haley & Aldrich, Inc., 2018c. "Monitored Natural Attenuation Technical Memorandum, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California." 17 September.

22. Haley & Aldrich, Inc., 2019a. "Soil Vapor Extraction Rebound Testing Technical Memorandum, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California." 28 June.

23. Haley & Aldrich, Inc., 2019b. "Addendum to the Aerobic Cometabolic Biodegradation Pilot Test Work Plan, Cooper Drum Company Superfund Site, 9313 Rayo Avenue, South Gate, California." 1 July.

24. Gilbane, 2018. "Groundwater Monitoring and Sampling Results for 2016 and 2017, Jervis B. Webb Company Superfund Site, Los Angeles County, California." 27 April.

25. Shultz, M. R., Cramer, R. S., Plank, C., Levine, H., & Ehman, K. D., 2017. Best Practices for Environmental Site Management: A Practical Guide for Applying Environmental Sequence Stratigraphy to Improve Conceptual Site Models, U.S. EPA Groundwater Issue EPA/600/R-17/293, September.

26. U.S. District Court Central District of California, Western Division. 2016. United States of America, and State of California Department of Toxic Substances Control, Plaintiffs, v. AC Products, Inc., et al., Defendants. Case 2:15-cv-09931.

References
(continued)

27. U.S. Environmental Protection Agency, 2015a. “EPA Comments on First Semi-Annual 2014 Performance Evaluation Report, Cooper Drum Company Superfund Site.” February 19.

28. U.S. Environmental Protection Agency, 2015b. “OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air.” June.

29. U.S. Environmental Protection Agency, 2015c. “Risk-Based Screening Table – Generic Table.” http://www.epa.gov/risk/risk-based-screening-table-generic-tables.

TABLES

TABLE 1

GROUNDWATER AND SOIL GAS CHEMICALS OF CONCERN AND CLEANUP LEVELS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Operable Unit 1						
Chemical of Concern	**Media**	**Cleanup Level[1] (µg/L)**				
1,1-DCA	Groundwater	5				
1,1-DCE	Groundwater	6				
1,2-DCA	Groundwater	0.5				
1,2-DCP	Groundwater	5				
1,2,3-TCP	Groundwater	1				
Benzene	Groundwater	1				
cDCE	Groundwater	6				
tDCE	Groundwater	10				
PCE	Groundwater	5				
TCE	Groundwater	5				
Vinyl chloride	Groundwater	0.5				
1,4-Dioxane[2]	Groundwater	TBD				
Operable Unit 2						
Chemical of Concern	**Media**	**Interim Soil Gas Cleanup Goals[3] (µg/m^3)**			**EPA Default Soil Gas Screening Levels[4] (µg/m^3)**	
		J&E (8.5 feet bgs)	**J&E (17.5 feet bgs)**	**VLEACH (>25 feet bgs)**	**Residential**	**Industrial**
1,1-DCA	Soil Gas	19,000	40,000	24,000	60	260
1,1-DCE	Soil Gas	760,000	1,577,000	136,000	2,450	10,300
1,2-DCA	Soil Gas	1,200	2,400	520	4	16
1,2-DCP	Soil Gas	3,500	7,300	12,000	9	41
1,2,3-TCP	Soil Gas	6	13	300	0.004	0.055
Benzene	Soil Gas	1,000	2,100	4,900	3	14
cDCE	Soil Gas	84,000	170,000	21,000	280	1,170
tDCE	Soil Gas	850,000	1,800,000	36,000	2,780	11,700
PCE	Soil Gas	8,400	17,400	76,000	16	70
TCE	Soil Gas	9,200	19,100	43,000	16	100
Vinyl chloride	Soil Gas	310	650	12,000	0.3	5

Notes:

1. Cleanup levels are according to EPA's Consent Decree dated 29 December 2015.
2. The cleanup level for 1,4-dioxane in groundwater is to be determined, pending a maximum contaminant level or a decision document.
3. Update interim soil gas cleanup goals are Site-specific levels for the Cooper Drum property as described in Appendix C of the Performance Evaluation Report prepared by Haley & Aldrich, Inc. dated 31 August 2018.
4. EPA default soil gas screening levels are calculated by applying the default USEPA attenuation factor (0.03) with the indoor air target concentrations (Appendix C) derived from current toxicity values for industrial air.

Abbreviations:

bgs = below ground surface
COCs = chemicals of concern
µg/L = micrograms per liter
µg/m^3 = micrograms per cubic meter
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
1,2,3-TCP = 1,2,3-Trichloropropane
VLEACH = Vadose Zone Transport Model
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene
J&E = Johnson and Edinger

TABLE 2

MONITORING WELL CONSTRUCTION AND SAMPLING FREQUENCY - OPERABLE UNIT 1
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Installation Date	Well Type	Aquifer	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Top of Casing Elevation (NAVD 88)	Monitoring Frequency[1]
EW-2	12/06/00	Extraction Well	Shallow Gaspur	84	6	39 - 79	103.72	Semi-Annual
EW-4	07/01/11	Extraction Well	Shallow/ Intermediate Gaspur	83	4	68 - 83	103.5	Semi-Annual
EW-5	10/24/12	Extraction Well	Shallow Gaspur	77	4	62 - 76	104.65	Semi-Annual
EW-7A	10/31/12	Extraction Well	Shallow/ Intermediate Gaspur	84	4	69 - 84	104.71	Semi-Annual
EW-7B	10/24/12	Extraction Well	Lower Gaspur	106	4	91 - 105	104.71	Semi-Annual
EW-8[2]	10/25/12	Monitoring Well	Lower Gaspur	109	4	99 - 109	104.42	Semi-Annual
EW-A[3]	03/26/15	Extraction Well	Intermediate/Lower Gaspur	112	4	82 - 110.3	103.72	Semi-Annual
MW-1	08/09/90	Monitoring Well	Shallow/ Intermediate Gaspur	83	4	52 - 84	104.88	Semi-Annual[6]
MW-2A	09/15/10	Monitoring Well	Shallow Gaspur	63	2	58 - 62	106.52	Semi-Annual
MW-2B	09/15/10	Monitoring Well	Shallow Gaspur	73	2	68 - 72	106.24	Semi-Annual
MW-2C	09/14/10	Monitoring Well	Intermediate Gaspur	92	2	88 - 92	106.27	Semi-Annual
MW-4	09/09/91	Monitoring Well	Shallow / Intermediate Gaspur	82	4	50 - 82	104.93	Semi-Annual
MW-4B	09/13/10	Monitoring Well	Intermediate Gaspur	93	2	88 - 92	105.06	Semi-Annual
MW-15[4]	11/30/00	Monitoring Well	Shallow/ Intermediate Gaspur	87	4	70 - 85	104.56	Semi-Annual
MW-15B	04/13/09	Monitoring Well	Lower Gaspur	105	2	93 - 103	104.71	Semi-Annual
MW-16	11/28/00	Monitoring Well	Exposition	135	2	118 - 128	104.67	Semi-Annual[6]
MW-17	11/30/00	Monitoring Well	Shallow Gaspur	80	4	69 - 79	105.32	Semi-Annual
MW-18	11/29/00	Monitoring Well	Exposition	135	2	118 - 128	105.21	Semi-Annual
MW-19	12/05/00	Monitoring Well	Shallow Gaspur	80	4	67 - 77	106.03	Semi-Annual
MW-20	02/28/03	Monitoring Well	Shallow Gaspur	75	4	55 - 70	104.84	Semi-Annual
MW-20B	07/05/08	Monitoring Well	Intermediate Gaspur	90	2	80 - 90	104.46	Semi-Annual
MW-21	10/22/03	Monitoring Well	Shallow Gaspur	75	4	55 - 75	105.62	Semi-Annual
MW-22	12/04/03	Monitoring Well	Shallow Gaspur	75	4	63 - 73	105.32	Semi-Annual
MW-23A	07/08/11	Monitoring Well	Shallow Gaspur	66	2	61 - 65	105.51	Semi-Annual
MW-23	12/05/03	Monitoring Well	Shallow Gaspur	81	4	69 - 79	106.09	Semi-Annual[6]

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MONITORING WELL CONSTRUCTION AND SAMPLING FREQUENCY - OPERABLE UNIT 1
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Installation Date	Well Type	Aquifer	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Top of Casing Elevation (NAVD 88)	Monitoring Frequency[1]
MW-23B	04/14/09	Monitoring Well	Lower Gaspur	108	2	95 - 105	106.06	Sem-Annual[6]
MW-24	12/01/03	Monitoring Well	Shallow Gaspur	87	4	70-85	103.96	Annual[7]
MW-25	12/03/03	Monitoring Well	Intermediate Gaspur	92	4	75-90	103.74	Semi-Annual
MW-25B	02/28/08	Monitoring Well	Lower Gaspur	109	4	95-105	103.54	Semi-Annual
MW-26	12/10/03	Monitoring Well	Exposition	134	2	122-132	103.86	Semi-Annual
MW-27	12/03/03	Monitoring Well	Intermediate Gaspur	92	4	75-90	103.60	Annual[7]
MW-28	12/11/03	Monitoring Well	Lower Gaspur	115	2	104-114	103.53	Semi-Annual
MW-29A	02/26/08	Monitoring Well	Shallow Gaspur	67	4	56-66	102.95	Annual
MW-29	12/02/03	Monitoring Well	Intermediate Gaspur	92	4	75-90	102.95	Semi-Annual[6]
MW-30	12/09/03	Monitoring Well	Lower Gaspur	115	2	104-114	103.09	Annual[8]
MW-31A	02/26/08	Monitoring Well	Shallow Gaspur	65.5	4	54.5-64.5	103.07	Annual[7]
MW-31	12/02/03	Monitoring Well	Intermediate Gaspur	92	4	75-90	103.30	Annual[8]
MW-31B	02/25/08	Monitoring Well	Lower Gaspur	109	4	97-107	103.15	Annual[8]
MW-32	12/08/03	Monitoring Well	Exposition	134	2	122-132	103.27	Semi-Annual
MW-33A	07/06/05	Monitoring Well	Shallow Gaspur	65	2	55 - 65	104.96	Semi-Annual
MW-33B	07/06/05	Monitoring Well	Intermediate Gaspur	90	2	80 - 90	104.72	Semi-Annual[6]
MW-34	02/28/08	Monitoring Well	Shallow Gaspur	69	4	58-68	103.24	Not Sampled[9]
MW-35	02/27/08	Monitoring Well	Lower Gaspur	106	4	95-105	103.25	Not Sampled[9]
MW-36	03/04/08	Monitoring Well	Intermediate Gaspur	89	4	77-87	102.73	Annual[7]
MW-37	03/05/08	Monitoring Well	Lower Gaspur	111	4	99.5-109.5	102.50	Semi-Annual
MW-38	03/03/08	Monitoring Well	Shallow Gaspur	68	4	56.5-66.5	102.28	Annual[8]
MW-39	02/29/08	Monitoring Well	Intermediate Gaspur	89	4	78-88	102.34	Annual[8]
MW-40	03/03/08	Monitoring Well	Lower Gaspur	111	4	100-110	102.06	Annual[8]
MW-41[5]	03/06/08	Monitoring Well	Lower Gaspur	100	4	89-99	104.34	Semi-Annual
MW-42	04/15/09	Monitoring Well	Shallow Gaspur	67	2	56-66	104.36	Not Sampled[9]

TABLE 2

MONITORING WELL CONSTRUCTION AND SAMPLING FREQUENCY - OPERABLE UNIT 1
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Installation Date	Well Type	Aquifer	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Top of Casing Elevation (NAVD 88)	Monitoring Frequency[1]
MW-43	04/15/09	Monitoring Well	Intermediate Gaspur	88	2	77-87	104.25	Not Sampled[9]
MW-44	04/15/09	Monitoring Well	Lower Gaspur	108	2	96-106	104.17	Not Sampled[9]
MW-45	04/14/09	Monitoring Well	Intermediate Gaspur	90	2	79-89	102.47	Not Sampled[9]
MW-46	04/20/09	Monitoring Well	Shallow Gaspur	68	2	57-67	101.87	Not Sampled[9]
MW-47	04/20/09	Monitoring Well	Intermediate Gaspur	88	2	77-87	101.74	Not Sampled[9]
MW-48	04/20/09	Monitoring Well	Lower Gaspur	110	2	98-108	101.68	Not Sampled[9]
MW-49	04/23/09	Monitoring Well	Shallow Gaspur	71	2	60-70	100.53	Not Sampled[9]
MW-50	04/23/09	Monitoring Well	Intermediate Gaspur	89	2	78-88	100.65	Annual
MW-51	04/23/09	Monitoring Well	Lower Gaspur	110	2	98-108	100.64	Annual
MW-52	04/22/09	Monitoring Well	Shallow Gaspur	77	2	66-76	100.77	Not Sampled[9]
MW-53	04/22/09	Monitoring Well	Lower Gaspur	101	2	90-100	100.73	Annual
MW-54	04/22/09	Monitoring Well	Lower Gaspur	115	2	108-113	100.88	Annual
MW-55	04/16/09	Monitoring Well	Exposition	140	2	128-138	102.57	Semi-Annual[6]
MW-56	04/17/09	Monitoring Well	Shallow Gaspur	74	2	62-72	101.73	Not Sampled[9]
MW-57A	09/14/11	Monitoring Well	Shallow Gaspur	71	2	60 - 70	105.93	Semi-Annual
MW-57B	09/14/11	Monitoring Well	Intermediate Gaspur	91	2	85 - 90	105.84	Semi-Annual
MW-58	09/13/11	Monitoring Well	Shallow Gaspur	71	2	60 - 70	106.01	Semi-Annual
MW-59A	09/17/10	Monitoring Well	Shallow Gaspur	63	2	58 - 62	105.72	Semi-Annual
MW-59B	09/17/10	Monitoring Well	Intermediate Gaspur	80	2	75 - 79	105.61	Semi-Annual[6]
MW-59C	09/16/10	Monitoring Well	Intermediate Gaspur	93	2	88 - 92	105.76	Semi-Annual
MW-60A	06/30/11	Monitoring Well	Shallow Gaspur	77	2	72 - 77	105.69	Semi-Annual
MW-60B	06/30/11	Monitoring Well	Lower Gaspur	102	2	92 - 101	105.64	Semi-Annual
MW-61A	07/06/11	Monitoring Well	Shallow Gaspur	76	2	66 - 76	104.84	Semi-Annual
MW-61B	07/06/11	Monitoring Well	Intermediate Gaspur	88	2	83 - 88	104.84	Semi-Annual
MW-62A	07/07/11	Monitoring Well	Shallow Gaspur	77	2	68 - 77	105.22	Semi-Annual

TABLE 2

MONITORING WELL CONSTRUCTION AND SAMPLING FREQUENCY - OPERABLE UNIT 1
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Installation Date	Well Type	Aquifer	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Interval (ft bgs)	Top of Casing Elevation (NAVD 88)	Monitoring Frequency[1]
MW-62B	09/14/11	Monitoring Well	Lower Gaspur	107	2	101 - 106	105.22	Semi-Annual
MW-63	03/21/18	Monitoring Well	Shallow Gaspur	68	2	62.5 - 67.1	105.86	Semi-Annual
MW-64A	03/19/18	Monitoring Well	Intermediate Gaspur	85	2	79.5 - 84.1	106.03	Semi-Annual
MW-64B	03/19/18	Monitoring Well	Lower Gaspur	113	2	107.8 - 112.5	106.01	Semi-Annual
PZ-7A	07/27/11	Monitoring Well	Shallow Gaspur	76	2	70 - 75	105.67	Semi-Annual
PZ-7B	07/27/11	Monitoring Well	Intermediate Gaspur	94	2	88 - 93	105.66	Semi-Annual

Notes:

1. All monitoring wells are gauged on a semi-annual basis and sampled in accordance with the Second Semi-Annual 2015 Groundwater Monitoring Report and Groundwater Monitoring Plan Update, 29 February 2016.
2. Modification to the extraction well network replaced well EW-8 with well EW-A. Well EW-8 has been retained for use as a monitoring well.
3. Well EW-A is angled at approximately 45 degrees from vertical. The downhole length of the screen interval is 116 to 156 feet below top of casing. The vertical depth of the screen interval is 82 to 110.3 ft bgs.
4. Intended usage of MW-15 changed from an extraction well to a monitoring well.
5. MW-41 was previously referred to as Intermediate Gaspur.
6. Monitoring frequency at these wells was previously listed as annual. COC concentrations increased above cleanup levels and the monitoring frequency was changed to semi-annual.
7. Previously monitored on a semi-annual basis. COC concentrations decreased below cleanup levels and the monitoring frequency was changed to annual.
8. Previously monitored on a semi-annual basis during the monitored natural attenuation assessment period. Returns to an annual basis following completion of the monitored natural attenuation period.
9. Monitoring wells not sampled due to non-Cooper Drum groundwater impacts.

Abbreviations:

ft bgs = feet below ground surface
NAVD 88 = feet above the North American Vertical Datum of 1988

TABLE 3

EXTRACTION WELL AND MONITORING POINT CONSTRUCTION SUMMARY OPERABLE - UNIT 2
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well or Monitoring Point ID	Installation Date	Installed By	Total Depth (ft bgs)	Casing or CMT Diameter (inches)	Screen Interval (ft bgs)	Slot Size (inches)	CMT Screen Size (microns)	Top of Casing Elevation (NAVD88)
SVE-1/DPE-1	12/4/2000	URS	44	4	8 - 43	0.02	--	109.96
SVE-2/DPE-7	2/27/2004	URS	48	4	8 - 48	0.02	--	112.91
SVE-3	8/26/2010	AMEC	30.9	4	9.5 - 29.5	0.02	--	105.08
SVE-4	8/24/2010	AMEC	30	4	9.6 - 28.9	0.02	--	105.29
SVE-5	8/24/2010	AMEC	30	4	10.1 - 29.3	0.02	--	104.84
SVE-6	8/25/2010	AMEC	30	4	9.9 - 29.1	0.02	--	105.37
SVE-7	8/25/2010	AMEC	30.5	4	10 - 29.2	0.02	--	105.27
SVE-8	8/26/2010	AMEC	30	4	9.5 - 29.5	0.02	--	105.33
SVE-9	8/24/2010	AMEC	32	4	10.4 - 29.4	0.02	--	104.90
SVE-10	8/23/2010	AMEC	32	4	10 - 29.2	0.02	--	104.80
SVE-11	8/25/2010	AMEC	30	4	9 - 29	0.02	--	105.04
SVE-12	8/25/2010	AMEC	30	4	9.5 - 29.5	0.02	--	104.85
DPE-2	5/5/2011	AMEC	49.8	4	32.8 - 47.3	0.02	--	108.70
DPE-3	5/5/2011	AMEC	50	4	32.9 - 47.4	0.02	--	109.08
DPE-4	5/2/2011	AMEC	49.7	4	32.8 - 47.1	0.02	--	108.99
DPE-5	5/2/2011	AMEC	49.6	4	32.6 - 47.1	0.02	--	109.11
DPE-6	5/6/2011	AMEC	49.5	4	32.6 - 47	0.02	--	108.83
DPE-8	5/3/2011	AMEC	49.5	4	32.6 - 47	0.02	--	109.00
DPE-9	5/4/2011	AMEC	50	4	32.9 - 47.5	0.02	--	108.42
DPE-10	5/4/2011	AMEC	49.9	4	33 - 47.4	0.02	--	108.55
DPE-11	5/6/2011	AMEC	50	4	33 - 47.5	0.02	--	108.75
DPE-12	5/3/2011	AMEC	49.4	4	32.5 - 46.9	0.02	--	109.03
DPE-13	8/16/2011	AMEC	50.7	4	33 - 47.5	0.02	--	104.43
DPE-14	5/9/2011	AMEC	50.9	4	33.9 - 48.4	0.02	--	108.63
VP-5A	7/2/2010	AMEC	29	1.1	9.25 - 9.75	--	150	106.50
VP-5B					20.25 - 20.75			
VP-5C					27.25 - 27.75			
PZ-5	7/1/2010	AMEC	50	2	37.1 - 41.5	0.01	--	106.89
VP-6A	7/2/2010	AMEC	29	1.1	9.25 - 9.75	--	150	106.67
VP-6B					20.25 - 20.75			
VP-6C					27.25 - 27.75			
PZ-6	7/1/2010	AMEC	45	2	37.2 - 41.6	0.01	--	106.74
VP-7A	1/7/2011	AMEC	49	1.7	9.5 - 10	--	150	106.00
VP-7B					18.75 - 19.25			
VP-7C					30.5 - 31			
VP-7D					34.5 - 35, 39 -			
VP-7E					37.5 - 38			
VP-7F					41.5 - 42			
VP-7G					46.5 - 47			
VP-8A	1/12/2011	AMEC	49	1.7	9.5 - 10.0	--	150	105.92
VP-8B					18.0 - 18.5			
VP-8C					29.5 - 30.0			
VP-8D					33.5 - 34.0,			
VP-8E					37.5 - 38.0			
VP-8F					46.5 - 47.0			
VP-8G					47.0 - 47.5			

TABLE 3

EXTRACTION WELL AND MONITORING POINT CONSTRUCTION SUMMARY OPERABLE - UNIT 2
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well or Monitoring Point ID	Installation Date	Installed By	Total Depth (ft bgs)	Casing or CMT Diameter (inches)	Screen Interval (ft bgs)	Slot Size (inches)	CMT Screen Size (microns)	Top of Casing Elevation (NAVD88)
VP-9A	1/12/2011	AMEC	49	1.7	8.5 - 9.0	--	150	105.63
VP-9B					17.5 - 18.0			
VP-9C					29.5 - 30.0			
VP-9D					33.5 - 34.0,			
VP-9E					37.5 - 38.0			
VP-9F					46.0 - 46.5			
VP-9G					47.0 - 47.5			
VP-10A	1/13/2011	AMEC	49	1.7	9.5 - 10.0	--	150	106.15
VP-10B					18.0 - 18.5			
VP-10C					30.5 - 31.0			
VP-10D					33.5 -34.0,			
VP-10E					39.0 - 39.5			
VP-10F					46.5 - 47.0			
VP-10G					47.0 - 47.5			
VP-11A	1/7/2011	AMEC	49	1.7	9.0 - 9.5	--	150	105.44
VP-11B					19.0 - 19.5			
VP-11C					29.5 - 30.0			
VP-11D					33.5 - 34.0,			
VP-11E					41.0 - 41.5			
VP-11F					46.0 - 46.5			
VP-11G					47.0 - 47.5			
VP-12A	1/13/2011	AMEC	49	1.7	10.0 - 10.5	--	150	105.65
VP-12B					17.5 - 18.0			
VP-12C					29.5 - 30.0			
VP-12D					33.5 - 34.0,			
VP-12E					37.5 - 38.0			
VP-12F					46.5 - 47.0			
VP-12G					47.0 - 47.5			
VP-13A	1/5/2011	AMEC	50	1.7	9.5 - 10.0	--	150	105.24
VP-13B					21.0 - 21.5			
VP-13C					26.0 - 26.5			
VP-13D					33.0 - 33.5,			
VP-13E					39.5 - 40.0			
VP-13F					45.5 - 46.0			
VP-13G					48.0 - 48.5			
VP-14A	8/17/2011	AMEC	48.5	1.7	9.5 - 10	--	150	105.13
VP-14B					19 - 19.5			
VP-14C					29 - 29.5			
VP-14D					33 - 33.5, 41 -			
VP-14E					39.5 - 40			
VP-14F					45.5 - 46			
VP-14G					47 - 47.5			

TABLE 3

EXTRACTION WELL AND MONITORING POINT CONSTRUCTION SUMMARY OPERABLE - UNIT 2
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well or Monitoring Point ID	Installation Date	Installed By	Total Depth (ft bgs)	Casing or CMT Diameter (inches)	Screen Interval (ft bgs)	Slot Size (inches)	CMT Screen Size (microns)	Top of Casing Elevation (NAVD88)
VP-15A	9/17/2011	AMEC	50	1.7	10 - 10.5	--	150	105.88
VP-15B					20 - 20.5			
VP-15C					29.5 - 30			
VP-15D					34.5 - 35			
VP-15E					40 - 40.5			
VP-15F					47 - 47.5			
VP-15G					48 - 48.5			

Abbreviations:

-- = information not available
AMEC = AMEC Environment & Infrastructure, Inc.
CMT = continuous multi-channel tubing
ft bgs = feet below ground surface
NAVD88 = feet above the North American Vertical Datum of 1988
URS = URS Group, Inc.

TABLE 4
OPERATIONAL HISTORY OF OPERABLE UNIT 2 REMEDIAL ACTION
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Date	Operational Change
February 2011	The SVE system began operating with 10 SVE/DPE wells (SVE-3 to SVE-10 and DPE-1 and DPE-7) operating with vapor recovery only.
September 2011	Vapor recovery ceased at DPE-1 and DPE-7 when these wells were retrofitted for perched groundwater recovery.
October 2011	SVE wells SVE-11 and SVE-12, located south of the Property, were connected to the vapor treatment system after access was granted by the landowner (Los Angeles Unified School District).
April 2012	Vapor and perched groundwater recovery was initiated at DPE wells DPE-1 through DPE-14.
September 2013	In accordance with the recommendations made in the previous PER, SVE wells SVE-3 to SVE-9 were temporarily closed to vacuum to increase vacuum at higher producing wells. These wells had historically been low-producing wells.
July 2014	Wells SVE-9 and DPE-10 were converted to vent wells by opening the wellhead to the atmosphere to enhance subsurface airflow near VP-10B and VP-13B. Well SVE-12 was temporarily closed to vacuum to increase vacuums at higher performing wells.
September 2014	Wells DPE-11 and DPE-12 were temporarily closed to vacuum to increase vacuum at higher performing wells.
October 2014	Wells SVE-11, DPE-2, DPE-3, DPE-4, DPE-6, DPE-8, DPE-9, and DPE-13 were temporarily closed to vacuum to increase vacuums at higher performing wells. Venting at wells SVE-9 and DPE-10 was discontinued because monitoring results indicated a significant decrease of COC concentrations at vapor monitoring points VP-10B, VP-10C, and VP-13B.
July 2015	Wells located in the HWA were temporarily closed to vacuum to increase vacuums at higher performing wells (SVE-3 through SVE-8, DPE-1 through DPE-6, DPE-8 through DPE-12).
August 2015	All wells were re-started to establish a new baseline condition.
October 2015	Wells SVE-3 through SVE-9, SVE-12, DPE-2 through DPE-4, DPE-6, DPE-8, DPE-10 through DPE-13 were temporarily closed to vacuum to increase vacuums at higher performing wells. Seven wells (SVE-10, SVE-11, DPE-1, DPE-5, DPE-7, DPE-9, and DPE-14) remained in operation through 16 March 2016.
March 2016	All DPE and SVE wells are turned off except DPE-1 and DPE-7 which remained in operation.

TABLE 4
OPERATIONAL HISTORY OF OPERABLE UNIT 2 REMEDIAL ACTION
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Date	Operational Change
May 2016	Venting program initiated where all wells were open to the atmosphere except DPE-1 and DPE-7. Extraction occurred for two weeks followed by six weeks of shutdown.
July 2016	May 2016 venting program was repeated (2 weeks of extraction followed by six weeks of shutdown).
October 2016	Cyclical program was implemented with two wells clusters (Cluster A and Cluster B). Cluster A wells included SVE-5, SVE-6, SVE-7, SVE-11, DPE-1, DPE-2, DPE-3 and DPE-7; Cluster B wells include SVE-3, SVE-4, SVE-10, DPE-4, DPE-5, DPE-6, DPE-8, DPE-14. Clusters operated on alternating weeks to improve vacuums at individual wellhead. Program continued until January 2017 when the blower seized.
April 2017	Revised cyclical program that included a third well cluster (Cluster C; DPE-1 and DPE-7) initiated. Program continues until 24 May 2017 when a high backpressure alarm is triggered in the carbon vessels. Cluster C was added because operating DPE-1 and DPE-7 in the beginning of 2016 resulted in decreased concentrations in certain VPs that subsequently rebounded during the previous cyclical program.
October 2017	The 500 scfm blower skid and associated substantive requirements were replaced with a larger 1200 scfm blower. A focused extraction program was implemented when the new blower came online 4 October 2017. At startup, all the DPE wells were open to vacuum. Based on monitoring of COC concentrations at individual DPE wells, DPE wells were temporarily closed from vacuum when mass recovery declined to approximately 1 percent of the total mass removal rate to increase vacuum at DPE wells with higher mass recovery rates. Focused extraction program continued through January 2018 when the blower motor was damaged.
May 2018	New blower motor was installed and the SVE system resumed operation with all DPE wells open to vacuum on 2 May 2018. Operation of DPE wells continues until 3 October 2018.
October 2018	On 3 October 2018, all DPE wells closed and all SVE wells opened. SVE wells remain open until 14 November 2018.
November 2018	On 14 November 2018, cyclical program implemented consisting of six weeks of temporary shutdown followed by two weeks of extraction. Extraction implemented using all DPE wells and began 27 December 2018.

Abbreviations:

COCs: chemicals of concern
DPE: dual phase extraction
HWA: Hard Wash Area
PER: Performance Evaluation Report
scfm: standard cubic feet per minute
SVE: soil vapor extraction
VP: vapor monitoring point

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-1	8-43	2/23/2011	Primary	**5.6**	**38000**	**8.1**	**44000**	< 0.83	< 5000	**36**	**140000**	**6.7**	**27000**	< 1.2	< 4900	**9.1**	**23000**	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**65.5**	**272000**
DPE-1	8-43	4/12/2011	Primary	**2.9**	**20000**	**1.3 J**	**7000 J**	< 0.1	< 600	**4.3 J**	**17000 J**	**0.71**	**2900**	< 0.15	< 610	**0.28**	**720**	< 0.1	< 400	< 0.15	< 690	< 0.1	< 400	**0.17**	**540**	**9.66**	**48160**
DPE-1	8-43	4/12/2011	Duplicate	**3.8**	**26000**	**2.1 J**	**11000 J**	< 0.2	< 1000	**6.2 J**	**25000 J**	**0.8**	**3000**	< 0.3	< 1000	**0.34 J**	**870 J**	< 0.2	< 800	< 0.3	< 1000	**0.12 J**	**480 J**	**0.18 J**	**580 J**	**13.54**	**66930**
DPE-1	8-43	12/7/2011	Primary	**0.029 J**	**200 J**	**0.017 J**	**91 J**	< 0.002	< 12	**0.024**	**95**	**0.011 J**	**45 J**	< 0.0025	< 10	**0.0074**	**19**	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	**0.0031**	**9.9**	**0.0935**	**467.8**
DPE-1	8-43	12/7/2011	Duplicate	**0.046 J**	**310 J**	**0.028 J**	**150 J**	< 0.002	< 12	**0.03**	**100**	**0.015 J**	**61 J**	< 0.0025	< 10	**0.011**	**28**	< 0.002	< 7.9	< 0.0022	< 10	**0.0028**	**11**	**0.0034**	**11**	**0.1362**	**671**
DPE-1	8-43	3/27/2012	Primary	**0.13**	**880**	**0.6**	**3000**	**0.0075**	**45**	**0.91**	**3600**	**1 J**	**4000 J**	**0.019**	**77**	**0.38**	**970**	**0.081**	**320**	**0.035**	**160**	**0.11**	**440**	**0.047**	**150**	**3.3195**	**13642**
DPE-1	8-43	6/4/2012	Primary	**1.1**	**7500**	**0.37**	**2000**	< 0.03	< 200	**0.35**	**1400**	**0.074**	**300**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.894**	**11200**
DPE-1	8-43	9/17/2012	Primary	**1.5**	**10000**	**0.39**	**2100**	< 0.002	< 12	**0.45**	**1800**	**0.094**	**380**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**2.434**	**14280**
DPE-1	8-43	12/11/2012	Primary	**0.82**	**5600**	**0.25**	**1300**	< 0.04	< 200	**0.23**	**910**	**0.11**	**450**	< 0.049	< 200	< 0.078 J	< 200 J	**0.17**	**670**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.58**	**8930**
DPE-1	8-43	9/24/2013	Primary	**0.86**	**5800**	**0.16**	**860**	< 0.03	< 200	**0.12**	**480**	**0.046**	**190**	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.186**	**7330**
DPE-1	8-43	12/17/2013	Primary	**0.37**	**2500**	**0.099**	**530**	< 0.004	< 24	**0.083**	**330**	**0.024**	**97**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.576**	**3457**
DPE-1	8-43	3/25/2014	Primary	**0.25**	**1700**	**0.079**	**430**	< 0.005	< 30	**0.06**	**200**	**0.023**	**93**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.412**	**2423**
DPE-1	8-43	6/26/2014	Primary	**0.49**	**3300**	**0.13**	**700**	< 0.01	< 60	**0.085**	**340**	**0.031**	**130**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.736**	**4470**
DPE-1	8-43	9/23/2014	Primary	**0.29**	**2000**	**0.093**	**500**	**0.0052**	**31**	**0.068**	**270**	**0.029**	**120**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	**0.0074**	**29**	< 0.0075	< 24	**0.4926**	**2950**
DPE-1	8-43	3/26/2015	Primary	**0.25**	**1700**	**0.16**	**860**	< 0.01	< 60	**0.04**	**200**	**0.015**	**61**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.465**	**2821**
DPE-1	8-43	12/16/2015	Primary	**0.07**	**500**	**0.021**	**110**	< 0.004	< 24	**0.0061**	**24**	**0.0054**	**22**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1025**	**656**
DPE-1	8-43	11/2/2016	Primary	**0.13**	**880**	**0.044**	**240**	< 0.004	< 24	**0.036**	**140**	**0.014**	**57**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.224**	**1317**
DPE-1	8-43	11/16/2016	Primary	**0.14**	**950**	**0.041**	**220**	< 0.004	< 24	**0.031**	**120**	**0.013**	**53**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.225**	**1343**
DPE-1	8-43	12/14/2016	Primary	**0.14**	**950**	**0.037**	**200**	< 0.004	< 24	**0.027**	**110**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.216**	**1309**
DPE-1	8-43	12/27/2016	Primary	**0.15**	**1000**	**0.045**	**240**	< 0.004	< 24	**0.026**	**100**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.233**	**1389**
DPE-1	8-43	3/22/2017	Primary	**0.35**	**2400**	**0.075**	**400**	< 0.002	< 12	**0.023**	**91**	**0.019**	**77**	< 0.0025	< 10	**0.0056**	**14**	< 0.002	< 7.9	< 0.0022	< 10	**0.003**	**12**	< 0.003	< 9.6	**0.4756**	**2994**
DPE-1	8-43	4/5/2017	Primary	**0.2**	**1000**	**0.063**	**340**	< 0.005	< 30	**0.056**	**220**	**0.014**	**57**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.333**	**1617**
DPE-1	8-43	4/12/2017	Primary	**0.041**	**280**	**0.005**	**27**	< 0.002	< 12	**0.002**	**7.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.048**	**314.9**
DPE-1	8-43	4/19/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-1	8-43	4/19/2017	Primary	**0.17**	**1200**	**0.051**	**270**	< 0.002	< 12	**0.024**	**95**	**0.0081**	**33**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0021**	**8.3**	< 0.003	< 9.6	**0.2552**	**1606.3**
DPE-1	8-43	4/26/2017	Primary	**0.061**	**410**	**0.017**	**91**	< 0.004	< 24	**0.017**	**67**	**0.007**	**28**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.102**	**596**
DPE-1	8-43	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-1	8-43	5/10/2017	Primary	**0.2**	**1000**	**0.043**	**230**	< 0.004	< 24	**0.017**	**67**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.272**	**1346**
DPE-1	8-43	5/10/2017	Primary	**0.22**	**1500**	**0.054**	**290**	**0.0026**	**16**	**0.02**	**80**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0033**	**13**	< 0.003	< 9.6	**0.3099**	**1939**
DPE-1	8-43	5/17/2017	Primary	**0.13**	**880**	**0.04**	**200**	**0.0037**	**22**	**0.027**	**110**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0023**	**11**	**0.0047**	**19**	< 0.003	< 9.6	**0.2187**	**1287**
DPE-1	8-43	5/24/2017	Primary	**0.28**	**1900**	**0.039**	**210**	**0.0032**	**19**	**0.012**	**48**	**0.012**	**49**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0022**	**10**	**0.0044**	**17**	< 0.003	< 9.6	**0.3528**	**2253**
DPE-1	8-43	10/4/2017	Primary	**0.34**	**2300**	**0.11**	**590**	**0.0036**	**22**	**0.091**	**360**	**0.05**	**200**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0093**	**43**	**0.01**	**40**	**0.0068**	**22**	**0.6207**	**3577**
DPE-1	8-43	10/11/2017	Primary	**0.14**	**950**	**0.076**	**410**	**0.0058**	**35**	**0.11**	**440**	**0.032**	**130**	< 0.0025	< 10	**0.012**	**31**	< 0.002	< 7.9	**0.0058**	**27**	**0.012**	**48**	< 0.003	< 9.6	**0.3936**	**2071**
DPE-1	8-43	10/25/2017	Primary	**0.14**	**950**	**0.052**	**280**	< 0.004	< 24	**0.055**	**220**	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0071**	**28**	< 0.006	< 19	**0.2691**	**1539**
DPE-1	8-43	11/8/2017	Primary	**0.14**	**950**	**0.039**	**210**	**0.0044**	**27**	**0.033**	**130**	**0.011**	**45**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0044**	**17**	< 0.006	< 19	**0.2318**	**1379**
DPE-1	8-43	11/29/2017	Primary	**0.09**	**600**	**0.023**	**120**	< 0.004	< 24	**0.02**	**80**	**0.0052**	**21**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1382**	**821**
DPE-1	8-43	12/13/2017	Primary	**0.09**	**600**	**0.023**	**120**	**0.0029**	**18**	**0.025**	**99**	**0.0098**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0038**	**15**	< 0.003	< 9.6	**0.1545**	**892**
DPE-1	8-43	12/27/2017	Primary	**0.069**	**470**	**0.019**	**100**	**0.0025**	**15**	**0.016**	**64**	**0.0083 J**	**34 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0027**	**11**	< 0.003	< 9.6	**0.1175**	**694**
DPE-1	8-43	1/31/2018	Primary	**0.081**	**550**	**0.026**	**140**	**0.0028**	**17**	**0.023**	**91**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0046**	**18**	< 0.003	< 9.6	**0.1484**	**861**
DPE-1	8-43	5/2/2018	Primary	**0.21 J**	**1400 J**	**0.092**	**500**	**0.0031**	**19**	**0.02**	**80**	**0.015**	**61**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.003**	**14**	**0.0026**	**10**	**0.001**	**3.2**	**0.3467**	**2087.2**
DPE-1	8-43	5/16/2018	Primary	**0.091**	**620**	**0.038**	**200**	**0.0034 J**	**21 J**	**0.023**	**91**	**0.018**	**73**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0024**	**11**	**0.0066**	**26**	< 0.00075	< 2.4	**0.1824**	**1042**
DPE-2	32.8-47.3	9/21/2011	Primary	< 0.0099	< 67	**0.013 J**	**70 J**	< 0.01	< 60.4	**0.033 J**	**130 J**	**0.025 J**	**100 J**	< 0.012	< 49	**0.035 J**	**90 J**	< 0.01 J	< 39.7 J	< 0.011	< 51	< 0.01 J	< 39.7 J	< 0.015	< 48	**0.106**	**390**
DPE-2	32.8-47.3	9/21/2011	Duplicate	< 0.0099	< 67	**0.032 J**	**170 J**	< 0.01	< 60.4	**0.086 J**	**340 J**	**0.074 J**	**300 J**	< 0.012	< 49	**0.086 J**	**220 J**	**0.013 J**	**52 J**	< 0.011	< 51	**0.025 J**	**99 J**	< 0.015	< 48	**0.316**	**1181**
DPE-2	32.8-47.3	12/7/2011	Primary	< 0.002	< 14	**0.0037**	**20**	< 0.002	< 12	**0.0088**	**35**	**0.0059**	**24**	< 0.0025	< 10	**0.007**	**18**	< 0.002	< 7.9	< 0.0022	< 10	**0.0025**	**9.9**	< 0.003	< 9.6	**0.0279**	**106.9**
DPE-2	32.8-47.3	3/27/2012	Primary	**0.1**	**700**	**0.11**	**590**	< 0.002	< 12	**0.11**	**440**	**0.1 J**	**400 J**	< 0.0025	< 10	**0.036**	**92**	**0.011**	**44**	< 0.0022	< 10	**0.022**	**87**	**0.01**	**30**	**0.499**	**2383**
DPE-2	32.8-47.3	3/27/2012	Duplicate	**0.096**	**650**	**0.1**	**500**	< 0.002	< 12	**0.11**	**440**	**0.1 J**	**400 J**	< 0.0025	< 10	**0.034**	**87**	**0.012**	**48**	< 0.0022	< 10	**0.023**	**91**	**0.0097**	**31**	**0.4847**	**2247**
DPE-2	32.8-47.3	6/4/2012	Primary	**0.34**	**2300**	**0.11**	**590**	< 0.01	< 60.4	**0.11**	**440**	**0.032**	**130**	< 0.012	< 49	< 0.02	< 50	**0.017**	**67**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.609**	**3527**
DPE-2	32.8-47.3	9/17/2012	Primary	**0.043**	**290**	**0.087**	**470**	< 0.002	< 12	**0.45**	**1800**	**0.19**	**770**	< 0.0025	< 10	**0.063**	**160**	**0.63**	**2500**	< 0.0022	< 10	**0.038**	**150**	**0.034**	**110**	**1.535**	**6250**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-2	32.8-47.3	12/11/2012	Primary	**0.0021**	**14**	**0.0035**	**19**	< 0.002	< 12	**0.0038**	**15**	**0.0083**	**34**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0177**	**82**
DPE-2	32.8-47.3	12/17/2013	Primary	**0.024**	**160**	**0.051**	**270**	< 0.002	< 12	**0.041**	**160**	**0.0024**	**9.7**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1184**	**599.7**
DPE-2	32.8-47.3	3/25/2014	Primary	**0.21**	**1400**	**0.66**	**3600**	< 0.002	< 12	**0.069**	**270**	**0.042**	**170**	< 0.0025	< 10	< 0.0039	< 10	**0.029**	**120**	< 0.0022	< 10	**0.0093**	**37**	< 0.003	< 9.6	**1.0193**	**5597**
DPE-2	32.8-47.3	6/26/2014	Primary	**0.32**	**2200**	**1.8**	**9700**	< 0.03	< 200	**0.13**	**520**	**0.038**	**150**	< 0.038	< 150	< 0.058	< 150	**0.062**	**250**	< 0.033	< 150	**0.033**	**130**	< 0.045	< 140	**2.383**	**12950**
DPE-2	32.8-47.3	9/23/2014	Primary	**0.034**	**230**	**0.27**	**1500**	< 0.004	< 24	**0.025**	**99**	**0.0089**	**36**	< 0.005	< 20	< 0.0078	< 20	**0.0079**	**31**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.3458**	**1896**
DPE-2	32.8-47.3	11/2/2016	Primary	**0.032**	**220**	**0.19**	**1000**	< 0.01	< 60	**0.068**	**270**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.29**	**1490**
DPE-2	32.8-47.3	11/16/2016	Primary	**0.031**	**210**	**0.2**	**1000**	< 0.01	< 60	**0.063**	**250**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	**0.025**	**99**	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.319**	**1559**
DPE-2	32.8-47.3	12/14/2016	Primary	**0.034**	**230**	**0.2**	**1000**	< 0.005	< 30	**0.076**	**300**	**0.0062**	**25**	< 0.0062	< 25	< 0.0098	< 25	**0.034**	**130**	< 0.0055	< 25	**0.0072**	**29**	**0.01**	**30**	**0.3674**	**1744**
DPE-2	32.8-47.3	12/27/2016	Primary	**0.045**	**310**	**0.25**	**1300**	< 0.01	< 60	**0.089**	**350**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	**0.042**	**170**	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.426**	**2130**
DPE-2	32.8-47.3	3/22/2017	Primary	**0.049**	**330**	**0.071**	**380**	< 0.002	< 12	**0.0075**	**30**	**0.0056**	**23**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1331**	**763**
DPE-2	32.8-47.3	4/5/2017	Primary	**0.031**	**210**	**0.12**	**650**	< 0.002	< 12	**0.037**	**150**	**0.0036**	**15**	< 0.0025	< 10	< 0.0039	< 10	**0.012**	**48**	< 0.0022	< 10	**0.0046**	**18**	**0.0083**	**27**	**0.2165**	**1118**
DPE-2	32.8-47.3	4/19/2017	Primary	**0.063**	**430**	**0.12**	**650**	< 0.004	< 24	**0.0049**	**19**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	**0.0078**	**31**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1957**	**1130**
DPE-2	32.8-47.3	4/26/2017	Primary	**0.016**	**110**	**0.076**	**410**	< 0.004	< 24	**0.034**	**130**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	**0.0075**	**30**	< 0.0044	< 20	**0.0043**	**17**	< 0.006	< 19	**0.1378**	**697**
DPE-2	32.8-47.3	5/10/2017	Primary	**0.06**	**400**	**0.046**	**250**	< 0.002	< 12	**0.0076**	**30**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	**0.0059**	**23**	< 0.0022	< 10	**0.003**	**12**	< 0.003	< 9.6	**0.1225**	**715**
DPE-2	32.8-47.3	5/17/2017	Primary	**0.035**	**240**	**0.16**	**860**	< 0.002	< 12	**0.053**	**210**	**0.0056**	**23**	< 0.0025	< 10	< 0.0039	< 10	**0.013**	**52**	< 0.0022	< 10	**0.0073**	**29**	**0.0072**	**23**	**0.2811**	**1437**
DPE-2	32.8-47.3	10/4/2017	Primary	**0.028**	**190**	**0.025**	**130**	< 0.002	< 12	**0.004**	**16**	**0.0054**	**22**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0624**	**358**
DPE-2	32.8-47.3	10/11/2017	Primary	**0.029**	**200**	**0.19**	**1000**	< 0.002	< 12	**0.097**	**390**	**0.0066**	**27**	< 0.0025	< 10	< 0.0039	< 10	**0.013**	**52**	< 0.0022	< 10	**0.01**	**40**	**0.01**	**30**	**0.3556**	**1739**
DPE-2	32.8-47.3	10/25/2017	Primary	**0.046**	**310**	**0.25**	**1300**	< 0.004	< 24	**0.13**	**520**	**0.0087**	**35**	< 0.005	< 20	< 0.0078	< 20	**0.055**	**220**	< 0.0044	< 20	**0.024**	**95**	**0.012**	**38**	**0.5257**	**2518**
DPE-2	32.8-47.3	11/8/2017	Primary	**0.081**	**550**	**0.39**	**2100**	< 0.01	< 60	**0.23**	**910**	**0.024**	**97**	< 0.012	< 49	< 0.02	< 50	**0.062**	**250**	< 0.011	< 51	**0.032**	**130**	**0.016**	**51**	**0.835**	**4088**
DPE-2	32.8-47.3	11/29/2017	Primary	**0.082**	**560**	**0.27**	**1500**	< 0.004	< 24	**0.19**	**750**	**0.022**	**89**	< 0.005	< 20	< 0.0078	< 20	**0.049**	**190**	< 0.0044	< 20	**0.016**	**64**	**0.019**	**61**	**0.648**	**3214**
DPE-2	32.8-47.3	12/13/2017	Primary	**0.061**	**410**	**0.22**	**1200**	< 0.002	< 12	**0.094**	**370**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	**0.003**	**12**	< 0.0022	< 10	**0.0033**	**13**	**0.011**	**35**	**0.4143**	**2129**
DPE-2	32.8-47.3	12/27/2017	Primary	**0.025**	**170**	**0.1**	**500**	< 0.002	< 12	**0.068**	**270**	**0.013 J**	**53 J**	< 0.0025	< 10	**0.0039**	**10**	**0.015**	**60**	< 0.0022	< 10	**0.0075**	**30**	**0.0044**	**14**	**0.2368**	**1107**
DPE-2	32.8-47.3	1/31/2018	Primary	**0.043**	**290**	**0.13**	**700**	< 0.002	< 12	**0.064**	**250**	**0.015**	**61**	< 0.0025	< 10	< 0.0039	< 10	**0.01**	**40**	< 0.0022	< 10	**0.0089**	**35**	**0.0049**	**16**	**0.2758**	**1392**
DPE-2	32.8-47.3	5/2/2018	Primary	**0.033**	**220**	**0.041**	**220**	< 0.0005	< 3.0	**0.002**	**7.9**	**0.0029**	**12**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0789**	**459.9**
DPE-2	32.8-47.3	5/16/2018	Primary	**0.064**	**430**	**0.16**	**860**	< 0.0005 J	< 3.0 J	**0.036**	**140**	**0.015**	**61**	< 0.00062	< 2.5	**0.0037**	**9.5**	**0.012**	**48**	**0.0013**	**6.0**	**0.0067**	**27**	**0.0057**	**18**	**0.3044**	**1599.5**
DPE-3	32.9-47.4	9/21/2011	Primary	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	ND	ND
DPE-3	32.9-47.4	12/7/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-3	32.9-47.4	3/27/2012	Primary	**0.16**	**1100**	**0.63**	**3400**	< 0.002	< 12	**0.1**	**400**	**0.21 J**	**850 J**	< 0.0025	< 10	**0.0043**	**11**	**0.013**	**52**	< 0.0022	< 10	**0.0025**	**9.9**	**0.0034**	**11**	**1.1232**	**5833.9**
DPE-3	32.9-47.4	6/4/2012	Primary	**0.56**	**3800**	**0.22**	**1200**	< 0.01	< 60.4	**0.25**	**990**	**0.084**	**340**	< 0.012	< 49	**0.023**	**59**	**0.038**	**150**	< 0.011	< 51	**0.013**	**52**	**0.038**	**120**	**1.226**	**6711**
DPE-3	32.9-47.4	9/17/2012	Primary	**0.15 J**	**1000 J**	**1.4 J**	**7500 J**	< 0.002	< 12	**0.11 J**	**440 J**	**0.052 J**	**210 J**	< 0.0025	< 10	**0.039 J**	**100 J**	**0.055 J**	**220 J**	< 0.0022	< 10	**0.016 J**	**64 J**	**27 J**	**86000 J**	**28.822**	**95534**
DPE-3	32.9-47.4	12/11/2012	Primary	< 0.4	< 3000	**1.6 J**	**8600 J**	< 0.4	< 2000	< 0.4	< 2000	< 0.4	< 2000	< 0.49	< 2000	< 0.78 J	< 2000 J	< 0.4	< 2000	< 0.43	< 2000	< 0.4	< 2000	**16**	**51000**	**17.6**	**59600**
DPE-3	32.9-47.4	9/24/2013	Primary	**0.2**	**1000**	**0.99**	**5300**	< 0.03	< 200	**0.063**	**250**	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.253**	**6550**
DPE-3	32.9-47.4	12/17/2013	Primary	**0.062**	**420**	**1.7**	**9100**	< 0.004	< 24	**0.22**	**870**	**0.029**	**120**	**0.037**	**150**	**0.011**	**28**	**0.078**	**310**	< 0.0044	< 20	**0.068**	**270**	**0.0067**	**21**	**2.2117**	**11289**
DPE-3	32.9-47.4	3/25/2014	Primary	**0.038**	**260**	**0.74**	**4000**	< 0.005	< 30	**0.072**	**290**	**0.013**	**53**	< 0.0062	< 25	< 0.0098	< 25	**0.025**	**99**	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.888**	**4702**
DPE-3	32.9-47.4	6/26/2014	Primary	**0.065**	**440**	**0.84**	**4500**	< 0.04	< 200	**0.26**	**1000**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**1.165**	**5940**
DPE-3	32.9-47.4	9/23/2014	Primary	**0.13**	**880**	**1**	**5000**	< 0.03	< 200	**0.34**	**1300**	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	**0.033**	**130**	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.503**	**7310**
DPE-3	32.9-47.4	11/2/2016	Primary	**0.054**	**370**	**1.1**	**5900**	< 0.04	< 200	**0.5**	**2000**	**0.058**	**240**	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**1.712**	**8510**
DPE-3	32.9-47.4	11/16/2016	Primary	**0.16**	**1100**	**0.77**	**4100**	< 0.02	< 100	**0.4**	**2000**	**0.041**	**170**	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**1.371**	**7370**
DPE-3	32.9-47.4	12/14/2016	Primary	**0.018**	**120**	**0.6**	**3000**	< 0.01	< 60	**0.37**	**1500**	**0.037**	**150**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.025**	**4770**
DPE-3	32.9-47.4	12/27/2016	Primary	**0.03**	**200**	**0.6**	**3000**	< 0.02	< 100	**0.36**	**1400**	**0.038**	**150**	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**1.028**	**4750**
DPE-3	32.9-47.4	3/22/2017	Primary	**0.027**	**180**	**0.19**	**1000**	< 0.002	< 12	**0.059**	**230**	**0.015**	**61**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.291**	**1471**
DPE-3	32.9-47.4	4/5/2017	Primary	**0.073**	**500**	**0.46**	**2500**	< 0.005	< 30	**0.23**	**910**	**0.05**	**200**	< 0.0062	< 25	**0.011 J**	**28 J**	**0.0095**	**38**	< 0.0055	< 25	**0.016**	**64**	< 0.0075	< 24	**0.8495**	**4240**
DPE-3	32.9-47.4	4/19/2017	Primary	**0.037**	**250**	**0.11**	**590**	< 0.002	< 12	**0.013**	**52**	**0.005**	**20**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.165**	**912**
DPE-3	32.9-47.4	4/26/2017	Primary	**0.0058**	**39**	**0.03**	**200**	< 0.002	< 12	**0.018**	**71**	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.056**	**318.9**
DPE-3	32.9-47.4	5/10/2017	Primary	**0.04**	**300**	**0.19**	**1000**	< 0.004	< 24	**0.038**	**150**	**0.0065**	**26**	< 0.005	< 20	< 0.0078	< 20	**0.01**	**40**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.2845**	**1516**
DPE-3	32.9-47.4	5/17/2017	Primary	**0.03**	**200**	**0.42**	**2300**	< 0.004	< 24	**0.19**	**750**	**0.027**	**110**	< 0.005	< 20	< 0.0078	< 20	**0.0061**	**24**	< 0.0044	< 20	**0.0075**	**30**	< 0.006	< 19	**0.6806**	**3414**
DPE-3	32.9-47.4	10/4/2017	Primary	**0.027**	**180**	**0.087**	**470**	< 0.002	< 12	**0.0078**	**31**	**0.0074**	**30**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1292**	**711**
DPE-3	32.9-47.4	10/11/2017	Primary	**0.036**	**240**	**0.088**	**470**	< 0.004	< 24	**0.038**	**150**	**0.016**	**65**	< 0.005	< 20	< 0.0078	< 20	**0.0057**	**23**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1837**	**948**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-3	32.9-47.4	10/25/2017	Primary	**0.048**	**330**	**0.29**	**1600**	< 0.002	< 12	**0.12**	**480**	**0.012**	**49**	< 0.0025	< 10	< 0.0039	< 10	**0.012**	**48**	< 0.0022	< 10	**0.016**	**64**	**0.014**	**45**	**0.512**	**2616**
DPE-3	32.9-47.4	11/8/2017	Primary	**0.017**	**120**	**0.023**	**120**	< 0.002	< 12	**0.012**	**48**	**0.0045**	**18**	< 0.0025	< 10	**0.0052**	**13**	**0.0026**	**10**	< 0.0022	< 10	< 0.002	< 7.9	**0.0053**	**17**	**0.0696**	**346**
DPE-3	32.9-47.4	11/29/2017	Primary	**0.075**	**510**	**0.093**	**500**	< 0.004	< 24	**0.034**	**130**	**0.0077**	**31**	< 0.005	< 20	< 0.0078	< 20	**0.0078**	**31**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.2175**	**1202**
DPE-3	32.9-47.4	12/13/2017	Primary	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	ND	ND
DPE-3	32.9-47.4	12/27/2017	Primary	**0.043**	**290**	**0.07**	**400**	< 0.002	< 12	**0.025**	**99**	**0.0074 J**	**30 J**	< 0.0025	< 10	< 0.0039	< 10	**0.0077**	**31**	< 0.0022	< 10	**0.0024**	**9.5**	< 0.003	< 9.6	**0.1555**	**859.5**
DPE-3	32.9-47.4	1/31/2018	Primary	**0.0048**	**33**	**0.0063**	**34**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0111**	**67**
DPE-3	32.9-47.4	5/2/2018	Primary	**0.022**	**150**	**0.027**	**150**	< 0.002 J	< 12 J	< 0.002	< 7.9	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0512**	**308.9**
DPE-3	32.9-47.4	5/16/2018	Primary	**0.025**	**170**	**0.062**	**330**	< 0.0005 J	< 3.0 J	**0.006**	**24**	**0.0044**	**18**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	**0.00062**	**2.9**	< 0.0005	< 2.0	**0.0013**	**4.2**	**0.10052**	**553.9**
DPE-4	32.8-47.1	9/21/2011	Primary	< 0.2	< 1000	< 0.2	< 1000	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	ND	ND
DPE-4	32.8-47.1	9/21/2011	Duplicate	< 0.15	< 1000	**0.18**	**970**	< 0.15	< 910	< 0.15	< 600	< 0.15	< 610	< 0.19	< 770	< 0.29	< 740	< 0.15	< 600	< 0.16	< 740	< 0.15	< 600	< 0.23	< 740	**0.18**	**970**
DPE-4	32.8-47.1	12/27/2011	Primary	**8**	**50000**	**1.8**	**9700**	< 0.2	< 1000	**1.1**	**4400**	**0.67**	**2700**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**11.57**	**66800**
DPE-4	32.8-47.1	3/27/2012	Primary	**0.018**	**120**	**0.1**	**500**	< 0.01	< 60.4	**0.014**	**56**	**0.027 J**	**110 J**	< 0.012	< 49	< 0.02	< 50	**0.011**	**44**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.17**	**830**
DPE-4	32.8-47.1	6/4/2012	Primary	**0.6**	**4000**	**0.2**	**1000**	< 0.004	< 24	**0.25**	**990**	**0.069**	**280**	< 0.0049	< 20	**0.018**	**46**	**0.03**	**100**	**0.0058**	**27**	**0.0093**	**37**	**0.026**	**83**	**1.2081**	**6563**
DPE-4	32.8-47.1	9/17/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.025**	**80**	**0.025**	**80**
DPE-4	32.8-47.1	12/11/2012	Primary	**0.032**	**220**	**1.9 J**	**10000 J**	< 0.002	< 12	**0.19**	**750**	**0.046 J**	**190 J**	< 0.0025	< 10	**0.048 J**	**120 J**	**0.021**	**83**	< 0.0022	< 10	**0.018**	**71**	**0.065**	**210**	**2.32**	**11644**
DPE-4	32.8-47.1	9/24/2013	Primary	**0.29**	**2000**	**0.51**	**2700**	< 0.05	< 300	**0.24**	**950**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**1.04**	**5650**
DPE-4	32.8-47.1	12/17/2013	Primary	**0.041**	**280**	**0.47**	**2500**	< 0.004	< 24	**0.45**	**1800**	**0.021**	**85**	< 0.005	< 20	**0.013**	**33**	< 0.004	< 16	< 0.0044	< 20	**0.014**	**56**	**0.0078**	**25**	**1.0168**	**4779**
DPE-4	32.8-47.1	3/25/2014	Primary	**0.035**	**240**	**0.92**	**5000**	< 0.005	< 30	**0.53**	**2100**	**0.035**	**140**	< 0.0062	< 25	**0.015**	**38**	**0.0051**	**20**	< 0.0055	< 25	**0.011**	**44**	< 0.0075	< 24	**1.5511**	**7582**
DPE-4	32.8-47.1	6/26/2014	Primary	**0.064**	**430**	**0.55**	**3000**	< 0.02	< 100	**0.46**	**1800**	**0.031**	**130**	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**1.105**	**5360**
DPE-4	32.8-47.1	9/23/2014	Primary	**0.069**	**470**	**0.36**	**1900**	< 0.005	< 30	**0.29**	**1200**	**0.022**	**89**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	**0.0061**	**24**	< 0.0075	< 24	**0.7471**	**3683**
DPE-4	32.8-47.1	10/26/2016	Primary	**0.0022**	**15**	**0.005**	**27**	< 0.0005	< 3.0	**0.00099**	**3.9**	< 0.0005	< 2.0	**0.0034**	**14**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01159**	**59.9**
DPE-4	32.8-47.1	12/7/2016	Primary	**0.035**	**240**	**0.17**	**910**	< 0.001	< 6.0	**0.07**	**300**	**0.013**	**53**	< 0.0012	< 4.9	**0.0038**	**9.7**	**0.023**	**91**	< 0.0011	< 5.1	**0.0097**	**39**	**0.011**	**35**	**0.3355**	**1677.7**
DPE-4	32.8-47.1	12/21/2016	Primary	**0.021**	**140**	**0.15**	**810**	< 0.004	< 24	**0.053**	**210**	**0.011**	**45**	< 0.005	< 20	< 0.0078	< 20	**0.016**	**64**	< 0.0044	< 20	**0.0046**	**18**	**0.0082**	**26**	**0.2638**	**1313**
DPE-4	32.8-47.1	4/5/2017	Primary	**0.0027**	**18**	**0.03**	**200**	< 0.002	< 12	**0.015**	**60**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0477**	**278**
DPE-4	32.8-47.1	4/12/2017	Primary	**0.05**	**300**	**0.14**	**750**	< 0.002	< 12	**0.065**	**260**	**0.012**	**49**	< 0.0025	< 10	**0.0044**	**11**	**0.02**	**80**	< 0.0022	< 10	**0.0078**	**31**	**0.0072**	**23**	**0.3064**	**1504**
DPE-4	32.8-47.1	4/26/2017	Primary	< 0.002	< 14	**0.0087**	**47**	< 0.002	< 12	**0.004**	**16**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0127**	**63**
DPE-4	32.8-47.1	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-4	32.8-47.1	5/17/2017	Primary	**0.01**	**70**	**0.77**	**4100**	< 0.004	< 24	**0.54**	**2100**	**0.053**	**210**	< 0.005	< 20	**0.0098**	**25**	**0.0079**	**31**	< 0.0044	< 20	**0.018**	**71**	< 0.006	< 19	**1.4087**	**6607**
DPE-4	32.8-47.1	5/24/2017	Primary	**0.034**	**230**	**0.13**	**700**	< 0.0005	< 3.0	**0.043**	**170**	**0.012**	**49**	< 0.00062	< 2.5	**0.0027**	**6.9**	**0.009**	**36**	< 0.00055	< 2.5	**0.0055**	**22**	**0.005**	**16**	**0.2412**	**1229.9**
DPE-4	32.8-47.1	10/4/2017	Primary	**0.02**	**100**	**0.086**	**460**	< 0.002	< 12	**0.024**	**95**	**0.0092**	**37**	< 0.0025	< 10	< 0.0039	< 10	**0.0022**	**8.7**	< 0.0022	< 10	**0.0023**	**9.1**	**0.0046**	**15**	**0.1483**	**724.8**
DPE-4	32.8-47.1	10/11/2017	Primary	**0.033**	**220**	**0.076**	**410**	< 0.002	< 12	**0.042**	**170**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	**0.0029**	**12**	< 0.0022	< 10	**0.0029**	**12**	**0.0035**	**11**	**0.1703**	**875**
DPE-4	32.8-47.1	10/25/2017	Primary	**0.027**	**180**	**0.059**	**320**	< 0.002	< 12	**0.047**	**190**	**0.0099**	**40**	< 0.0025	< 10	< 0.0039	< 10	**0.0032**	**13**	< 0.0022	< 10	**0.003**	**12**	**0.0043**	**14**	**0.1534**	**769**
DPE-4	32.8-47.1	11/8/2017	Primary	**0.023**	**160**	**0.048**	**260**	< 0.002	< 12	**0.043**	**170**	**0.0091**	**37**	< 0.0025	< 10	< 0.0039	< 10	**0.0034**	**13**	< 0.0022	< 10	**0.0026**	**10**	**0.0042**	**13**	**0.1333**	**663**
DPE-4	32.8-47.1	11/29/2017	Primary	**0.016**	**110**	**0.046**	**250**	< 0.004	< 24	**0.029**	**120**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.091**	**480**
DPE-4	32.8-47.1	12/13/2017	Primary	**0.018**	**120**	**0.048**	**260**	< 0.002	< 12	**0.029**	**120**	**0.0073**	**30**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1023**	**530**
DPE-4	32.8-47.1	5/2/2018	Primary	**0.0066**	**45**	**0.027**	**150**	< 0.002 J	< 12 J	**0.0048**	**19**	**0.0033**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0417**	**227**
DPE-4	32.8-47.1	5/16/2018	Primary	**0.019**	**130**	**0.041**	**220**	< 0.0005 J	< 3.0 J	**0.014**	**56**	**0.0039**	**16**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	< 0.00055	< 2.5	**0.00099**	**3.9**	**0.0014**	**4.5**	**0.08149**	**435.2**
DPE-5	32.6-47.1	9/21/2011	Primary	< 0.0099	< 67	< 0.01	< 50	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	ND	ND
DPE-5	32.6-47.1	12/7/2011	Primary	**0.024**	**160**	**0.22**	**1200**	< 0.02	< 100	**0.063**	**250**	**0.072**	**290**	< 0.025	< 100	< 0.039	< 100	**0.035**	**140**	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.414**	**2040**
DPE-5	32.6-47.1	3/27/2012	Primary	**0.037**	**250**	**0.32**	**1700**	< 0.01	< 60.4	**0.17**	**670**	**0.13 J**	**530 J**	< 0.012	< 49	< 0.02	< 50	**0.061**	**240**	< 0.011	< 51	**0.018**	**71**	< 0.015	< 48	**0.736**	**3461**
DPE-5	32.6-47.1	6/4/2012	Primary	**0.38**	**2600**	**0.14**	**750**	< 0.01	< 60.4	**0.18**	**710**	**0.052**	**210**	< 0.012	< 49	< 0.02	< 50	**0.022**	**87**	< 0.011	< 51	< 0.01	< 39.7	**0.017**	**54**	**0.791**	**4411**
DPE-5	32.6-47.1	9/17/2012	Primary	**0.0057**	**39**	**0.032**	**170**	< 0.002	< 12	**0.013**	**52**	**0.0027**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.019**	**61**	**0.0724**	**333**
DPE-5	32.6-47.1	12/11/2012	Primary	**0.033**	**220**	**1.9**	**10000**	< 0.004	< 24	**0.42**	**1700**	**0.21**	**850**	< 0.0049	< 20	**0.077 J**	**200 J**	**0.027**	**110**	< 0.0043	< 20	**0.033**	**130**	**0.0058**	**19**	**2.7058**	**13229**
DPE-5	32.6-47.1	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-5	32.6-47.1	12/17/2013	Primary	**0.03**	**200**	**15**	**81000**	< 0.002	< 12	**7.3**	**29000**	**0.59**	**2400**	< 0.0025	< 10	**0.41**	**1000**	**0.12**	**480**	< 0.0022	< 10	**0.16**	**640**	**0.0031**	**9.9**	**23.6131**	**114729.9**
DPE-5	32.6-47.1	3/25/2014	Primary	< 0.2	< 1000	**16**	**86000**	< 0.2	< 1000	**5.8**	**23000**	**0.44**	**1800**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**22.24**	**110800**
DPE-5	32.6-47.1	6/26/2014	Primary	< 0.5	< 3000	**14**	**75000**	< 0.5	< 3000	**6.1**	**24000**	< 0.5	< 2000	< 0.62	< 2500	< 0.98	< 2500	< 0.5	< 2000	< 0.55	< 2500	< 0.5	< 2000	< 0.75	< 2400	**20.1**	**99000**
DPE-5	32.6-47.1	9/23/2014	Primary	< 0.2	< 1000	**13**	**70000**	< 0.2	< 1000	**5.1**	**20000**	**0.39**	**1600**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**18.49**	**91600**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-5	32.6-47.1	12/9/2014	Primary	< 0.1	< 700	**3.4**	**18000**	< 0.1	< 600	**1.5**	**6000**	**0.11**	**450**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**5.01**	**24450**
DPE-5	32.6-47.1	3/26/2015	Primary	< 0.06	< 400	**3.8**	**20000**	< 0.06	< 400	**1.6**	**6400**	**0.1**	**400**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**5.5**	**26800**
DPE-5	32.6-47.1	12/16/2015	Primary	**0.02**	**100**	**0.13**	**700**	< 0.01	< 60	**0.11**	**440**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.26**	**1240**
DPE-5	32.6-47.1	10/26/2016	Primary	**0.019**	**130**	**3.2**	**17000**	< 0.01	< 60	**1.5**	**6000**	**0.14**	**570**	< 0.012	< 49	**0.037**	**95**	**0.028**	**110**	< 0.011	< 51	**0.059**	**230**	< 0.015	< 48	**4.983**	**24135**
DPE-5	32.6-47.1	12/7/2016	Primary	< 0.025	< 170	**3.1**	**17000**	< 0.025	< 150	**2.1**	**8300**	**0.16**	**650**	< 0.031	< 130	< 0.049	< 130	**0.029**	**120**	< 0.028	< 130	**0.061**	**240**	< 0.038	< 120	**5.45**	**26310**
DPE-5	32.6-47.1	12/21/2016	Primary	< 0.05	< 300	**2**	**10000**	< 0.05	< 300	**1.5**	**6000**	**0.1**	**400**	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**3.6**	**16400**
DPE-5	32.6-47.1	4/5/2017	Primary	**0.0022**	**15**	**0.08**	**400**	< 0.002	< 12	**0.041**	**160**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1232**	**575**
DPE-5	32.6-47.1	4/12/2017	Primary	**0.012**	**82**	**1.5**	**8100**	< 0.01	< 60	**1.1**	**4400**	**0.11**	**450**	< 0.012	< 49	**0.046**	**120**	**0.024**	**95**	< 0.011	< 51	**0.041**	**160**	< 0.015	< 48	**2.833**	**13407**
DPE-5	32.6-47.1	4/26/2017	Primary	< 0.002	< 14	**0.033**	**180**	< 0.002	< 12	**0.02**	**80**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.053**	**260**
DPE-5	32.6-47.1	5/3/2017	Primary	< 0.002	< 14	**0.0081**	**44**	< 0.002	< 12	**0.0026**	**10**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0107**	**54**
DPE-5	32.6-47.1	5/17/2017	Primary	< 0.1	< 700	**3**	**20000**	< 0.1	< 600	**2.2**	**8700**	**0.16**	**650**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**5.36**	**29350**
DPE-5	32.6-47.1	5/24/2017	Primary	**0.013**	**88**	**1.7**	**9100**	< 0.01	< 60	**1.1**	**4400**	**0.1**	**400**	< 0.012	< 49	**0.05**	**100**	**0.029**	**120**	< 0.011	< 51	**0.052**	**210**	< 0.015	< 48	**3.044**	**14418**
DPE-5	32.6-47.1	10/4/2017	Primary	**0.0084**	**57**	**1.2**	**6500**	< 0.002	< 12	**0.67**	**2700**	**0.059**	**240**	< 0.0025	< 10	< 0.0039	< 10	**0.009**	**36**	< 0.0022	< 10	**0.029**	**120**	< 0.003	< 9.6	**1.9754**	**9653**
DPE-5	32.6-47.1	10/11/2017	Primary	**0.009**	**61**	**1.6**	**8600**	< 0.004	< 24	**0.91**	**3600**	**0.082**	**330**	< 0.005	< 20	**0.036**	**92**	**0.018**	**71**	< 0.0044	< 20	**0.036**	**140**	< 0.006	< 19	**2.691**	**12894**
DPE-5	32.6-47.1	10/25/2017	Primary	**0.0081**	**55**	**1.2**	**6500**	< 0.004	< 24	**0.66**	**2600**	**0.07**	**300**	< 0.005	< 20	**0.037**	**95**	**0.019**	**75**	< 0.0044	< 20	**0.031**	**120**	< 0.006	< 19	**2.0251**	**9745**
DPE-5	32.6-47.1	11/8/2017	Primary	< 0.01	< 70	**0.91**	**4900**	< 0.01	< 60	**0.51**	**2000**	**0.036**	**150**	< 0.012	< 49	< 0.02	< 50	**0.013**	**52**	< 0.011	< 51	**0.017**	**67**	< 0.015	< 48	**1.486**	**7169**
DPE-5	32.6-47.1	11/29/2017	Primary	**0.015**	**100**	**0.14**	**750**	< 0.01	< 60	**0.12**	**480**	**0.033**	**130**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.308**	**1460**
DPE-5	32.6-47.1	12/13/2017	Primary	**0.0047**	**32**	**0.66**	**3600**	< 0.004	< 24	**0.39**	**1500**	**0.045**	**180**	< 0.005	< 20	**0.015**	**38**	**0.013**	**52**	< 0.0044	< 20	**0.016**	**64**	< 0.006	< 19	**1.1437**	**5466**
DPE-5	32.6-47.1	12/27/2017	Primary	< 0.004	< 27	**0.38**	**2000**	< 0.004	< 24	**0.26**	**1000**	**0.029 J**	**120 J**	< 0.005	< 20	**0.012**	**31**	**0.013**	**52**	< 0.0044	< 20	**0.011**	**44**	< 0.006	< 19	**0.705**	**3247**
DPE-5	32.6-47.1	1/31/2018	Primary	< 0.004	< 27	**0.38**	**2000**	< 0.004	< 24	**0.14**	**560**	**0.021**	**85**	< 0.005	< 20	< 0.0078	< 20	**0.0077**	**31**	< 0.0044	< 20	**0.0082**	**33**	< 0.006	< 19	**0.5569**	**2709**
DPE-5	32.6-47.1	5/2/2018	Primary	< 0.004	< 27	**0.23**	**1200**	< 0.004 J	< 24 J	**0.14**	**560**	**0.014**	**57**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0081**	**32**	< 0.006	< 19	**0.3921**	**1849**
DPE-5	32.6-47.1	5/16/2018	Primary	**0.0045**	**31**	**0.31**	**1700**	< 0.0005 J	< 3.0 J	**0.2**	**800**	**0.021**	**85**	< 0.00062	< 2.5	**0.0028**	**7.2**	**0.0063**	**25**	< 0.00055	< 2.5	**0.0091**	**36**	< 0.00075	< 2.4	**0.5537**	**2684.2**
DPE-6	32.6-47	9/21/2011	Primary	< 0.06	< 400	< 0.061	< 330	< 0.06	< 400	< 0.06	< 200	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	ND	ND
DPE-6	32.6-47	12/7/2011	Primary	**0.18**	**1200**	**0.3**	**2000**	< 0.02	< 100	**0.25**	**990**	**0.21**	**850**	< 0.025	< 100	**0.07**	**200**	**0.035**	**140**	< 0.022	< 100	**0.023**	**91**	< 0.03	< 100	**1.068**	**5471**
DPE-6	32.6-47	3/27/2012	Primary	< 0.0099	< 67	**0.015**	**81**	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.015**	**81**
DPE-6	32.6-47	6/4/2012	Primary	**0.52**	**3500**	**0.18**	**970**	< 0.01	< 60.4	**0.2**	**800**	**0.064**	**260**	< 0.012	< 49	< 0.02	< 50	**0.028**	**110**	< 0.011	< 51	< 0.01	< 39.7	**0.024**	**77**	**1.016**	**5717**
DPE-6	32.6-47	9/17/2012	Primary	**0.066**	**450**	**0.24**	**1300**	< 0.002	< 12	**0.61**	**2400**	**0.15**	**610**	< 0.0025	< 10	**0.047**	**120**	**0.025**	**99**	< 0.0022	< 10	**0.061**	**240**	**0.31**	**990**	**1.509**	**6209**
DPE-6	32.6-47	12/11/2012	Primary	**0.06**	**400**	**1**	**5000**	< 0.03	< 200	**6.7**	**27000**	**2.7**	**11000**	**0.047**	**190**	**0.55**	**1400**	**0.27**	**1100**	< 0.032	< 150	**0.6**	**2000**	< 0.045	< 140	**11.927**	**48090**
DPE-6	32.6-47	7/2/2013	Primary	**0.091**	**620**	**0.13**	**700**	< 0.03	< 200	**0.063**	**250**	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.284**	**1570**
DPE-6	32.6-47	12/17/2013	Primary	**0.033**	**220**	**0.12**	**650**	< 0.002	< 12	**0.4**	**2000**	**0.013**	**53**	< 0.0025	< 10	< 0.0039	< 10	**0.002**	**7.9**	< 0.0022	< 10	**0.015**	**60**	< 0.003	< 9.6	**0.583**	**2990.9**
DPE-6	32.6-47	3/25/2014	Primary	**0.03**	**200**	**0.29**	**1600**	< 0.002	< 12	**0.45**	**1800**	**0.025**	**100**	< 0.0025	< 10	**0.013**	**33**	< 0.002	< 7.9	< 0.0022	< 10	**0.014**	**56**	< 0.003	< 9.6	**0.822**	**3789**
DPE-6	32.6-47	6/26/2014	Primary	**0.09**	**600**	**0.4**	**2000**	< 0.01	< 60	**0.59**	**2300**	**0.028**	**110**	< 0.012	< 49	**0.028**	**72**	< 0.01	< 40	< 0.011	< 51	**0.019**	**75**	< 0.015	< 48	**1.155**	**5157**
DPE-6	32.6-47	9/23/2014	Primary	**0.058**	**390**	**0.41**	**2200**	< 0.015	< 91	**0.48**	**1900**	**0.028**	**110**	< 0.019	< 77	< 0.029	< 74	< 0.015	< 60	< 0.016	< 74	< 0.015	< 60	< 0.022	< 70	**0.976**	**4600**
DPE-6	32.6-47	10/26/2016	Primary	**0.042**	**290**	**0.059**	**320**	< 0.002	< 12	**0.071**	**280**	**0.034**	**140**	< 0.0025	< 10	**0.018**	**46**	**0.0083**	**33**	< 0.0022	< 10	**0.005**	**20**	< 0.003	< 9.6	**0.2373**	**1129**
DPE-6	32.6-47	12/7/2016	Primary	**0.026**	**180**	**0.054**	**290**	< 0.002	< 12	**0.097**	**390**	**0.06**	**200**	< 0.0025	< 10	**0.02**	**50**	**0.019**	**75**	< 0.0022	< 10	**0.01**	**40**	< 0.003	< 9.6	**0.286**	**1225**
DPE-6	32.6-47	12/21/2016	Primary	**0.016**	**110**	**0.037**	**200**	< 0.002	< 12	**0.057**	**230**	**0.046**	**190**	< 0.0025	< 10	**0.013**	**33**	**0.012**	**48**	< 0.0022	< 10	**0.0054**	**21**	< 0.003	< 9.6	**0.1864**	**832**
DPE-6	32.6-47	4/5/2017	Primary	**0.0035**	**24**	**0.0092**	**50**	< 0.002	< 12	**0.0044**	**17**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0171**	**91**
DPE-6	32.6-47	4/12/2017	Primary	**0.049**	**330**	**0.076**	**410**	< 0.002	< 12	**0.098**	**390**	**0.056**	**230**	< 0.0025	< 10	**0.016**	**41**	**0.018**	**71**	< 0.0022	< 10	**0.009**	**36**	< 0.003	< 9.6	**0.322**	**1508**
DPE-6	32.6-47	4/26/2017	Primary	< 0.002	< 14	**0.003**	**16**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.003**	**16**
DPE-6	32.6-47	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-6	32.6-47	5/17/2017	Primary	**0.019**	**130**	**0.047**	**250**	< 0.002	< 12	**0.082**	**330**	**0.058**	**240**	< 0.0025	< 10	**0.027**	**69**	**0.015**	**60**	< 0.0022	< 10	**0.012**	**48**	< 0.003	< 9.6	**0.26**	**1127**
DPE-6	32.6-47	5/24/2017	Primary	**0.036**	**240**	**0.048**	**260**	< 0.0005	< 3.0	**0.067**	**270**	**0.049**	**200**	< 0.00062	< 2.5	**0.0098**	**25**	**0.0087**	**35**	**0.001**	**4.6**	**0.0061**	**24**	**0.0013**	**4.2**	**0.2269**	**1062.8**
DPE-6	32.6-47	10/4/2017	Primary	**0.088**	**600**	**0.11**	**590**	< 0.002	< 12	**0.042**	**170**	**0.041**	**170**	< 0.0025	< 10	**0.011**	**28**	**0.0085**	**34**	< 0.0022	< 10	**0.0063**	**25**	< 0.003	< 9.6	**0.3068**	**1617**
DPE-6	32.6-47	10/11/2017	Primary	**0.053**	**360**	**0.28**	**1500**	< 0.004	< 24	**0.2**	**800**	**0.068**	**280**	< 0.005	< 20	**0.019**	**49**	**0.017**	**67**	< 0.0044	< 20	**0.017**	**67**	< 0.006	< 19	**0.654**	**3123**
DPE-6	32.6-47	10/25/2017	Primary	**0.036**	**240**	**0.24**	**1300**	< 0.004	< 24	**0.18**	**710**	**0.056**	**230**	< 0.005	< 20	**0.015**	**38**	**0.017**	**67**	< 0.0044	< 20	**0.017**	**67**	< 0.006	< 19	**0.561**	**2652**
DPE-6	32.6-47	11/8/2017	Primary	**0.022**	**150**	**0.26**	**1400**	< 0.01	< 60	**0.2**	**800**	**0.034**	**140**	< 0.012	< 49	**0.033**	**84**	**0.017**	**67**	< 0.011	< 51	**0.013**	**52**	< 0.015	< 48	**0.579**	**2693**
DPE-6	32.6-47	11/29/2017	Primary	**0.012**	**82**	**0.084**	**450**	< 0.01	< 60	**0.07**	**300**	**0.015**	**61**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.181**	**893**
DPE-6	32.6-47	12/13/2017	Primary	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	ND	ND

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-6	32.6-47	12/27/2017	Primary	**0.015**	**100**	**0.13**	**700**	< 0.002	< 12	**0.11**	**440**	**0.031 J**	**130 J**	< 0.0025	< 10	**0.013**	**33**	**0.011**	**44**	< 0.0022	< 10	**0.012**	**48**	< 0.003	< 9.6	**0.322**	**1495**
DPE-6	32.6-47	1/31/2018	Primary	**0.034**	**230**	**0.19**	**1000**	< 0.004	< 24	**0.16**	**640**	**0.043**	**170**	< 0.005	< 20	**0.014**	**36**	**0.013**	**52**	< 0.0044	< 20	**0.018**	**71**	< 0.006	< 19	**0.472**	**2199**
DPE-6	32.6-47	5/2/2018	Primary	**0.018**	**120**	**0.14**	**750**	< 0.004 J	< 24 J	**0.044**	**170**	**0.017**	**69**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.219**	**1109**
DPE-6	32.6-47	5/16/2018	Primary	**0.032**	**220**	**0.11**	**590**	< 0.0005 J	< 3.0 J	**0.082**	**330**	**0.03**	**100**	< 0.00062	< 2.5	**0.0017**	**4.4**	**0.0092**	**37**	**0.0012**	**5.6**	**0.0075**	**30**	**0.00099**	**3.2**	**0.27459**	**1320.2**
DPE-7	8-48	2/23/2011	Primary	**57**	**390000**	**13**	**70000**	< 0.83	< 5000	**5.5**	**22000**	**11**	**45000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**86.5**	**527000**
DPE-7	8-48	4/12/2011	Primary	**15**	**100000**	**1.1**	**5900**	< 0.2	< 1000	**0.23**	**910**	**0.82**	**3300**	< 0.3	< 1000	< 0.4	< 1000	< 0.2	< 800	< 0.3	< 1000	< 0.2	< 800	< 0.3	< 1000	**17.15**	**110110**
DPE-7	8-48	12/7/2011	Primary	**3.8**	**26000**	**0.74**	**4000**	< 0.2	< 1000	< 0.2	< 800	**0.77**	**3100**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**5.31**	**33100**
DPE-7	8-48	3/27/2012	Primary	**0.15**	**1000**	**0.22**	**1200**	< 0.004	< 24	**0.04**	**200**	**0.12 J**	**490 J**	< 0.0049	< 20	< 0.0078	< 20	**0.015**	**60**	< 0.0043	< 20	**0.0076**	**30**	< 0.006	< 19	**0.5526**	**2980**
DPE-7	8-48	6/4/2012	Primary	**0.046**	**310**	**0.0037**	**20**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0497**	**330**
DPE-7	8-48	6/4/2012	Duplicate	**0.044**	**300**	**0.0035**	**19**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0475**	**319**
DPE-7	8-48	9/17/2012	Primary	**3.7**	**25000**	**0.24**	**1300**	< 0.002	< 12	**0.073**	**290**	**0.18**	**730**	< 0.0025	< 10	< 0.0039	< 10	**0.0078**	**31**	**0.0022**	**10**	**0.0071**	**28**	< 0.003	< 9.6	**4.2101**	**27389**
DPE-7	8-48	12/11/2012	Primary	**6.3**	**43000**	< 0.77	< 4100	< 0.75	< 4500	< 0.75	< 3000	< 0.75	< 3000	< 0.93	< 3800	< 1.5	< 3800	< 0.75	< 3000	< 0.81	< 3700	< 0.75	< 3000	< 1.1	< 3500	**6.3**	**43000**
DPE-7	8-48	3/26/2013	Primary	**4.1**	**28000**	< 0.31	< 1700	< 0.3	< 2000	< 0.3	< 1000	< 0.3	< 1000	< 0.37	< 1500	< 0.59	< 1500	< 0.3	< 1000	< 0.32	< 1500	< 0.3	< 1000	< 0.45	< 1400	**4.1**	**28000**
DPE-7	8-48	7/2/2013	Primary	**3.2**	**22000**	**0.17**	**910**	< 0.1	< 600	< 0.1	< 400	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**3.37**	**22910**
DPE-7	8-48	9/24/2013	Primary	**3.7**	**25000**	**0.2**	**1000**	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.9**	**26000**
DPE-7	8-48	12/17/2013	Primary	**1.5**	**10000**	**0.065**	**350**	< 0.05	< 300	< 0.05	< 200	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**1.565**	**10350**
DPE-7	8-48	3/25/2014	Primary	**0.98**	**6700**	**0.053**	**290**	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**1.033**	**6990**
DPE-7	8-48	6/26/2014	Primary	**2.7**	**18000**	**0.21**	**1100**	< 0.05	< 300	**0.14**	**560**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**3.05**	**19660**
DPE-7	8-48	9/23/2014	Primary	**2.5**	**17000**	**0.11**	**590**	< 0.06	< 400	< 0.06	< 200	< 0.06	< 200	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**2.61**	**17590**
DPE-7	8-48	12/9/2014	Primary	**1.1**	**7500**	**0.043**	**230**	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.143**	**7730**
DPE-7	8-48	3/26/2015	Primary	**0.9**	**6000**	**0.035**	**190**	< 0.015	< 91	< 0.015	< 60	< 0.015	< 61	< 0.019	< 77	< 0.029	< 74	< 0.015	< 60	< 0.016	< 74	< 0.015	< 60	< 0.022	< 70	**0.935**	**6190**
DPE-7	8-48	12/16/2015	Primary	**0.22**	**1500**	**0.016**	**86**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.236**	**1586**
DPE-7	8-48	11/2/2016	Primary	**0.84**	**5700**	**0.068**	**370**	< 0.01	< 60	**0.041**	**160**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.949**	**6230**
DPE-7	8-48	11/16/2016	Primary	**0.84**	**5700**	**0.07**	**400**	< 0.01	< 60	**0.037**	**150**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.947**	**6250**
DPE-7	8-48	12/14/2016	Primary	**0.72**	**4900**	**0.059**	**320**	< 0.02	< 100	**0.026**	**100**	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.805**	**5320**
DPE-7	8-48	12/27/2016	Primary	**0.58**	**3900**	**0.051**	**270**	< 0.02	< 100	< 0.02	< 80	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.631**	**4170**
DPE-7	8-48	3/22/2017	Primary	**1.6**	**11000**	**0.088**	**470**	< 0.005	< 30	**0.011**	**44**	**0.022**	**89**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**1.721**	**11603**
DPE-7	8-48	4/5/2017	Primary	**0.73**	**5000**	**0.14**	**750**	< 0.005	< 30	**0.042**	**170**	**0.02**	**80**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	**0.0072**	**29**	< 0.0075	< 24	**0.9392**	**6029**
DPE-7	8-48	4/12/2017	Primary	**0.076**	**520**	**0.0021**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0781**	**531**
DPE-7	8-48	4/19/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-7	8-48	4/19/2017	Primary	**0.14**	**950**	**0.01**	**50**	< 0.002	< 12	**0.0049**	**19**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1549**	**1019**
DPE-7	8-48	4/26/2017	Primary	**0.71**	**4800**	**0.068**	**370**	< 0.01	< 60	**0.044**	**170**	**0.013**	**53**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.835**	**5393**
DPE-7	8-48	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-7	8-48	5/10/2017	Primary	**0.85**	**5800**	**0.055**	**300**	< 0.01	< 60	**0.026**	**100**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.931**	**6200**
DPE-7	8-48	5/10/2017	Primary	**0.89**	**6000**	**0.046**	**250**	< 0.01	< 60	**0.023**	**91**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.959**	**6341**
DPE-7	8-48	5/17/2017	Primary	**0.99**	**6700**	**0.077**	**410**	< 0.01	< 60	**0.036**	**140**	**0.01**	**40**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.113**	**7290**
DPE-7	8-48	5/24/2017	Primary	**1.3**	**8800**	**0.074**	**400**	< 0.01	< 60	**0.041**	**160**	**0.018**	**73**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.433**	**9433**
DPE-7	8-48	10/4/2017	Primary	**0.72**	**4900**	**1.7**	**9100**	< 0.002	< 12	**0.051**	**200**	**0.051**	**210**	< 0.0025	< 10	< 0.0039	< 10	**0.0022**	**8.7**	< 0.0022	< 10	**0.0037**	**15**	< 0.003	< 9.6	**2.5279**	**14433.7**
DPE-7	8-48	10/11/2017	Primary	**1.2**	**8200**	**0.08**	**400**	< 0.004	< 24	**0.25**	**990**	**0.017**	**69**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**1.547**	**9659**
DPE-7	8-48	10/25/2017	Primary	**1.8**	**12000**	**0.079**	**430**	< 0.004	< 24	**0.13**	**520**	**0.019**	**77**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**2.028**	**13027**
DPE-7	8-48	11/8/2017	Primary	**1.6**	**11000**	**0.073**	**390**	< 0.01	< 60	**0.087**	**350**	**0.013**	**53**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.773**	**11793**
DPE-7	8-48	11/29/2017	Primary	**1.7**	**12000**	**0.06**	**300**	< 0.02	< 100	**0.061**	**240**	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**1.821**	**12540**
DPE-7	8-48	12/13/2017	Primary	**2.4**	**16000**	**0.083**	**450**	< 0.004	< 24	**0.079**	**310**	**0.022**	**89**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**2.584**	**16849**
DPE-7	8-48	12/27/2017	Primary	**1.2**	**8200**	**0.049**	**260**	< 0.01	< 60	**0.051**	**200**	**0.011 J**	**45 J**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.311**	**8705**
DPE-7	8-48	1/31/2018	Primary	**1.4**	**9500**	**0.055**	**300**	< 0.004	< 24	**0.062**	**250**	**0.0079**	**32**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**1.5249**	**10082**
DPE-7	8-48	5/2/2018	Primary	**0.89**	**6000**	**0.049**	**260**	< 0.002 J	< 12 J	**0.02**	**80**	**0.019**	**77**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.978**	**6417**
DPE-7	8-48	5/16/2018	Primary	**1.1**	**7500**	**0.05**	**300**	< 0.0005	< 3.0	**0.069**	**270**	**0.013**	**53**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0016**	**6.4**	**0.00091**	**2.9**	**1.23451**	**8132.3**
DPE-8	32.6-47	9/21/2011	Primary	< 0.0099	< 67	< 0.01	< 50	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	ND	ND

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-8	32.6-47	12/7/2011	Primary	**0.049**	**330**	**0.084**	**450**	< 0.004	< 24	**0.091**	**360**	**0.072**	**290**	< 0.0049	< 20	**0.032**	**82**	**0.0096**	**38**	< 0.0043	< 20	**0.0091**	**36**	< 0.006	< 19	**0.3467**	**1586**
DPE-8	32.6-47	3/27/2012	Primary	**0.56**	**3800**	**0.84**	**4500**	< 0.01	< 60.4	**0.61**	**2400**	**0.52**	**2100**	< 0.012	< 49	< 0.02	< 50	**0.12**	**480**	< 0.011	< 51	**0.021**	**83**	< 0.015	< 48	**2.671**	**13363**
DPE-8	32.6-47	6/4/2012	Primary	**0.65**	**4400**	**0.22**	**1200**	< 0.04	< 200	**0.24**	**950**	**0.074**	**300**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.184**	**6850**
DPE-8	32.6-47	9/17/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.068**	**270**	**0.089**	**360**	< 0.0025	< 10	**0.035**	**90**	< 0.002	< 7.9	< 0.0022	< 10	**0.015**	**60**	< 0.003	< 9.6	**0.207**	**780**
DPE-8	32.6-47	12/11/2012	Primary	**0.026**	**180**	**0.033**	**180**	< 0.004	< 24	**0.013**	**52**	**0.014**	**57**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.086**	**469**
DPE-8	32.6-47	12/17/2013	Primary	**0.009**	**61**	**0.2**	**1000**	< 0.005	< 30	**0.15**	**600**	**0.0074**	**30**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.3664**	**1691**
DPE-8	32.6-47	3/25/2014	Primary	**0.028**	**190**	**0.27**	**1500**	< 0.005	< 30	**0.093**	**370**	**0.012**	**49**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.403**	**2109**
DPE-8	32.6-47	6/26/2014	Primary	**0.051**	**350**	**0.032**	**170**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.083**	**520**
DPE-8	32.6-47	9/23/2014	Primary	**0.029**	**200**	**0.023**	**120**	< 0.002	< 12	**0.0068**	**27**	**0.0032**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.062**	**360**
DPE-8	32.6-47	10/26/2016	Primary	**0.034**	**230**	**0.16**	**860**	< 0.002	< 12	**0.056**	**220**	**0.03**	**100**	< 0.0025	< 10	**0.0072**	**18**	**0.0058**	**23**	< 0.0022	< 10	**0.0036**	**14**	< 0.003	< 9.6	**0.2966**	**1465**
DPE-8	32.6-47	12/7/2016	Primary	**0.038**	**260**	**0.017**	**91**	< 0.001	< 6.0	**0.024**	**95**	**0.023**	**93**	< 0.0012	< 4.9	**0.0088**	**23**	**0.0044**	**17**	**0.0013**	**6.0**	**0.0043**	**17**	< 0.0015	< 4.8	**0.1208**	**602**
DPE-8	32.6-47	12/21/2016	Primary	**0.031**	**210**	**0.017**	**91**	< 0.001	< 6.0	**0.02**	**80**	**0.022**	**89**	< 0.0012	< 4.9	**0.0073**	**19**	**0.0037**	**15**	**0.0013**	**6.0**	**0.0031**	**12**	< 0.0015	< 4.8	**0.1054**	**522**
DPE-8	32.6-47	4/5/2017	Primary	< 0.002	< 14	**0.004**	**22**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.004**	**22**
DPE-8	32.6-47	4/12/2017	Primary	**0.067**	**460**	**0.031**	**170**	< 0.002	< 12	**0.044**	**170**	**0.033**	**130**	< 0.0025	< 10	**0.015**	**38**	**0.0062**	**25**	< 0.0022	< 10	**0.0048**	**19**	< 0.003	< 9.6	**0.201**	**1012**
DPE-8	32.6-47	4/26/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-8	32.6-47	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-8	32.6-47	5/17/2017	Primary	**0.01**	**70**	**0.049**	**260**	< 0.002	< 12	**0.028**	**110**	**0.054**	**220**	< 0.0025	< 10	**0.033**	**84**	**0.0084**	**33**	**0.0023**	**11**	**0.0056**	**22**	< 0.003	< 9.6	**0.1903**	**810**
DPE-8	32.6-47	5/24/2017	Primary	**0.015**	**100**	**0.014**	**75**	**0.00063**	**3.8**	**0.018**	**71**	**0.02**	**80**	< 0.00062	< 2.5	**0.014**	**36**	**0.003**	**12**	**0.0015**	**6.9**	**0.0037**	**15**	**0.0015**	**4.8**	**0.09133**	**404.5**
DPE-8	32.6-47	10/4/2017	Primary	**0.026**	**180**	**0.036**	**190**	< 0.002	< 12	**0.0091**	**36**	**0.037**	**150**	< 0.0025	< 10	**0.019**	**49**	**0.0024**	**9.5**	< 0.0022	< 10	**0.0039**	**15**	< 0.003	< 9.6	**0.1334**	**629.5**
DPE-8	32.6-47	10/11/2017	Primary	**0.05**	**300**	**0.041**	**220**	< 0.002	< 12	**0.049**	**190**	**0.059**	**240**	< 0.0025	< 10	**0.033**	**84**	**0.0084**	**33**	< 0.0022	< 10	**0.0065**	**26**	**0.0038**	**12**	**0.2507**	**1105**
DPE-8	32.6-47	10/25/2017	Primary	**0.044**	**300**	**0.036**	**190**	< 0.004	< 24	**0.077**	**310**	**0.061**	**250**	< 0.005	< 20	**0.02**	**50**	**0.0073**	**29**	< 0.0044	< 20	**0.0062**	**25**	< 0.006	< 19	**0.2515**	**1154**
DPE-8	32.6-47	11/8/2017	Primary	**0.022**	**150**	**0.02**	**100**	< 0.004	< 24	**0.061**	**240**	**0.039**	**160**	< 0.005	< 20	**0.0091**	**23**	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1511**	**673**
DPE-8	32.6-47	11/29/2017	Primary	**0.013**	**88**	**0.016**	**86**	< 0.004	< 24	**0.044**	**170**	**0.027**	**110**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1**	**454**
DPE-8	32.6-47	12/13/2017	Primary	< 0.004	< 27	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-8	32.6-47	5/2/2018	Primary	**0.013**	**88**	**0.015**	**81**	< 0.002 J	< 12 J	**0.0054**	**21**	**0.02**	**80**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0534**	**270**
DPE-8	32.6-47	5/16/2018	Primary	**0.042**	**290**	**0.03**	**200**	**0.0011 J**	**6.6 J**	**0.016**	**64**	**0.029**	**120**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0018**	**7.1**	**0.0013**	**6.0**	**0.0017**	**6.7**	**0.00078**	**2.5**	**0.12368**	**702.9**
DPE-9	32.9-47.5	9/21/2011	Primary	< 0.05	< 300	**0.06**	**300**	< 0.05	< 300	**0.063**	**250**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**0.123**	**550**
DPE-9	32.9-47.5	12/7/2011	Primary	**0.005**	**34**	**0.0039**	**21**	< 0.002	< 12	**0.0045**	**18**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0134**	**73**
DPE-9	32.9-47.5	3/27/2012	Primary	**0.075**	**510**	**0.11**	**590**	< 0.002	< 12	**0.066**	**260**	**0.049**	**200**	< 0.0025	< 10	**0.023**	**59**	**0.028**	**110**	**0.017**	**79**	**0.03**	**100**	**0.015**	**48**	**0.413**	**1956**
DPE-9	32.9-47.5	6/4/2012	Primary	**0.12**	**820**	**0.041**	**220**	< 0.01	< 60.4	**0.05**	**200**	**0.014**	**57**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.225**	**1297**
DPE-9	32.9-47.5	9/17/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.002**	**8.1**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.002**	**8.1**
DPE-9	32.9-47.5	9/17/2012	Duplicate	**0.0021**	**14**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0043**	**22.9**
DPE-9	32.9-47.5	12/11/2012	Primary	**0.053**	**360**	**0.061**	**330**	< 0.002	< 12	**0.13**	**520**	**0.046**	**190**	< 0.0025	< 10	**0.0063**	**16**	**0.1**	**400**	< 0.0022	< 10	**0.0085**	**34**	**0.2**	**600**	**0.6048**	**2450**
DPE-9	32.9-47.5	12/17/2013	Primary	< 0.1	< 700	< 0.1	< 500	< 0.1	< 600	< 0.1	< 400	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	ND	ND
DPE-9	32.9-47.5	3/25/2014	Primary	**0.06**	**400**	**0.06**	**300**	< 0.005	< 30	**0.041**	**160**	**0.017**	**69**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.178**	**929**
DPE-9	32.9-47.5	6/26/2014	Primary	**0.075**	**510**	**0.064**	**340**	< 0.002	< 12	**0.034**	**130**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0023**	**11**	< 0.002	< 7.9	< 0.003	< 9.6	**0.1863**	**1036**
DPE-9	32.9-47.5	9/23/2014	Primary	**0.02**	**100**	**0.013**	**70**	< 0.002	< 12	**0.0083**	**33**	**0.0025**	**10**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0438**	**213**
DPE-9	32.9-47.5	12/16/2015	Primary	**0.028**	**190**	**0.064**	**340**	< 0.002	< 12	**0.0081**	**32**	**0.0049**	**20**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.105**	**582**
DPE-9	32.9-47.5	10/4/2017	Primary	**0.039**	**260**	**0.016**	**86**	< 0.002	< 12	**0.0042**	**17**	**0.0067**	**27**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0023**	**11**	< 0.002	< 7.9	< 0.003	< 9.6	**0.0682**	**401**
DPE-9	32.9-47.5	10/11/2017	Primary	**0.026**	**180**	**0.02**	**100**	< 0.002	< 12	**0.0062**	**25**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0522**	**305**
DPE-9	32.9-47.5	10/25/2017	Primary	**0.034**	**230**	**0.026**	**140**	< 0.002	< 12	**0.011**	**44**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	**0.002**	**7.9**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.073**	**421.9**
DPE-9	32.9-47.5	11/8/2017	Primary	**0.056**	**380**	**0.028**	**150**	< 0.002	< 12	**0.015**	**60**	**0.0033**	**13**	< 0.0025	< 10	< 0.0039	< 10	**0.0034**	**13**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1057**	**616**
DPE-9	32.9-47.5	5/2/2018	Primary	**0.049**	**330**	**0.015**	**81**	< 0.002 J	< 12 J	< 0.002	< 7.9	**0.0031**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0671**	**424**
DPE-9	32.9-47.5	5/16/2018	Primary	**0.049**	**330**	**0.023**	**120**	< 0.0005 J	< 3.0 J	**0.003**	**12**	**0.0027**	**11**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	**0.00057**	**2.6**	< 0.0005	< 2.0	**0.00075**	**2.4**	**0.08022**	**482.8**
DPE-10	33-47.4	9/21/2011	Primary	< 0.0099	< 67	**0.022**	**120**	< 0.01	< 60.4	**0.023**	**91**	**0.011**	**45**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.056**	**256**
DPE-10	33-47.4	12/7/2011	Primary	**0.12**	**820**	**0.11**	**590**	< 0.02	< 100	**0.23**	**910**	**0.12**	**490**	< 0.025	< 100	**0.086**	**220**	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.666**	**3030**
DPE-10	33-47.4	3/27/2012	Primary	**0.25**	**1700**	**0.69**	**3700**	< 0.01	< 60.4	**0.73**	**2900**	**0.49**	**2000**	< 0.012	< 49	**0.19**	**490**	**0.12**	**480**	**0.078**	**360**	**0.12**	**480**	**0.066**	**210**	**2.734**	**12320**
DPE-10	33-47.4	6/4/2012	Primary	**0.75**	**5100**	**0.24**	**1300**	< 0.03	< 200	**0.33**	**1300**	**0.096**	**390**	< 0.037	< 150	< 0.059	< 150	**0.038**	**150**	< 0.032	< 150	< 0.03	< 100	**0.05**	**200**	**1.504**	**8440**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-10	33-47.4	9/17/2012	Primary	**0.056**	**380**	**0.1**	**500**	< 0.002	< 12	**0.11**	**440**	**0.062**	**250**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.328**	**1570**
DPE-10	33-47.4	12/11/2012	Primary	**0.041**	**280**	**0.055**	**300**	< 0.002	< 12	**0.07**	**300**	**0.033**	**130**	< 0.0025	< 10	< 0.0039	< 10	**0.003**	**12**	**0.0023**	**11**	**0.0035**	**14**	< 0.003	< 9.6	**0.2078**	**1047**
DPE-10	33-47.4	12/17/2013	Primary	**0.056**	**380**	**0.037**	**200**	< 0.002	< 12	**0.025**	**99**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.128**	**719**
DPE-10	33-47.4	3/25/2014	Primary	**0.085**	**580**	**0.08**	**400**	< 0.002	< 12	**0.015**	**60**	**0.0079**	**32**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1879**	**1072**
DPE-10	33-47.4	6/26/2014	Primary	**0.052**	**350**	**0.042**	**230**	< 0.002	< 12	**0.0093**	**37**	**0.0045**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1078**	**635**
DPE-10	33-47.4	10/25/2017	Primary	**0.045**	**310**	**0.016**	**86**	< 0.004	< 24	**0.01**	**40**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.071**	**436**
DPE-10	33-47.4	11/8/2017	Primary	**0.055**	**370**	**0.019**	**100**	< 0.004	< 24	**0.0077**	**31**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0817**	**501**
DPE-10	33-47.4	11/29/2017	Primary	**0.033**	**220**	**0.023**	**120**	< 0.004	< 24	**0.0098**	**39**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0658**	**379**
DPE-10	33-47.4	12/13/2017	Primary	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	ND	ND
DPE-10	33-47.4	5/2/2018	Primary	**0.029**	**200**	**0.011**	**59**	< 0.002 J	< 12 J	**0.0026**	**10**	**0.002**	**8.1**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0446**	**277.1**
DPE-10	33-47.4	5/16/2018	Primary	**0.027**	**180**	**0.014**	**75**	< 0.0005 J	< 3.0 J	**0.0031**	**12**	**0.0017**	**6.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00081**	**3.2**	**0.00082**	**3.8**	**0.00055**	**2.2**	< 0.00075	< 2.4	**0.04798**	**283.1**
DPE-11	33-47.5	9/21/2011	Primary	< 0.05	< 300	< 0.051	< 270	< 0.05	< 300	**0.055**	**220**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**0.055**	**220**
DPE-11	33-47.5	12/7/2011	Primary	**0.22**	**1500**	**0.6**	**3000**	< 0.04	< 200	**1**	**4000**	**0.62**	**2500**	< 0.049	< 200	< 0.078	< 200	**0.071**	**280**	< 0.043	< 200	**0.04**	**200**	< 0.06	< 200	**2.551**	**11480**
DPE-11	33-47.5	3/27/2012	Primary	**0.052**	**350**	**0.18**	**970**	< 0.04	< 200	**0.3**	**1000**	**0.2**	**800**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.732**	**3120**
DPE-11	33-47.5	3/27/2012	Duplicate	**0.053**	**360**	**0.18**	**970**	< 0.04	< 200	**0.28**	**1100**	**0.19**	**770**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.703**	**3200**
DPE-11	33-47.5	6/4/2012	Primary	**0.49**	**3300**	**0.16**	**860**	< 0.03	< 200	**0.22**	**870**	**0.064**	**260**	< 0.037	< 150	< 0.059	< 150	**0.033**	**130**	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.967**	**5420**
DPE-11	33-47.5	9/17/2012	Primary	**0.021**	**140**	**0.026**	**140**	< 0.002	< 12	**0.013**	**52**	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.074**	**389**
DPE-11	33-47.5	12/11/2012	Primary	**0.085**	**580**	**0.12 J**	**650 J**	< 0.002	< 12	**0.18**	**710**	**0.47 J**	**1900 J**	**0.014**	**57**	**0.18**	**460**	**0.0099**	**39**	**0.012**	**56**	**0.11**	**440**	**0.024**	**77**	**1.2049**	**4969**
DPE-11	33-47.5	12/11/2012	Duplicate	**0.065**	**440**	**0.13**	**700**	< 0.002	< 12	**0.17**	**670**	**0.42**	**1700**	**0.016**	**65**	**0.18**	**460**	**0.011**	**44**	**0.014**	**65**	**0.11**	**440**	**0.028**	**90**	**1.144**	**4674**
DPE-11	33-47.5	9/24/2013	Primary	**0.042**	**290**	**0.053**	**290**	< 0.002	< 12	**0.017**	**67**	**0.0036**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1156**	**662**
DPE-11	33-47.5	12/17/2013	Primary	**0.0088**	**60**	**0.049**	**260**	< 0.002	< 12	**0.0097**	**39**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0675**	**359**
DPE-11	33-47.5	3/25/2014	Primary	**0.009**	**61**	**0.026**	**140**	< 0.002	< 12	**0.0055**	**22**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0405**	**223**
DPE-11	33-47.5	6/26/2014	Primary	**0.0074**	**50**	**0.0078**	**42**	< 0.002	< 12	**0.0022**	**8.7**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0174**	**100.7**
DPE-11	33-47.5	9/23/2014	Primary	**0.012**	**82**	**0.013**	**70**	< 0.002	< 12	**0.0045**	**18**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0295**	**170**
DPE-11	33-47.5	10/4/2017	Primary	**0.018**	**120**	**0.024**	**130**	< 0.002	< 12	**0.01**	**40**	**0.0076**	**31**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0596**	**321**
DPE-11	33-47.5	10/11/2017	Primary	**0.018**	**120**	**0.021**	**110**	< 0.002	< 12	**0.02**	**80**	**0.007**	**28**	< 0.0025	< 10	< 0.0039	< 10	**0.0032**	**13**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0692**	**351**
DPE-11	33-47.5	10/25/2017	Primary	**0.014**	**95**	**0.017**	**91**	**0.00078**	**4.7**	**0.016**	**64**	**0.0062**	**25**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0015**	**6.0**	< 0.00055	< 2.5	**0.0011**	**4.4**	**0.0012**	**3.8**	**0.05778**	**293.9**
DPE-11	33-47.5	11/8/2017	Primary	**0.0041**	**28**	**0.0087**	**47**	< 0.002	< 12	**0.0087**	**35**	**0.0032**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0247**	**123**
DPE-11	33-47.5	5/2/2018	Primary	**0.01**	**70**	**0.019**	**100**	< 0.002 J	< 12 J	**0.0043**	**17**	**0.0054**	**22**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0387**	**209**
DPE-11	33-47.5	5/16/2018	Primary	**0.007**	**48**	**0.013**	**70**	< 0.0005 J	< 3.0 J	**0.0069**	**27**	**0.0043**	**17**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0014**	**5.6**	**0.00076**	**3.5**	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.03336**	**171.1**
DPE-12	32.5-46.9	9/21/2011	Primary	< 0.06	< 400	< 0.061	< 330	< 0.06	< 400	< 0.06	< 200	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	ND	ND
DPE-12	32.5-46.9	12/7/2011	Primary	**0.27**	**1800**	**0.43**	**2300**	< 0.05	< 300	**0.38**	**1500**	**0.25**	**1000**	< 0.062	< 250	< 0.098	< 250	**0.05**	**200**	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**1.38**	**6800**
DPE-12	32.5-46.9	3/27/2012	Primary	**0.21**	**1400**	**0.37**	**2000**	< 0.04	< 200	**0.058**	**230**	**0.17**	**690**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.808**	**4320**
DPE-12	32.5-46.9	6/4/2012	Primary	**0.46**	**3100**	**0.15**	**810**	< 0.03	< 200	**0.2**	**800**	**0.057**	**230**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.867**	**4940**
DPE-12	32.5-46.9	9/17/2012	Primary	< 0.002	< 14	**0.11**	**590**	< 0.002	< 12	**1.1**	**4400**	**0.44**	**1800**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.045**	**180**	< 0.003	< 9.6	**1.695**	**6970**
DPE-12	32.5-46.9	12/11/2012	Primary	< 0.04	< 300	**0.58**	**3100**	< 0.04	< 200	**0.77**	**3100**	**0.55**	**2200**	< 0.049	< 200	**0.12**	**310**	< 0.04	< 200	< 0.043	< 200	**0.17**	**670**	< 0.06	< 200	**2.19**	**9380**
DPE-12	32.5-46.9	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-12	32.5-46.9	12/17/2013	Primary	**0.015**	**100**	**0.0066**	**36**	< 0.002	< 12	**0.0025**	**9.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0241**	**145.9**
DPE-12	32.5-46.9	3/25/2014	Primary	**0.019**	**130**	**0.05**	**300**	< 0.002	< 12	**0.019**	**75**	**0.0021**	**8.5**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0901**	**513.5**
DPE-12	32.5-46.9	6/26/2014	Primary	**0.0094**	**64**	**0.011**	**59**	< 0.002	< 12	**0.0041**	**16**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0245**	**139**
DPE-12	32.5-46.9	9/23/2014	Primary	**0.014**	**95**	**0.054**	**290**	< 0.005	< 30	**0.017**	**67**	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.085**	**452**
DPE-12	32.5-46.9	10/4/2017	Primary	**0.012**	**82**	**0.044**	**240**	< 0.002	< 12	**0.013**	**52**	**0.019**	**77**	< 0.0025	< 10	< 0.0039	< 10	**0.0022**	**8.7**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0902**	**459.7**
DPE-12	32.5-46.9	10/11/2017	Primary	**0.013**	**88**	**0.066**	**360**	< 0.002	< 12	**0.047**	**190**	**0.04**	**200**	< 0.0025	< 10	**0.0062**	**16**	**0.017**	**67**	< 0.0022	< 10	**0.0058**	**23**	< 0.003	< 9.6	**0.195**	**944**
DPE-12	32.5-46.9	10/25/2017	Primary	**0.011**	**75**	**0.09**	**500**	< 0.004	< 24	**0.071**	**280**	**0.055**	**220**	< 0.005	< 20	< 0.0078	< 20	**0.023**	**91**	< 0.0044	< 20	**0.007**	**28**	< 0.006	< 19	**0.257**	**1194**
DPE-12	32.5-46.9	11/8/2017	Primary	**0.0096**	**65**	**0.082**	**440**	< 0.004	< 24	**0.065**	**260**	**0.045**	**180**	< 0.005	< 20	< 0.0078	< 20	**0.019**	**75**	< 0.0044	< 20	**0.0059**	**23**	< 0.006	< 19	**0.2265**	**1043**
DPE-12	32.5-46.9	11/29/2017	Primary	**0.0053**	**36**	**0.056**	**300**	< 0.004	< 24	**0.048**	**190**	**0.025**	**100**	< 0.005	< 20	< 0.0078	< 20	**0.015**	**60**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1493**	**686**
DPE-12	32.5-46.9	12/13/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-12	32.5-46.9	12/27/2017	Primary	**0.0036**	**24**	**0.032**	**170**	< 0.002	< 12	**0.038**	**150**	**0.03 J**	**100 J**	< 0.0025	< 10	< 0.0039	< 10	**0.0099**	**39**	< 0.0022	< 10	**0.0028**	**11**	< 0.003	< 9.6	**0.1163**	**494**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-12	32.5-46.9	1/31/2018	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-12	32.5-46.9	5/2/2018	Primary	**0.0057**	**39**	**0.028**	**150**	< 0.002 J	< 12 J	**0.0096**	**38**	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0573**	**284**
DPE-12	32.5-46.9	5/16/2018	Primary	**0.012**	**82**	**0.044**	**240**	< 0.0005	< 3.0	**0.016**	**64**	**0.026**	**110**	**0.00063**	**2.6**	< 0.00098	< 2.5	**0.0068**	**27**	**0.0012**	**5.6**	**0.00092**	**3.7**	**0.001**	**3.2**	**0.10855**	**538.1**
DPE-13	33-47.5	9/20/2011	Primary	< 0.018	< 120	**0.056**	**300**	< 0.01	< 60.4	< 0.01	< 39.7	**0.049**	**200**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.105**	**500**
DPE-13	33-47.5	12/7/2011	Primary	< 0.0099	< 67	**0.01**	**50**	< 0.01	< 60.4	< 0.01	< 39.7	**0.011**	**45**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.021**	**95**
DPE-13	33-47.5	3/27/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-13	33-47.5	6/4/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-13	33-47.5	9/18/2012	Primary	**0.038**	**260**	**0.089**	**480**	< 0.002	< 12	**0.0066**	**26**	**0.074**	**300**	< 0.0025	< 10	< 0.0039	< 10	**0.0093**	**37**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2169**	**1103**
DPE-13	33-47.5	12/10/2012	Primary	**0.0029**	**20**	**0.0041**	**22**	< 0.002	< 12	< 0.002	< 7.9	**0.0027 J**	**11 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0097**	**53**
DPE-13	33-47.5	12/17/2013	Primary	**0.086**	**580**	**0.037**	**200**	< 0.002	< 12	< 0.002	< 7.9	**0.0051**	**21**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1281**	**801**
DPE-13	33-47.5	3/25/2014	Primary	**0.68**	**4600**	**0.028**	**150**	< 0.002	< 12	**0.0033**	**13**	**0.008**	**32**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.7193**	**4795**
DPE-13	33-47.5	6/26/2014	Primary	**0.043**	**290**	**0.024**	**130**	< 0.002	< 12	**0.0031**	**12**	**0.003**	**12**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0731**	**444**
DPE-13	33-47.5	9/23/2014	Primary	**0.021**	**140**	**0.037**	**200**	< 0.002	< 12	**0.0025**	**9.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0605**	**349.9**
DPE-13	33-47.5	6/16/2015	Primary	**0.0063**	**43**	**0.042**	**230**	< 0.002	< 12	**0.003**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0513**	**285**
DPE-13	33-47.5	10/4/2017	Primary	**0.024**	**160**	**0.047**	**250**	< 0.002	< 12	**0.015**	**60**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0055**	**22**	< 0.003	< 9.6	**0.0915**	**492**
DPE-13	33-47.5	10/11/2017	Primary	**0.037**	**250**	**0.13**	**700**	< 0.002	< 12	**0.027**	**110**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	**0.0022**	**8.7**	< 0.0022	< 10	**0.0088**	**35**	< 0.003	< 9.6	**0.205**	**1103.7**
DPE-13	33-47.5	10/25/2017	Primary	**0.0098**	**67**	**0.038**	**200**	< 0.002	< 12	**0.019**	**75**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	< 0.003	< 9.6	**0.0688**	**349.9**
DPE-13	33-47.5	11/8/2017	Primary	**0.0068**	**46**	**0.023**	**120**	< 0.002	< 12	**0.013**	**52**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.003**	**12**	< 0.003	< 9.6	**0.0458**	**230**
DPE-13	33-47.5	11/29/2017	Primary	**0.0075**	**51**	**0.021**	**110**	< 0.004	< 24	**0.011**	**44**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0395**	**205**
DPE-13	33-47.5	12/13/2017	Primary	**0.01**	**70**	**0.025**	**130**	< 0.002	< 12	**0.014**	**56**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.049**	**256**
DPE-13	33-47.5	5/2/2018	Primary	**0.016**	**110**	**0.03**	**200**	< 0.002 J	< 12 J	**0.0072**	**29**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0022**	**8.7**	< 0.003	< 9.6	**0.0554**	**347.7**
DPE-13	33-47.5	5/16/2018	Primary	**0.007**	**48**	**0.035**	**190**	< 0.0005	< 3.0	**0.015**	**60**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	**0.00063**	**2.9**	**0.0052**	**21**	< 0.00075	< 2.4	**0.06403**	**326.7**
DPE-14	33.9-48.4	9/21/2011	Primary	< 0.0099	< 67	**0.026**	**140**	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.026**	**140**
DPE-14	33.9-48.4	12/7/2011	Primary	**0.18**	**1200**	**0.28**	**1500**	< 0.04	< 200	< 0.04	< 200	**0.094**	**380**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.554**	**3080**
DPE-14	33.9-48.4	3/27/2012	Primary	**0.59**	**4000**	**0.61**	**3300**	< 0.04	< 200	< 0.04	< 200	**0.49**	**2000**	< 0.049	< 200	< 0.078	< 200	**0.045**	**180**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.735**	**9480**
DPE-14	33.9-48.4	6/4/2012	Primary	**0.74**	**5000**	**0.26**	**1400**	< 0.03	< 200	**0.3**	**1000**	**0.094**	**380**	< 0.037	< 150	< 0.059	< 150	**0.035**	**140**	< 0.032	< 150	< 0.03	< 100	**0.044**	**140**	**1.473**	**8060**
DPE-14	33.9-48.4	9/17/2012	Primary	**0.004**	**27**	**0.0091**	**49**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0131**	**76**
DPE-14	33.9-48.4	12/11/2012	Primary	**0.16**	**1100**	**0.65**	**3500**	< 0.002	< 12	**0.0085**	**34**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	**0.017**	**67**	< 0.0022	< 10	**0.0044**	**17**	< 0.003	< 9.6	**0.8619**	**4807**
DPE-14	33.9-48.4	3/26/2013	Primary	**0.22**	**1500**	**0.37**	**2000**	< 0.01	< 60	< 0.01	< 40	**0.05**	**200**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.64**	**3700**
DPE-14	33.9-48.4	12/19/2013	Primary	**0.044**	**300**	**0.1**	**500**	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.144**	**800**
DPE-14	33.9-48.4	3/25/2014	Primary	**0.0084**	**57**	**0.0067**	**36**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0151**	**93**
DPE-14	33.9-48.4	12/9/2014	Primary	**0.017**	**120**	**0.048**	**260**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.065**	**380**
DPE-14	33.9-48.4	3/26/2015	Primary	**0.046**	**310**	**0.11**	**590**	< 0.002	< 12	**0.0028**	**11**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1588**	**911**
DPE-14	33.9-48.4	6/16/2015	Primary	**0.033**	**220**	**0.036**	**190**	< 0.002	< 12	**0.002**	**7.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.071**	**417.9**
DPE-14	33.9-48.4	12/16/2015	Primary	**0.025**	**170**	**0.048**	**260**	< 0.002	< 12	**0.0032**	**13**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0762**	**443**
DPE-14	33.9-48.4	10/26/2016	Primary	**0.17**	**1200**	**0.075**	**400**	< 0.004	< 24	**0.024**	**95**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.269**	**1695**
DPE-14	33.9-48.4	12/7/2016	Primary	**0.25**	**1700**	**0.097**	**520**	< 0.004	< 24	**0.024**	**95**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0041**	**16**	< 0.006	< 19	**0.3751**	**2331**
DPE-14	33.9-48.4	12/21/2016	Primary	**0.19**	**1300**	**0.072**	**390**	< 0.005	< 30	**0.016**	**64**	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.278**	**1754**
DPE-14	33.9-48.4	4/5/2017	Primary	**0.046**	**310**	**0.13**	**700**	< 0.002	< 12	**0.023**	**91**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0079**	**31**	< 0.003	< 9.6	**0.2069**	**1132**
DPE-14	33.9-48.4	4/12/2017	Primary	**0.099**	**670**	**0.028**	**150**	< 0.002	< 12	**0.0065**	**26**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1335**	**846**
DPE-14	33.9-48.4	4/26/2017	Primary	**0.0022**	**15**	**0.0026**	**14**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0048**	**29**
DPE-14	33.9-48.4	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-14	33.9-48.4	5/17/2017	Primary	**0.037**	**250**	**0.19**	**1000**	< 0.002	< 12	**0.028**	**110**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.007**	**28**	< 0.003	< 9.6	**0.262**	**1388**
DPE-14	33.9-48.4	5/24/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
DPE-14	33.9-48.4	10/4/2017	Primary	**0.037**	**250**	**0.11**	**590**	< 0.002	< 12	**0.027**	**110**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.014**	**56**	< 0.003	< 9.6	**0.188**	**1006**
DPE-14	33.9-48.4	10/11/2017	Primary	**0.014**	**95**	**0.049**	**260**	< 0.002	< 12	**0.02**	**80**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0039**	**15**	< 0.003	< 9.6	**0.0869**	**450**
DPE-14	33.9-48.4	10/25/2017	Primary	**0.036**	**240**	**0.13**	**700**	< 0.002	< 12	**0.023**	**91**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0065**	**26**	< 0.003	< 9.6	**0.1955**	**1057**
DPE-14	33.9-48.4	11/8/2017	Primary	**0.042**	**290**	**0.082**	**440**	< 0.004	< 24	**0.013**	**52**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.137**	**782**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
DPE-14	33.9-48.4	11/29/2017	Primary	**0.033**	**220**	**0.094**	**510**	< 0.004	< 24	**0.014**	**56**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.141**	**786**
DPE-14	33.9-48.4	12/13/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-14	33.9-48.4	12/27/2017	Primary	**0.017**	**120**	**0.057**	**310**	< 0.002	< 12	**0.016**	**64**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0036**	**14**	< 0.003	< 9.6	**0.0936**	**508**
DPE-14	33.9-48.4	1/31/2018	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
DPE-14	33.9-48.4	5/2/2018	Primary	**0.018**	**120**	**0.058**	**310**	< 0.002 J	< 12 J	**0.01**	**40**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0046**	**18**	< 0.003	< 9.6	**0.0906**	**488**
DPE-14	33.9-48.4	5/16/2018	Primary	**0.022**	**150**	**0.079 J**	**430 J**	< 0.0005	< 3.0	**0.013**	**52**	< 0.0005	< 2.0	**0.00075**	**3.0**	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0008**	**3.7**	**0.0055**	**22**	< 0.00075	< 2.4	**0.12105**	**660.7**
PZ-5	37.1-41.5	2/16/2011	Primary	**2.9**	**20000**	**2.8**	**15000**	< 0.83	< 5000	**10**	**40000**	**16**	**65000**	< 1.2	< 4900	**2.7**	**6900**	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**34.4**	**146900**
PZ-5	37.1-41.5	5/25/2011	Primary	**0.5**	**3000**	**3**	**20000**	< 0.2	< 1000	**0.61**	**2400**	**0.79**	**3200**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**4.9**	**28600**
PZ-5	37.1-41.5	5/25/2011	Duplicate	**0.52**	**3500**	**3.3**	**18000**	< 0.2	< 1000	**0.71**	**2800**	**0.84**	**3400**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**5.37**	**27700**
PZ-5	37.1-41.5	9/21/2011	Primary	**0.18**	**1200**	**0.95**	**5100**	< 0.04	< 200	**1.6**	**6400**	**0.91**	**3700**	< 0.049	< 200	**0.078**	**200**	**0.061**	**240**	< 0.043	< 200	**0.05**	**200**	< 0.06	< 200	**3.829**	**17040**
PZ-5	37.1-41.5	9/21/2011	Duplicate	**0.15**	**1000**	**0.91**	**4900**	< 0.04	< 200	**1.4**	**5600**	**0.84**	**3400**	< 0.049	< 200	< 0.078	< 200	**0.055**	**220**	< 0.043	< 200	**0.045**	**180**	< 0.06	< 200	**3.4**	**15300**
PZ-5	37.1-41.5	12/7/2011	Primary	**0.041**	**280**	**0.22**	**1200**	< 0.01	< 60.4	**0.45**	**1800**	**0.35**	**1400**	< 0.012	< 49	**0.033**	**84**	< 0.01	< 39.7	< 0.011	< 51	**0.015**	**60**	< 0.015	< 48	**1.109**	**4824**
PZ-5	37.1-41.5	3/29/2012	Primary	**0.28**	**1900**	**1.8**	**9700**	< 0.01	< 60.4	**11**	**44000**	**5.4**	**22000**	**0.027**	**110**	**1.2**	**3100**	**0.17**	**670**	**0.035**	**160**	**0.25**	**990**	< 0.015	< 48	**20.162**	**82630**
PZ-5	37.1-41.5	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
PZ-5	37.1-41.5	6/6/2012	Duplicate	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
PZ-5	37.1-41.5	9/19/2012	Primary	**0.078**	**530**	**0.022**	**120**	< 0.002	< 12	**0.025**	**99**	**0.021**	**85**	< 0.0025	< 10	**0.0055**	**14**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1515**	**848**
PZ-5	37.1-41.5	12/12/2012	Primary	**0.016**	**110**	**0.0033**	**18**	< 0.002	< 12	**0.0052**	**21**	**0.0043**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0288**	**166**
PZ-5	37.1-41.5	3/20/2013	Primary	**0.17**	**1200**	**0.32**	**1700**	< 0.002	< 12	**1.4**	**5600**	**0.99**	**4000**	**0.0075**	**30**	**0.059**	**150**	**0.029**	**120**	**0.026**	**120**	**0.077**	**310**	< 0.003	< 9.6	**3.0785**	**13230**
PZ-5	37.1-41.5	8/8/2013	Primary	**0.22**	**1500**	**0.039**	**210**	< 0.01	< 60	**0.049**	**190**	**0.032**	**130**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.34**	**2030**
PZ-5	37.1-41.5	12/18/2013	Primary	**0.01**	**70**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.01**	**70**
PZ-5	37.1-41.5	3/25/2015	Primary	**0.0052**	**35**	**0.0032**	**17**	< 0.002	< 12	**0.0035**	**14**	**0.0036**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0155**	**81**
PZ-5	37.1-41.5	4/19/2016	Primary	< 0.002	< 14	**0.0031 J**	**17 J**	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0031**	**17**
PZ-5	37.1-41.5	12/27/2016	Primary	**0.0041**	**28**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0041**	**28**
PZ-5	37.1-41.5	3/14/2017	Primary	**0.034**	**230**	**0.013**	**70**	**0.00051**	**3.1**	**0.0091**	**36**	**0.014**	**57**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00055**	**2.2**	**0.0012**	**5.6**	**0.00075**	**3.0**	< 0.00075	< 2.4	**0.07311**	**406.9**
PZ-5	37.1-41.5	6/28/2017	Primary	**0.045**	**310**	**0.02**	**100**	< 0.004	< 24	**0.013**	**52**	**0.016**	**65**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.094**	**527**
PZ-5	37.1-41.5	9/27/2017	Primary	**0.032**	**220**	**0.018**	**97**	< 0.002	< 12	**0.013**	**52**	**0.016**	**65**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.079**	**434**
PZ-5	37.1-41.5	12/11/2017	Primary	**0.0011**	**7.5**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015 J	< 4.8 J	**0.0011**	**7.5**
PZ-5	37.1-41.5	5/1/2018	Primary	**0.14**	**950**	**0.032**	**170**	**0.0022**	**13**	**0.013**	**52**	**0.014**	**57**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0023**	**11**	**0.0015**	**6.0**	< 0.00075	< 2.4	**0.205**	**1259**
PZ-6	37.2-41.6	2/16/2011	Primary	< 0.74	< 5000	**1.1**	**5900**	< 0.83	< 5000	**6.1**	**24000**	**5.9**	**24000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**13.1**	**53900**
PZ-6	37.2-41.6	5/25/2011	Primary	**0.04**	**300**	**0.73**	**3900**	< 0.04	< 200	**0.22**	**870**	**0.089**	**360**	< 0.049	< 200	< 0.078	< 200	**0.05**	**200**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.129**	**5630**
PZ-6	37.2-41.6	9/21/2011	Primary	**0.12**	**820**	**0.084 J**	**450 J**	< 0.03	< 200	**1.4 J**	**5600 J**	**0.69**	**2800**	< 0.037	< 150	**0.15**	**380**	**0.068**	**270**	< 0.032	< 150	**0.04**	**200**	< 0.045	< 140	**2.552**	**10520**
PZ-6	37.2-41.6	9/21/2011	Duplicate	**0.11**	**750**	**0.78 J**	**4200 J**	< 0.01	< 60.4	**0.73 J**	**2900 J**	**0.79**	**3200**	< 0.012	< 49	**0.16**	**410**	**0.081**	**320**	< 0.011	< 51	**0.045**	**180**	< 0.015	< 48	**2.696**	**11960**
PZ-6	37.2-41.6	12/7/2011	Primary	**0.21**	**1400**	**1.2**	**6500**	< 0.1	< 600	**5**	**20000**	**2.4**	**9700**	< 0.12	< 490	**0.29**	**740**	**0.11**	**440**	< 0.11	< 510	**0.16**	**640**	< 0.15	< 480	**9.37**	**39420**
PZ-6	37.2-41.6	3/29/2012	Primary	**0.47**	**3200**	**1.7**	**9100**	< 0.12	< 720	**19**	**75000**	**4.4**	**18000**	< 0.15	< 610	**0.63**	**1600**	**0.14**	**560**	< 0.13	< 600	**0.23**	**910**	< 0.18	< 580	**26.57**	**108370**
PZ-6	37.2-41.6	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
PZ-6	37.2-41.6	9/19/2012	Primary	**0.024**	**160**	**0.019**	**100**	< 0.002	< 12	**0.063**	**250**	**0.032**	**130**	< 0.0025	< 10	**0.0043**	**11**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1423**	**651**
PZ-6	37.2-41.6	12/12/2012	Primary	**0.11**	**750**	**0.026**	**140**	< 0.002	< 12	**0.018**	**71**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.165**	**1006**
PZ-6	37.2-41.6	3/20/2013	Primary	**0.17**	**1200**	**0.24**	**1300**	< 0.004	< 24	**2.3**	**9100**	**1.3**	**5300**	**0.016**	**65**	**0.11**	**280**	**0.044**	**170**	**0.034**	**160**	**0.11**	**440**	< 0.006	< 19	**4.324**	**18015**
PZ-6	37.2-41.6	8/8/2013	Primary	**0.025**	**170**	**0.016**	**86**	< 0.004	< 24	**0.095**	**380**	**0.049**	**200**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.185**	**836**
PZ-6	37.2-41.6	12/18/2013	Primary	**0.007**	**48**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.007**	**48**
PZ-6	37.2-41.6	3/25/2015	Primary	**0.0057**	**39**	**0.0044**	**24**	< 0.002	< 12	**0.0036**	**14**	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0174**	**92**
PZ-6	37.2-41.6	4/19/2016	Primary	< 0.002	< 14	**0.0064 J**	**34 J**	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0064**	**34**
PZ-6	37.2-41.6	12/27/2016	Primary	**0.0058**	**39**	**0.0025**	**13**	< 0.0005	< 3.0	**0.0046**	**18**	**0.00079**	**3.2**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01369**	**73.2**
PZ-6	37.2-41.6	3/14/2017	Primary	**0.032**	**220**	**0.022**	**120**	**0.00058**	**3.5**	**0.012**	**48**	**0.021**	**85**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0014**	**5.6**	**0.0012**	**5.6**	**0.00096**	**3.8**	< 0.00075	< 2.4	**0.09114**	**491.5**
PZ-6	37.2-41.6	6/28/2017	Primary	**0.048**	**330**	**0.02**	**100**	< 0.004	< 24	**0.012**	**48**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.092**	**527**
PZ-6	37.2-41.6	9/27/2017	Primary	**0.0053**	**36**	**0.0018**	**9.7**	< 0.0005	< 3.0	**0.0011**	**4.4**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0082**	**50.1**
PZ-6	37.2-41.6	12/11/2017	Primary	**0.12**	**820**	**0.026**	**140**	< 0.004	< 24	**0.015**	**60**	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006 J	< 19 J	**0.176**	**1081**
PZ-6	37.2-41.6	5/1/2018	Primary	**0.16**	**1100**	**0.041**	**220**	**0.0012**	**7.2**	**0.0066**	**26**	**0.0079**	**32**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0014**	**6.5**	**0.001**	**4.0**	< 0.00075	< 2.4	**0.2191**	**1395.7**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
SVE-3	9.5-29.5	2/23/2011	Primary	**5.3**	**36000**	**3.4**	**18000**	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**8.7**	**54000**
SVE-3	9.5-29.5	4/12/2011	Primary	**0.28**	**1900**	**0.11**	**590**	< 0.0025	< 15	**0.0094**	**37**	**0.0015 J**	**6.1 J**	**0.0023 J**	**9.3 J**	< 0.005	< 13	< 0.0025	< 9.9	< 0.0038	< 18	< 0.0025	< 9.9	< 0.0038	< 12	**0.4032**	**2542.4**
SVE-3	9.5-29.5	9/20/2011	Primary	**0.25**	**1700**	**0.13**	**700**	< 0.01	< 60.4	**0.013**	**52**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.393**	**2452**
SVE-3	9.5-29.5	12/7/2011	Primary	**0.088**	**600**	**0.048**	**260**	< 0.002	< 12	**0.016**	**64**	**0.0025**	**10**	< 0.0025	< 10	< 0.0039	< 10	**0.0033**	**13**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1578**	**947**
SVE-3	9.5-29.5	3/27/2012	Primary	**0.062**	**420**	**0.03**	**200**	< 0.002	< 12	**0.0022**	**8.7**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0942**	**628.7**
SVE-3	9.5-29.5	6/5/2012	Primary	**0.038**	**260**	**0.024**	**130**	< 0.002	< 12	**0.0053**	**21**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0673**	**411**
SVE-3	9.5-29.5	9/17/2012	Primary	**0.11**	**750**	**0.065**	**350**	< 0.002	< 12	**0.013**	**52**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.188**	**1152**
SVE-3	9.5-29.5	12/12/2012	Primary	**0.032**	**220**	**0.03**	**200**	< 0.002	< 12	**0.0087**	**35**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0707**	**455**
SVE-3	9.5-29.5	12/16/2013	Primary	**0.0093**	**63**	**0.0051**	**27**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0144**	**90**
SVE-3	9.5-29.5	10/26/2016	Primary	**0.05**	**300**	**0.042**	**230**	< 0.001	< 6.0	**0.0066**	**26**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0986**	**556**
SVE-3	9.5-29.5	12/7/2016	Primary	**0.013**	**88**	**0.0073**	**39**	< 0.001	< 6.0	**0.0025**	**9.9**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0228**	**136.9**
SVE-3	9.5-29.5	12/21/2016	Primary	**0.0086**	**58**	**0.006**	**32**	< 0.001	< 6.0	**0.002**	**7.9**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0166**	**97.9**
SVE-3	9.5-29.5	4/5/2017	Primary	**0.027**	**180**	**0.03**	**200**	< 0.002	< 12	**0.0086**	**34**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0656**	**414**
SVE-3	9.5-29.5	4/12/2017	Primary	**0.025**	**170**	**0.011**	**59**	< 0.002	< 12	**0.0035**	**14**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0395**	**243**
SVE-3	9.5-29.5	4/26/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-3	9.5-29.5	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-3	9.5-29.5	5/17/2017	Primary	**0.018**	**120**	**0.019**	**100**	< 0.002	< 12	**0.0065**	**26**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0435**	**246**
SVE-3	9.5-29.5	5/24/2017	Primary	**0.011 J**	**75 J**	< 0.01 J	< 50 J	< 0.01 J	< 60 J	< 0.01 J	< 40 J	< 0.01 J	< 40 J	< 0.012 J	< 49 J	< 0.02 J	< 50 J	< 0.01 J	< 40 J	< 0.011 J	< 51 J	< 0.01 J	< 40 J	< 0.015 J	< 48 J	**0.011**	**75**
SVE-4	9.6-28.9	2/23/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	ND	ND
SVE-4	9.6-28.9	4/12/2011	Primary	**0.36**	**2400**	**0.34**	**1800**	< 0.0029	< 18	**0.16**	**640**	**0.15**	**610**	**0.0035 J**	**14 J**	< 0.0057	< 15	**0.054**	**210**	< 0.0043	< 20	< 0.0029	< 12	< 0.0043	< 14	**1.0675**	**5674**
SVE-4	9.6-28.9	9/20/2011	Primary	**0.063**	**430**	**0.054**	**290**	< 0.002	< 12	**0.022**	**87**	**0.019**	**77**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.158**	**884**
SVE-4	9.6-28.9	12/27/2011	Primary	**0.15**	**1000**	**0.1**	**500**	< 0.004	< 24	**0.025**	**99**	**0.035**	**140**	< 0.0049	< 20	**0.012**	**31**	**0.011**	**44**	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.333**	**1814**
SVE-4	9.6-28.9	3/29/2012	Primary	**0.024**	**160**	**0.02**	**100**	< 0.004	< 24	**0.0083**	**33**	**0.0086**	**35**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.0609**	**328**
SVE-4	9.6-28.9	6/5/2012	Primary	**0.0074**	**50**	**0.011**	**59**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0184**	**109**
SVE-4	9.6-28.9	9/17/2012	Primary	**0.069**	**470**	**0.063**	**340**	< 0.002	< 12	**0.018**	**71**	**0.013**	**53**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.163**	**934**
SVE-4	9.6-28.9	12/12/2012	Primary	**0.02**	**100**	**0.014**	**75**	< 0.002	< 12	**0.0053**	**21**	**0.0021**	**8.5**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0414**	**204.5**
SVE-4	9.6-28.9	12/16/2013	Primary	**0.0059**	**40**	**0.0052**	**28**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0111**	**68**
SVE-4	9.6-28.9	10/26/2016	Primary	**0.011**	**75**	**0.018**	**97**	< 0.0005	< 3.0	**0.0021**	**8.3**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0311**	**180.3**
SVE-4	9.6-28.9	12/7/2016	Primary	**0.012**	**82**	**0.0056**	**30**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0176**	**112**
SVE-4	9.6-28.9	12/21/2016	Primary	**0.008**	**54**	**0.0041**	**22**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0121**	**76**
SVE-4	9.6-28.9	4/5/2017	Primary	**0.0034**	**23**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0034**	**23**
SVE-4	9.6-28.9	4/12/2017	Primary	**0.0056**	**38**	**0.008**	**43**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0136**	**81**
SVE-4	9.6-28.9	4/26/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-4	9.6-28.9	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-4	9.6-28.9	5/17/2017	Primary	**0.003**	**20**	**0.0067**	**36**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0097**	**56**
SVE-4	9.6-28.9	5/24/2017	Primary	**0.0022**	**15**	**0.0066**	**36**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0088**	**51**
SVE-5	10.1-29.3	2/23/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	ND	ND
SVE-5	10.1-29.3	4/12/2011	Primary	**0.21**	**1400**	**0.018**	**97**	< 0.002	< 12	**0.021**	**83**	**0.0065**	**26**	< 0.003	< 12	< 0.004 R	< 10 R	< 0.002	< 7.9	< 0.003	< 14	**0.0013 J**	**5.2 J**	< 0.003	< 9.6	**0.2568**	**1611.2**
SVE-5	10.1-29.3	9/20/2011	Primary	**0.041**	**280**	**0.0058**	**31**	< 0.002	< 12	**0.0066**	**26**	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	< 0.003	< 9.6	**0.0591**	**359.9**
SVE-5	10.1-29.3	12/7/2011	Primary	**0.0088**	**60**	**0.0039**	**21**	< 0.002	< 12	**0.0038**	**15**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0165**	**96**
SVE-5	10.1-29.3	3/27/2012	Primary	**0.034**	**230**	**0.0074**	**40**	< 0.002	< 12	**0.014**	**56**	**0.0052 J**	**21 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0038**	**15**	< 0.003	< 9.6	**0.0644**	**362**
SVE-5	10.1-29.3	6/5/2012	Primary	**0.0031**	**21**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0031**	**21**
SVE-5	10.1-29.3	9/17/2012	Primary	**0.052**	**350**	**0.0039**	**21**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0559**	**371**
SVE-5	10.1-29.3	12/12/2012	Primary	**0.012**	**82**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.012**	**82**
SVE-5	10.1-29.3	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-5	10.1-29.3	12/16/2013	Primary	**0.011**	**75**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.011**	**75**
SVE-5	10.1-29.3	11/2/2016	Primary	**5.3**	**36000**	**0.27**	**1500**	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**5.57**	**37500**
SVE-5	10.1-29.3	11/16/2016	Primary	**0.93**	**6300**	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**0.93**	**6300**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
SVE-5	10.1-29.3	12/14/2016	Primary	**0.014**	**95**	**0.00081**	**4.4**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01481**	**99.4**
SVE-5	10.1-29.3	12/27/2016	Primary	**0.017**	**120**	**0.0019**	**10**	< 0.0005	< 3.0	**0.0006**	**2.4**	< 0.0005	< 2.0	**0.00068**	**2.8**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.02018**	**135.2**
SVE-5	10.1-29.3	3/22/2017	Primary	**0.011**	**75**	**0.0011**	**5.9**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0121**	**80.9**
SVE-5	10.1-29.3	4/5/2017	Primary	**0.011**	**75**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.011**	**75**
SVE-5	10.1-29.3	4/19/2017	Primary	**0.025**	**170**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.025**	**170**
SVE-5	10.1-29.3	4/26/2017	Primary	**0.0068**	**46**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0068**	**46**
SVE-5	10.1-29.3	5/10/2017	Primary	**0.03**	**200**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.03**	**200**
SVE-5	10.1-29.3	5/17/2017	Primary	**0.018**	**120**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.018**	**120**
SVE-6	9.9-29.1	2/23/2011	Primary	**4.1**	**28000**	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**4.1**	**28000**
SVE-6	9.9-29.1	4/12/2011	Primary	**0.23**	**1600**	**0.017**	**91**	< 0.002	< 12	**0.014**	**56**	**0.0091**	**37**	**0.0045**	**18**	< 0.004 R	< 10 R	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	**0.2746**	**1802**
SVE-6	9.9-29.1	9/20/2011	Primary	**0.027**	**180**	**0.0048**	**26**	< 0.002	< 12	< 0.002	< 7.9	**0.0062**	**25**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.038**	**231**
SVE-6	9.9-29.1	12/7/2011	Primary	**0.034**	**230**	**0.0052**	**28**	< 0.002	< 12	**0.0045**	**18**	**0.0044**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0481**	**294**
SVE-6	9.9-29.1	3/27/2012	Primary	**0.019**	**130**	**0.0061**	**33**	< 0.002	< 12	**0.003**	**12**	**0.016 J**	**65 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0441**	**240**
SVE-6	9.9-29.1	6/5/2012	Primary	**0.01**	**70**	**0.0026**	**14**	< 0.002	< 12	< 0.002	< 7.9	**0.0023**	**9.3**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0149**	**93.3**
SVE-6	9.9-29.1	9/17/2012	Primary	**0.013**	**88**	**0.003**	**16**	< 0.002	< 12	< 0.002	< 7.9	**0.0027**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0187**	**115**
SVE-6	9.9-29.1	12/12/2012	Primary	**0.0045**	**31**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0045**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.009**	**49**
SVE-6	9.9-29.1	12/16/2013	Primary	**0.0071**	**48**	**0.0021**	**11**	< 0.002	< 12	< 0.002	< 7.9	**0.0021**	**8.5**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0113**	**67.5**
SVE-6	9.9-29.1	11/2/2016	Primary	**1**	**7000**	**0.049**	**260**	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**1.049**	**7260**
SVE-6	9.9-29.1	11/16/2016	Primary	< 0.008	< 54	< 0.008	< 43	< 0.008	< 48	< 0.008	< 32	< 0.008	< 32	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	ND	ND
SVE-6	9.9-29.1	12/14/2016	Primary	**0.0025**	**17**	**0.00064**	**3.4**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00314**	**20.4**
SVE-6	9.9-29.1	12/27/2016	Primary	**0.0042**	**29**	**0.0015**	**8.1**	< 0.0005	< 3.0	**0.00056**	**2.2**	**0.00071**	**2.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00697**	**42.2**
SVE-6	9.9-29.1	3/22/2017	Primary	**0.0026**	**18**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0026**	**18**
SVE-6	9.9-29.1	4/5/2017	Primary	**0.0021**	**14**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0021**	**14**
SVE-6	9.9-29.1	4/19/2017	Primary	**0.012**	**82**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.012**	**82**
SVE-6	9.9-29.1	4/26/2017	Primary	**0.0026**	**18**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0026**	**18**
SVE-6	9.9-29.1	5/10/2017	Primary	**0.01**	**70**	**0.00075**	**4.0**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0021**	**8.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01285**	**82.5**
SVE-6	9.9-29.1	5/17/2017	Primary	**0.006**	**41**	**0.0021**	**11**	< 0.001	< 6.0	< 0.001	< 4.0	**0.002**	**8.1**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0101**	**60.1**
SVE-7	10-29.2	2/23/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	ND	ND
SVE-7	10-29.2	4/12/2011	Primary	**0.061**	**410**	**0.009**	**48**	< 0.002	< 12	**0.0073**	**29**	**0.0054**	**22**	**0.0028 J**	**11 J**	< 0.004	< 10	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	**0.0855**	**520**
SVE-7	10-29.2	9/20/2011	Primary	**1.4**	**9500**	**0.37**	**2000**	< 0.04	< 200	**0.28**	**1100**	**0.064**	**260**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.114**	**12860**
SVE-7	10-29.2	12/27/2011	Primary	**0.74**	**5000**	**0.17**	**910**	< 0.03	< 200	**0.045**	**180**	**0.054**	**220**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.009**	**6310**
SVE-7	10-29.2	3/27/2012	Primary	**0.31**	**2100**	**0.097**	**520**	< 0.03	< 200	**0.076**	**300**	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.483**	**2920**
SVE-7	10-29.2	6/5/2012	Primary	**0.018**	**120**	**0.0067**	**36**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0247**	**156**
SVE-7	10-29.2	9/17/2012	Primary	**0.047**	**320**	**0.015**	**81**	< 0.002	< 12	**0.0066**	**26**	**0.0079**	**32**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0765**	**459**
SVE-7	10-29.2	12/12/2012	Primary	**0.022**	**150**	**0.01**	**50**	< 0.002	< 12	**0.004**	**16**	**0.0058**	**24**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0418**	**240**
SVE-7	10-29.2	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-7	10-29.2	12/16/2013	Primary	**0.0056**	**38**	**0.002**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0076**	**49**
SVE-7	10-29.2	11/2/2016	Primary	**7.2**	**49000**	**0.44**	**2400**	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**7.64**	**51400**
SVE-7	10-29.2	11/16/2016	Primary	< 0.01	< 70	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	ND	ND
SVE-7	10-29.2	12/14/2016	Primary	**0.011**	**75**	**0.0032**	**17**	< 0.0005	< 3.0	**0.011**	**44**	**0.0021**	**8.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.001**	**4.0**	< 0.00055	< 2.5	**0.00086**	**3.4**	< 0.00075	< 2.4	**0.02916**	**151.9**
SVE-7	10-29.2	12/27/2016	Primary	**0.016**	**110**	**0.0058**	**31**	< 0.0005	< 3.0	**0.023**	**91**	**0.0032**	**13**	**0.0011**	**4.5**	< 0.00098	< 2.5	**0.0014**	**5.6**	< 0.00055	< 2.5	**0.0017**	**6.7**	< 0.00075	< 2.4	**0.0522**	**261.8**
SVE-7	10-29.2	3/22/2017	Primary	**0.031**	**210**	**0.0031**	**17**	< 0.001	< 6.0	**0.0011**	**4.4**	**0.0011**	**4.5**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0363**	**235.9**
SVE-7	10-29.2	4/5/2017	Primary	**0.0029**	**20**	**0.0027**	**15**	< 0.002	< 12	**0.0072**	**29**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0128**	**64**
SVE-7	10-29.2	4/19/2017	Primary	**0.0087**	**59**	< 0.002	< 11	< 0.002	< 12	**0.0027**	**11**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0114**	**70**
SVE-7	10-29.2	4/26/2017	Primary	**0.0016**	**11**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0016**	**11**
SVE-7	10-29.2	5/10/2017	Primary	**0.0079**	**54**	**0.0026**	**14**	< 0.0005	< 3.0	**0.0019**	**7.5**	**0.00074**	**3.0**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01314**	**78.5**
SVE-7	10-29.2	5/17/2017	Primary	**0.0059**	**40**	**0.0043**	**23**	< 0.001	< 6.0	**0.0071**	**28**	**0.0017**	**6.9**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.019**	**97.9**
SVE-8	9.5-29.5	2/23/2011	Primary	**1.1**	**7500**	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**1.1**	**7500**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
SVE-8	9.5-29.5	4/12/2011	Primary	**0.3**	**2000**	**0.18**	**970**	< 0.0025	< 15	**0.1**	**400**	**0.1**	**400**	**0.0049**	**20**	**0.023**	**59**	**0.02**	**80**	< 0.0038	< 18	**0.0029**	**12**	< 0.0038	< 12	**0.7308**	**3941**
SVE-8	9.5-29.5	9/20/2011	Primary	**0.094**	**640**	**0.052**	**280**	**0.003**	**18**	**0.025**	**99**	**0.021**	**85**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.195**	**1122**
SVE-8	9.5-29.5	12/7/2011	Primary	**0.05**	**300**	**0.011**	**59**	**0.002**	**12**	**0.0033**	**13**	**0.0042**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0705**	**401**
SVE-8	9.5-29.5	3/27/2012	Primary	**0.024**	**160**	**0.012**	**65**	< 0.002	< 12	**0.013**	**52**	**0.012 J**	**49 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.061**	**326**
SVE-8	9.5-29.5	6/5/2012	Primary	**0.019**	**130**	**0.0035**	**19**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0225**	**149**
SVE-8	9.5-29.5	9/17/2012	Primary	**0.072**	**490**	**0.019**	**100**	< 0.002	< 12	**0.005**	**20**	**0.0052**	**21**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1012**	**631**
SVE-8	9.5-29.5	12/12/2012	Primary	**0.038**	**260**	**0.011**	**59**	< 0.002	< 12	**0.0031**	**12**	**0.003**	**12**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0551**	**343**
SVE-8	9.5-29.5	12/16/2013	Primary	**0.0075**	**51**	**0.002**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0095**	**62**
SVE-9	10.4-29.4	2/23/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	ND	ND
SVE-9	10.4-29.4	4/12/2011	Primary	**0.12**	**820**	**0.016**	**86**	< 0.004	< 24	**0.015**	**60**	**0.0052**	**21**	**0.0077**	**31**	< 0.008	< 20	< 0.004	< 16	< 0.006	< 28	< 0.004	< 16	< 0.006	< 19	**0.1639**	**1018**
SVE-9	10.4-29.4	9/20/2011	Primary	**0.037**	**250**	**0.0024**	**13**	< 0.002	< 12	< 0.002	< 7.9	**0.0032**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0426**	**276**
SVE-9	10.4-29.4	12/7/2011	Primary	**0.063**	**430**	**0.0076**	**41**	< 0.002	< 12	< 0.002	< 7.9	**0.0074**	**30**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.078**	**501**
SVE-9	10.4-29.4	3/27/2012	Primary	**0.053**	**360**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	**0.012 J**	**49 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.079**	**484**
SVE-9	10.4-29.4	6/5/2012	Primary	**0.044**	**300**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.044**	**300**
SVE-9	10.4-29.4	9/17/2012	Primary	**0.068**	**460**	**0.0037**	**20**	< 0.002	< 12	< 0.002	< 7.9	**0.0027**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0744**	**491**
SVE-9	10.4-29.4	9/17/2012	Duplicate	**0.075**	**510**	**0.0039**	**21**	< 0.002	< 12	< 0.002	< 7.9	**0.0025**	**10**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0814**	**541**
SVE-9	10.4-29.4	12/12/2012	Primary	**0.026**	**180**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.026**	**180**
SVE-9	10.4-29.4	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-9	10.4-29.4	12/16/2013	Primary	**0.013**	**88**	**0.0031**	**17**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0161**	**105**
SVE-10	10-29.2	2/23/2011	Primary	**8.9**	**60000**	**6.2**	**33000**	< 0.83	< 5000	**3.3**	**13000**	**7.8**	**32000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**26.2**	**138000**
SVE-10	10-29.2	2/23/2011	Duplicate	**8.5**	**58000**	**6.1**	**33000**	< 0.83	< 5000	**3.2**	**13000**	**7.2**	**29000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**25**	**133000**
SVE-10	10-29.2	4/12/2011	Primary	**1.6**	**11000**	**0.38**	**2000**	< 0.02	< 100	**0.11**	**440**	**0.53**	**2100**	< 0.03	< 100	**0.039 J**	**100 J**	< 0.02	< 80	< 0.03	< 100	< 0.02	< 80	**0.053**	**170**	**2.712**	**15810**
SVE-10	10-29.2	9/20/2011	Primary	**0.29**	**2000**	**0.071**	**380**	< 0.01	< 60.4	**0.019**	**75**	**0.069**	**280**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.449**	**2735**
SVE-10	10-29.2	12/7/2011	Primary	**0.84**	**5700**	**0.22**	**1200**	< 0.05	< 300	**0.063**	**250**	**0.4**	**2000**	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**1.523**	**9150**
SVE-10	10-29.2	12/7/2011	Duplicate	**0.71**	**4800**	**0.22**	**1200**	< 0.03	< 200	**0.071**	**280**	**0.42**	**1700**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	**0.044**	**140**	**1.465**	**8120**
SVE-10	10-29.2	3/27/2012	Primary	**0.41**	**2800**	**0.13**	**700**	< 0.03	< 200	< 0.03	< 100	**0.14 J**	**570 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.68**	**4070**
SVE-10	10-29.2	6/5/2012	Primary	**0.14 J**	**950 J**	**0.032 J**	**170 J**	< 0.01	< 60.4	< 0.01	< 39.7	**0.032 J**	**130 J**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.204**	**1250**
SVE-10	10-29.2	6/5/2012	Duplicate	**0.21 J**	**1400 J**	**0.05 J**	**300 J**	< 0.002	< 12	**0.01**	**40**	**0.049 J**	**200 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	**0.0056**	**18**	**0.3266**	**1965.9**
SVE-10	10-29.2	9/17/2012	Primary	**0.41**	**2800**	**0.093**	**500**	< 0.002	< 12	**0.02**	**80**	**0.069**	**280**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.592**	**3660**
SVE-10	10-29.2	12/12/2012	Primary	**0.23**	**1600**	**0.038**	**200**	< 0.01	< 60	< 0.01	< 40	**0.022**	**89**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.29**	**1889**
SVE-10	10-29.2	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-10	10-29.2	12/17/2013	Primary	**0.12**	**820**	**0.018**	**97**	< 0.002	< 12	**0.0047**	**19**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1537**	**981**
SVE-10	10-29.2	3/25/2014	Primary	**0.39**	**2600**	**0.028**	**150**	< 0.002	< 12	**0.0056**	**22**	**0.0049**	**20**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.4285**	**2792**
SVE-10	10-29.2	6/26/2014	Primary	**0.012**	**82**	**0.038**	**200**	< 0.002	< 12	**0.0076**	**30**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0576**	**312**
SVE-10	10-29.2	9/23/2014	Primary	**0.29**	**2000**	**0.042**	**230**	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.332**	**2230**
SVE-10	10-29.2	12/9/2014	Primary	**0.14**	**950**	**0.02**	**100**	< 0.004	< 24	**0.0044**	**17**	**0.0098**	**40**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1742**	**1107**
SVE-10	10-29.2	3/26/2015	Primary	**0.14**	**950**	**0.015**	**81**	< 0.015	< 91	< 0.015	< 60	< 0.015	< 61	< 0.019	< 77	< 0.029	< 74	< 0.015	< 60	< 0.016	< 74	< 0.015	< 60	< 0.022	< 70	**0.155**	**1031**
SVE-10	10-29.2	6/16/2015	Primary	**0.083**	**560**	**0.0094**	**51**	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.0924**	**611**
SVE-10	10-29.2	12/16/2015	Primary	**0.11**	**750**	**0.014**	**75**	< 0.004	< 24	< 0.004	< 16	**0.011**	**45**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.135**	**870**
SVE-10	10-29.2	10/26/2016	Primary	**0.17**	**1200**	**0.041**	**220**	< 0.002	< 12	**0.015**	**60**	**0.02**	**80**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.0056**	**18**	**0.2516**	**1578**
SVE-10	10-29.2	12/7/2016	Primary	**0.17**	**1200**	**0.027**	**150**	< 0.004	< 24	**0.0071**	**28**	**0.0095**	**38**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.2136**	**1416**
SVE-10	10-29.2	12/21/2016	Primary	**0.12**	**820**	**0.02**	**100**	< 0.004	< 24	**0.0049**	**19**	**0.0078**	**32**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1527**	**971**
SVE-10	10-29.2	4/5/2017	Primary	**0.01**	**70**	**0.0033**	**18**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0133**	**88**
SVE-10	10-29.2	4/12/2017	Primary	**0.26**	**1800**	**0.035**	**190**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.295**	**1990**
SVE-10	10-29.2	4/26/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	**0.054**	**220**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.054**	**220**
SVE-10	10-29.2	5/3/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-10	10-29.2	5/17/2017	Primary	**0.15**	**1000**	**0.04**	**200**	< 0.01	< 60	**0.017**	**67**	**0.024**	**97**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.231**	**1364**
SVE-10	10-29.2	5/24/2017	Primary	**0.18**	**1200**	**0.03**	**200**	< 0.01	< 60	< 0.01	< 40	**0.01**	**40**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.22**	**1440**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
SVE-11	9-29	8/24/2011	Primary	**0.0081**	**55**	**0.0026**	**14**	< 0.0017	< 10	< 0.0025	< 9.9	< 0.0025	< 10	< 0.0025	< 10	< 0.0039	< 10	< 0.0025	< 9.9	< 0.0022	< 10	< 0.0025	< 9.9	< 0.0031	< 9.9	**0.0107**	**69**
SVE-11	9-29	9/20/2011	Primary	**0.24**	**1600**	**0.019**	**100**	< 0.01	< 60.4	< 0.01	< 39.7	**0.017**	**69**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.276**	**1769**
SVE-11	9-29	12/7/2011	Primary	**1.1**	**7500**	**0.065**	**350**	< 0.05	< 300	< 0.05	< 200	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**1.165**	**7850**
SVE-11	9-29	3/27/2012	Primary	**1.4**	**9500**	**0.061**	**330**	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.461**	**9830**
SVE-11	9-29	6/5/2012	Primary	**0.046**	**310**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.046**	**310**
SVE-11	9-29	9/18/2012	Primary	**0.49**	**3300**	**0.019**	**100**	< 0.002	< 12	< 0.002	< 7.9	**0.0042**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.5132**	**3417**
SVE-11	9-29	12/10/2012	Primary	**0.68**	**4600**	< 0.061	< 330	< 0.06	< 400	< 0.06	< 200	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**0.68**	**4600**
SVE-11	9-29	7/2/2013	Primary	**0.69**	**4700**	< 0.031	< 170	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.69**	**4700**
SVE-11	9-29	9/24/2013	Primary	**0.7**	**5000**	< 0.03	< 200	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.7**	**5000**
SVE-11	9-29	12/17/2013	Primary	**0.26**	**1800**	< 0.03	< 200	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.26**	**1800**
SVE-11	9-29	3/25/2014	Primary	**0.23**	**1600**	**0.0059**	**32**	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.2359**	**1632**
SVE-11	9-29	6/26/2014	Primary	**0.56**	**3800**	**0.015**	**81**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.575**	**3881**
SVE-11	9-29	9/23/2014	Primary	**0.43**	**2900**	**0.0074**	**40**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.4374**	**2940**
SVE-11	9-29	12/16/2015	Primary	**0.11**	**750**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.11**	**750**
SVE-11	9-29	11/2/2016	Primary	**0.078**	**530**	< 0.002	< 11	< 0.002	< 12	**0.0024**	**9.5**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0804**	**539.5**
SVE-11	9-29	11/16/2016	Primary	**0.092**	**630**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.092**	**630**
SVE-11	9-29	12/14/2016	Primary	**0.11**	**750**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.11**	**750**
SVE-11	9-29	12/27/2016	Primary	**0.15**	**1000**	**0.01**	**50**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.16**	**1050**
SVE-11	9-29	3/22/2017	Primary	**0.17**	**1200**	**0.0052**	**28**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.1752**	**1228**
SVE-11	9-29	4/5/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-11	9-29	4/19/2017	Primary	**0.049**	**330**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.049**	**330**
SVE-11	9-29	4/26/2017	Primary	**0.13**	**880**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.13**	**880**
SVE-11	9-29	5/10/2017	Primary	**0.017**	**120**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.017**	**120**
SVE-11	9-29	5/17/2017	Primary	**0.095**	**650**	< 0.002	< 11	< 0.002	< 12	**0.0029**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0979**	**662**
SVE-12	9.5-29.5	8/24/2011	Primary	**0.0055**	**37**	**0.0032**	**17**	< 0.0017	< 10	< 0.0025	< 9.9	< 0.0025	< 10	< 0.0025	< 10	< 0.0039	< 10	< 0.0025	< 9.9	< 0.0022	< 10	< 0.0025	< 9.9	< 0.0031	< 9.9	**0.0087**	**54**
SVE-12	9.5-29.5	9/20/2011	Primary	**0.059**	**400**	< 0.01	< 50	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.059**	**400**
SVE-12	9.5-29.5	12/7/2011	Primary	**0.084**	**570**	**0.015**	**81**	< 0.002	< 12	< 0.002	< 7.9	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.11**	**696**
SVE-12	9.5-29.5	3/27/2012	Primary	**0.078**	**530**	**0.014**	**75**	< 0.002	< 12	**0.0025**	**9.9**	**0.01 J**	**40 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1045**	**654.9**
SVE-12	9.5-29.5	3/27/2012	Duplicate	**0.065**	**440**	**0.012**	**65**	< 0.002	< 12	**0.0022**	**8.7**	**0.0084 J**	**34 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0876**	**547.7**
SVE-12	9.5-29.5	6/5/2012	Primary	**0.018**	**120**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	**0.0024**	**9.7**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0226**	**141.7**
SVE-12	9.5-29.5	9/18/2012	Primary	**0.018**	**120**	**0.0045**	**24**	< 0.002	< 12	< 0.002	< 7.9	**0.003**	**12**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0255**	**156**
SVE-12	9.5-29.5	12/10/2012	Primary	**0.028**	**190**	**0.0053**	**29**	< 0.002	< 12	< 0.002	< 7.9	**0.003 J**	**12 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0363**	**231**
SVE-12	9.5-29.5	3/26/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
SVE-12	9.5-29.5	12/17/2013	Primary	**0.016**	**110**	**0.0039**	**21**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0199**	**131**
SVE-12	9.5-29.5	3/25/2014	Primary	**0.016**	**110**	**0.011**	**59**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.027**	**169**
SVE-12	9.5-29.5	6/26/2014	Primary	**0.055**	**370**	**0.0097**	**52**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0647**	**422**
SVE-12	9.5-29.5	9/23/2014	Primary	**0.014**	**95**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.014**	**95**
VP-5A	9.25-9.75	2/15/2011	Primary	**40**	**300000**	**22**	**120000**	**0.83**	**5000**	**250 J**	**990000 J**	**42**	**170000**	**2.1**	**8500**	**130**	**330000**	**1.3**	**5200**	< 1.1 J	< 5100 J	**5**	**20000**	**7.8**	**25000**	**501.03**	**1973700**
VP-5A	9.25-9.75	2/15/2011	Primary	**72**	**490000**	**39**	**210000**	**3.3**	**20000**	**480**	**1900000**	**72**	**290000**	**4.9**	**20000**	**210**	**540000**	**5**	**20000**	< 4.3 J	< 20000 J	**7.6**	**30000**	**13**	**42000**	**906.8**	**3562000**
VP-5A	9.25-9.75	2/15/2011	Primary	**94**	**640000**	**45**	**240000**	**17**	**100000**	**550**	**2200000**	**62**	**250000**	**25**	**100000**	**180**	**460000**	**25**	**99000**	< 22 J	< 100000 J	**25**	**99000**	**31**	**99000**	**1054**	**4287000**
VP-5A	9.25-9.75	5/25/2011	Primary	**22**	**150000**	< 4.1	< 22000	< 4	< 20000	< 4	< 20000	< 4	< 20000	< 4.9	< 20000	< 7.8	< 20000	< 4	< 20000	< 4.3	< 20000	< 4	< 20000	< 6	< 20000	**22**	**150000**
VP-5A	9.25-9.75	9/21/2011	Primary	**0.1 J**	**700 J**	**0.019 J**	**100 J**	< 0.01	< 60.4	**0.018 J**	**71 J**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.137**	**871**
VP-5A	9.25-9.75	9/21/2011	Duplicate	**0.18 J**	**1200 J**	**0.028 J**	**150 J**	< 0.01	< 60.4	**0.053 J**	**210 J**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.261**	**1560**
VP-5A	9.25-9.75	12/6/2011	Primary	**1.9**	**13000**	**0.22**	**1200**	< 0.1	< 600	**0.96**	**3800**	**0.21**	**850**	< 0.12	< 490	**0.63**	**1600**	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**3.92**	**20450**
VP-5A	9.25-9.75	12/6/2011	Duplicate	**2.1**	**14000**	**0.24**	**1300**	< 0.1	< 600	**1**	**4000**	**0.21**	**850**	< 0.12	< 490	**0.63**	**1600**	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**4.18**	**21750**
VP-5A	9.25-9.75	3/29/2012	Primary	**0.028**	**190**	**0.012**	**65**	< 0.01	< 60.4	**0.024**	**95**	**0.014**	**57**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.078**	**407**
VP-5A	9.25-9.75	6/6/2012	Primary	**0.032**	**220**	**0.0054**	**29**	< 0.002	< 12	**0.0061**	**24**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0435**	**273**
VP-5A	9.25-9.75	9/19/2012	Primary	**0.57**	**3900**	**0.16**	**860**	< 0.002	< 12	**0.33**	**1300**	**0.044**	**180**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**1.104**	**6240**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-5A	9.25-9.75	12/12/2012	Primary	**3.9**	**26000**	**0.66**	**3600**	< 0.2	< 1000	**0.7**	**3000**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**5.26**	**32600**
VP-5A	9.25-9.75	3/20/2013	Primary	**3.5**	**24000**	**0.53**	**2900**	< 0.2	< 1000	**0.65**	**2600**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**4.68**	**29500**
VP-5A	9.25-9.75	6/25/2013	Primary	**1.8**	**12000**	**0.5**	**3000**	< 0.1	< 600	**0.58**	**2300**	**0.17**	**690**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**3.05**	**17990**
VP-5A	9.25-9.75	9/24/2013	Primary	**1.3**	**8800**	**0.33**	**1800**	< 0.1	< 600	**0.44**	**1700**	**0.1**	**400**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.17**	**12700**
VP-5A	9.25-9.75	12/18/2013	Primary	**0.21**	**1400**	**0.15**	**810**	< 0.1	< 600	**0.34**	**1300**	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**0.7**	**3510**
VP-5A	9.25-9.75	3/25/2014	Primary	**1.2**	**8200**	**0.3**	**2000**	< 0.1	< 600	**0.31**	**1200**	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**1.81**	**11400**
VP-5A	9.25-9.75	6/26/2014	Primary	**0.57**	**3900**	**0.12**	**650**	< 0.06	< 400	**0.2**	**800**	< 0.06	< 200	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**0.89**	**5350**
VP-5A	9.25-9.75	12/9/2014	Primary	**0.86**	**5800**	**0.3**	**2000**	< 0.01	< 60	**0.3**	**1000**	**0.19**	**770**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	**0.024**	**110**	**0.058**	**230**	< 0.015	< 48	**1.732**	**9910**
VP-5A	9.25-9.75	3/25/2015	Primary	**0.59**	**4000**	**0.17**	**910**	< 0.04	< 200	**0.18**	**710**	**0.047**	**190**	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**0.987**	**5810**
VP-5A	9.25-9.75	9/22/2015	Primary	**0.71**	**4800**	**0.21**	**1100**	< 0.01	< 60	**0.14**	**560**	**0.18**	**730**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	**0.064**	**250**	**0.017**	**54**	**1.321**	**7494**
VP-5A	9.25-9.75	12/16/2015	Primary	**0.23**	**1600**	**0.084**	**450**	< 0.01	< 60	< 0.01	< 40	**0.032**	**130**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.346**	**2180**
VP-5A	9.25-9.75	4/19/2016	Primary	**0.026**	**180**	**0.0035 J**	**19 J**	< 0.001	< 6.0	**0.0019 J**	**7.5 J**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0314**	**206.5**
VP-5A	9.25-9.75	5/31/2016	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-5A	9.25-9.75	8/29/2016	Primary	**0.12**	**820**	**0.41**	**2200**	< 0.001	< 6.0	**0.019**	**75**	**0.07**	**300**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0052**	**24**	**0.021**	**83**	< 0.0015	< 4.8	**0.6452**	**3502**
VP-5A	9.25-9.75	12/27/2016	Primary	**0.2**	**1000**	**0.036**	**190**	< 0.002	< 12	**0.029**	**120**	**0.0082**	**33**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0022**	**8.7**	< 0.003	< 9.6	**0.2754**	**1351.7**
VP-5A	9.25-9.75	3/14/2017	Primary	**0.32**	**2200**	**0.06**	**300**	< 0.0005	< 3.0	**0.011**	**44**	**0.016**	**65**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0019**	**8.8**	**0.004**	**16**	< 0.00075	< 2.4	**0.4129**	**2633.8**
VP-5A	9.25-9.75	6/28/2017	Primary	**0.32**	**2200**	**0.13**	**700**	< 0.004	< 24	**0.0042**	**17**	**0.054**	**220**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	**0.0048**	**22**	**0.017**	**67**	< 0.006	< 19	**0.53**	**3226**
VP-5A	9.25-9.75	9/27/2017	Primary	**0.28**	**1900**	**0.081**	**440**	< 0.01	< 60	**0.018**	**71**	**0.039**	**160**	< 0.012	< 49	**0.02**	**50**	< 0.01	< 40	< 0.011	< 51	**0.013**	**52**	< 0.015	< 48	**0.451**	**2673**
VP-5A	9.25-9.75	12/11/2017	Primary	**0.017**	**120**	**0.004**	**22**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0017**	**6.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.002**	**7.9**	**0.00079 J**	**2.5 J**	**0.02549**	**159.3**
VP-5A	9.25-9.75	5/1/2018	Primary	**0.12**	**820**	**0.03**	**200**	< 0.0005	< 3.0	**0.0033**	**13**	**0.016**	**65**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0021**	**9.7**	**0.0026**	**10**	< 0.00075	< 2.4	**0.174**	**1117.7**
VP-5A	9.25-9.75	9/19/2018	Primary	**0.1**	**700**	**0.28**	**1500**	< 0.002	< 12	**0.072**	**290**	**0.15**	**610**	< 0.0025	< 10	< 0.0039 J	< 10 J	< 0.002	< 7.9	**0.014**	**65**	**0.022**	**87**	< 0.003	< 9.6	**0.638**	**3252**
VP-5A	9.25-9.75	12/27/2018	Primary	**0.068**	**460**	**0.009**	**48**	**0.0028**	**17**	**0.0015**	**6.0**	**0.01**	**40**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0023**	**11**	**0.0025**	**9.9**	< 0.00075	< 2.4	**0.0961**	**591.9**
VP-5A	9.25-9.75	2/20/2019	Primary	**0.33**	**2200**	**0.051**	**270**	**0.0022**	**13**	**0.0039**	**15**	**0.016**	**65**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0032**	**15**	**0.012**	**48**	< 0.00075	< 2.4	**0.4183**	**2626**
VP-5A	9.25-9.75	6/12/2019	Primary	**0.32**	**2200**	**0.049**	**260**	< 0.0005	< 3.0	**0.0051**	**20**	**0.055**	**220**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0033**	**15**	**0.021**	**83**	< 0.00075	< 2.4	**0.4534**	**2798**
VP-5B	20.25-20.75	2/15/2011	Primary	< 0.59	< 4000	< 0.74	< 4000	< 0.66	< 4000	**5.3**	**21000**	**1.4**	**5700**	< 0.99	< 4000	**3.2**	**8200**	< 1	< 4000	< 0.87 J	< 4000 J	< 1	< 4000	< 1.3	< 4200	**9.9**	**34900**
VP-5B	20.25-20.75	5/25/2011	Primary	**0.0057**	**39**	**0.002**	**10**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0077**	**49**
VP-5B	20.25-20.75	9/21/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-5B	20.25-20.75	12/6/2011	Primary	**0.014**	**95**	< 0.002	< 11	< 0.002	< 12	**0.0048**	**19**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0188**	**114**
VP-5B	20.25-20.75	3/29/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-5B	20.25-20.75	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-5B	20.25-20.75	9/19/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-5B	20.25-20.75	12/12/2012	Primary	**0.032**	**220**	**0.0046**	**25**	< 0.002	< 12	**0.0049**	**19**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0415**	**264**
VP-5B	20.25-20.75	3/20/2013	Primary	**0.047**	**320**	**0.009**	**48**	< 0.002	< 12	**0.011**	**44**	**0.0026**	**11**	< 0.0025	< 10	**0.0072**	**18**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0768**	**441**
VP-5B	20.25-20.75	6/25/2013	Primary	**1.4**	**9500**	**0.43**	**2300**	< 0.1	< 600	**0.55**	**2200**	**0.16**	**650**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.54**	**14650**
VP-5B	20.25-20.75	9/24/2013	Primary	**0.03**	**200**	< 0.005	< 27	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.03**	**200**
VP-5B	20.25-20.75	12/18/2013	Primary	**0.036**	**240**	< 0.02	< 100	< 0.02	< 100	< 0.02	< 80	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.036**	**240**
VP-5B	20.25-20.75	12/9/2014	Primary	**0.98**	**6700**	**0.39**	**2100**	< 0.002	< 12	**0.68**	**2700**	**0.2**	**800**	< 0.0025	< 10	**0.18**	**460**	**0.018**	**71**	**0.0057**	**26**	**0.044**	**170**	**0.014**	**45**	**2.5117**	**13072**
VP-5B	20.25-20.75	3/25/2015	Primary	**0.0021**	**14**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0021**	**14**
VP-5B	20.25-20.75	4/19/2016	Primary	< 0.0005	< 3.4	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-5B	20.25-20.75	12/27/2016	Primary	**0.0068**	**46**	**0.00068**	**3.7**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00748**	**49.7**
VP-5B	20.25-20.75	3/14/2017	Primary	**0.018**	**120**	**0.0023**	**12**	< 0.0005	< 3.0	**0.0047**	**19**	**0.00051**	**2.1**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.02551**	**153.1**
VP-5B	20.25-20.75	6/28/2017	Primary	**0.0066**	**45**	**0.0015**	**8.1**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00098**	**3.1**	**0.00908**	**56.2**
VP-5B	20.25-20.75	9/27/2017	Primary	**0.01**	**70**	**0.0025**	**13**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0125**	**83**
VP-5B	20.25-20.75	12/11/2017	Primary	**0.00075**	**5.1**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0009 J**	**2.9 J**	**0.00165**	**8**
VP-5B	20.25-20.75	5/1/2018	Primary	**0.018**	**120**	**0.0072**	**39**	< 0.0005	< 3.0	**0.0022**	**8.7**	**0.0014**	**5.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0288**	**173.4**
VP-5C	27.25-27.75	2/15/2011	Primary	< 0.59	< 4000	< 0.74	< 4000	< 0.66	< 4000	< 1	< 4000	< 0.99	< 4000	< 0.99	< 4000	< 1.6	< 4100	< 1	< 4000	< 0.87 J	< 4000 J	< 1	< 4000	< 1.3	< 4200	ND	ND
VP-5C	27.25-27.75	5/25/2011	Primary	**5.2**	**35000**	**2.6**	**14000**	< 1	< 6000	**17**	**67000**	**2.1**	**8500**	< 1.2	< 4900	< 2	< 5000	< 1	< 4000	< 1.1	< 5100	< 1	< 4000	< 1.5	< 4800	**26.9**	**124500**
VP-5C	27.25-27.75	9/21/2011	Primary	**0.71**	**4800**	**0.45**	**2400**	< 0.1	< 600	**0.63**	**2500**	**0.16**	**650**	< 0.12	< 490	**0.2**	**500**	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.15**	**10850**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-5C	27.25-27.75	12/6/2011	Primary	**0.094**	**640**	**0.033**	**180**	< 0.005	< 30	**0.11**	**440**	**0.03**	**100**	< 0.0062	< 25	**0.031**	**79**	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**0.298**	**1439**
VP-5C	27.25-27.75	3/29/2012	Primary	**0.24**	**1600**	**0.078**	**420**	< 0.005	< 30	**1.3**	**5200**	**0.062**	**250**	< 0.0062	< 25	**0.055**	**140**	**0.023**	**91**	< 0.0054	< 25	**0.045**	**180**	**0.018**	**58**	**1.821**	**7939**
VP-5C	27.25-27.75	6/6/2012	Primary	**1.3**	**8800**	**0.39**	**2100**	< 0.03	< 200	**0.76**	**3000**	**0.096**	**390**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**2.546**	**14290**
VP-5C	27.25-27.75	9/19/2012	Primary	**0.62**	**4200**	**0.19**	**1000**	< 0.002	< 12	**0.4**	**2000**	**0.057**	**230**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**1.267**	**7430**
VP-5C	27.25-27.75	12/12/2012	Primary	**1.2**	**8200**	**0.3**	**2000**	< 0.3	< 2000	**4.6**	**18000**	**0.34**	**1400**	< 0.37	< 1500	< 0.59	< 1500	< 0.3	< 1000	< 0.32	< 1500	< 0.3	< 1000	< 0.45	< 1400	**6.44**	**29600**
VP-5C	27.25-27.75	3/20/2013	Primary	**0.28**	**1900**	**0.059**	**320**	< 0.01	< 60	**0.51**	**2000**	**0.03**	**100**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	**0.016**	**64**	**0.016**	**51**	**0.911**	**4435**
VP-5C	27.25-27.75	6/25/2013	Primary	**0.49**	**3300**	**0.26**	**1400**	< 0.1	< 600	**41 J**	**160000 J**	**5.9**	**24000**	< 0.12	< 490	**2**	**5000**	**0.4 J**	**2000 J**	**0.17**	**790**	**1.4**	**5600**	**0.81**	**2600**	**52.43**	**204690**
VP-5C	27.25-27.75	9/24/2013	Primary	**0.02**	**100**	< 0.01	< 50	< 0.01	< 60	**0.12**	**480**	**0.016**	**65**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.156**	**645**
VP-5C	27.25-27.75	12/18/2013	Primary	**0.025**	**170**	**0.0088**	**47**	< 0.008	< 48	**0.11**	**440**	**0.026**	**110**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.1698**	**767**
VP-5C	27.25-27.75	12/9/2014	Primary	**0.47**	**3200**	**0.29**	**1600**	< 0.002	< 12	**8.7**	**35000**	**0.94**	**3800**	**0.024**	**97**	**0.17**	**440**	**0.022**	**87**	**0.038**	**180**	**0.14**	**560**	**0.093**	**300**	**10.887**	**45264**
VP-5C	27.25-27.75	3/25/2015	Primary	**0.02**	**100**	< 0.01	< 50	< 0.01	< 60	**0.24**	**950**	**0.12**	**490**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	**0.012**	**48**	< 0.015	< 48	**0.392**	**1588**
VP-5C	27.25-27.75	9/22/2015	Primary	**0.014**	**95**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.025**	**80**	**0.039**	**175**
VP-5C	27.25-27.75	12/16/2015	Primary	**0.068**	**460**	**0.018**	**97**	< 0.001	< 6.0	**0.14**	**560**	**0.028**	**110**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0024**	**11**	**0.0042**	**17**	**0.002**	**6.4**	**0.2626**	**1261.4**
VP-5C	27.25-27.75	4/19/2016	Primary	**0.017**	**120**	**0.0035 J**	**19 J**	< 0.001	< 6.0	**0.0019 J**	**7.5 J**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0224**	**146.5**
VP-5C	27.25-27.75	12/27/2016	Primary	**0.0084**	**57**	**0.001**	**5.4**	< 0.0005	< 3.0	**0.00086**	**3.4**	**0.00056**	**2.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01082**	**68.1**
VP-5C	27.25-27.75	3/14/2017	Primary	**0.043 J-**	**290 J-**	**0.009 J-**	**48 J-**	< 0.0005 J	< 3.0 J	**0.28 J-**	**1100 J-**	**0.022 J-**	**89 J-**	< 0.00062 J	< 2.5 J	**0.0033 J-**	**8.4 J-**	< 0.0005 J	< 2.0 J	**0.0021 J-**	**9.7 J-**	**0.0017 J-**	**6.7 J-**	**0.0041 J-**	**13 J-**	**0.3652**	**1564.8**
VP-5C	27.25-27.75	6/28/2017	Primary	**0.031**	**210**	**0.0063**	**34**	< 0.004	< 24	**0.038**	**150**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0753**	**394**
VP-5C	27.25-27.75	9/27/2017	Primary	**0.019**	**130**	**0.0056**	**30**	< 0.0005	< 3.0	**0.051**	**200**	**0.0042**	**17**	< 0.00062	< 2.5	**0.0021**	**5.4**	< 0.0005	< 2.0	**0.00076**	**3.5**	< 0.0005	< 2.0	**0.0015**	**4.8**	**0.08416**	**390.7**
VP-5C	27.25-27.75	12/11/2017	Primary	**0.062**	**420**	**0.019**	**100**	< 0.002	< 12	**0.036**	**140**	**0.0024**	**9.7**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003 J	< 9.6 J	**0.1194**	**669.7**
VP-5C	27.25-27.75	5/1/2018	Primary	**0.0036**	**24**	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.00071**	**2.8**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00431**	**26.8**
VP-6A	9.25-9.75	2/15/2011	Primary	**250**	**1700000**	**150**	**810000**	< 17	< 100000	**830**	**3300000**	**64**	**260000**	< 25	< 100000	**180**	**460000**	< 25	< 99000	< 22 J	< 100000 J	< 25	< 99000	< 31	< 99000	**1474**	**6530000**
VP-6A	9.25-9.75	5/25/2011	Primary	**0.025**	**170**	**0.015**	**81**	< 0.002	< 12	**0.014**	**56**	< 0.002	< 8.1	**0.0047**	**19**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0587**	**326**
VP-6A	9.25-9.75	9/21/2011	Primary	**1.5**	**10000**	**0.74**	**4000**	< 0.2	< 1000	**0.98**	**3900**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.22**	**17900**
VP-6A	9.25-9.75	12/6/2011	Primary	**7.5**	**51000**	**3.2**	**17000**	< 0.4	< 2000	**5.3**	**21000**	**0.54**	**2200**	< 0.49	< 2000	**0.78**	**2000**	< 0.4	< 2000	< 0.43	< 2000	< 0.4	< 2000	< 0.6	< 2000	**17.32**	**93200**
VP-6A	9.25-9.75	3/29/2012	Primary	**0.015**	**100**	< 0.01	< 50	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.015**	**100**
VP-6A	9.25-9.75	6/6/2012	Primary	**0.022**	**150**	**0.0052**	**28**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0272**	**178**
VP-6A	9.25-9.75	9/19/2012	Primary	**2.7**	**18000**	**0.61**	**3300**	< 0.002	< 12	**0.66**	**2600**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**3.97**	**23900**
VP-6A	9.25-9.75	12/12/2012	Primary	< 1.5	< 10000	< 1.5	< 8100	< 1.5	< 9100	< 1.5	< 6000	< 1.5	< 6100	< 1.9	< 7700	< 2.9	< 7400	< 1.5	< 6000	< 1.6	< 7400	< 1.5	< 6000	< 2.3	< 7400	ND	ND
VP-6A	9.25-9.75	12/12/2012	Duplicate	< 1.5	< 10000	< 1.5	< 8100	< 1.5	< 9100	< 1.5	< 6000	< 1.5	< 6100	< 1.9	< 7700	< 2.9	< 7400	< 1.5	< 6000	< 1.6	< 7400	< 1.5	< 6000	< 2.3	< 7400	ND	ND
VP-6A	9.25-9.75	3/20/2013	Primary	**2.9**	**20000**	**0.39**	**2100**	< 0.2	< 1000	**0.44**	**1700**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.73**	**23800**
VP-6A	9.25-9.75	6/25/2013	Primary	**0.16**	**1100**	< 0.1	< 500	< 0.1	< 600	**0.1**	**400**	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**0.26**	**1500**
VP-6A	9.25-9.75	9/24/2013	Primary	**0.12**	**820**	**0.071**	**380**	< 0.01	< 60	**0.11**	**440**	**0.028**	**110**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.329**	**1750**
VP-6A	9.25-9.75	12/18/2013	Primary	**0.06**	**400**	**0.024**	**130**	< 0.008	< 48	**0.01**	**40**	< 0.008	< 32	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.094**	**570**
VP-6A	9.25-9.75	3/25/2015	Primary	**0.12**	**820**	**0.027**	**150**	< 0.01	< 60	**0.036**	**140**	**0.013**	**53**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.196**	**1163**
VP-6A	9.25-9.75	9/22/2015	Primary	**0.27**	**1800**	**0.1**	**500**	< 0.008	< 48	**0.26**	**1000**	**0.098**	**400**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	**0.034**	**130**	< 0.012	< 38	**0.762**	**3830**
VP-6A	9.25-9.75	12/16/2015	Primary	**0.11**	**750**	**0.041**	**220**	< 0.004	< 24	**0.034**	**130**	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0041**	**16**	< 0.006	< 19	**0.2041**	**1177**
VP-6A	9.25-9.75	4/19/2016	Primary	**0.012**	**82**	**0.0014 J**	**7.5 J**	< 0.001	< 6.0	**0.0019 J**	**7.5 J**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0153**	**97**
VP-6A	9.25-9.75	8/15/2016	Primary	**0.14**	**950**	**0.074**	**400**	< 0.001	< 6.0	**0.14**	**560**	**0.07**	**300**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0026**	**12**	**0.022**	**87**	< 0.0015	< 4.8	**0.4486**	**2309**
VP-6A	9.25-9.75	12/27/2016	Primary	**0.027**	**180**	**0.015**	**81**	< 0.001	< 6.0	**0.017**	**67**	**0.0042**	**17**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0632**	**345**
VP-6A	9.25-9.75	3/14/2017	Primary	**0.13**	**880**	**0.04**	**200**	< 0.004	< 24	**0.043**	**170**	**0.017**	**69**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0066**	**26**	< 0.006	< 19	**0.2366**	**1345**
VP-6A	9.25-9.75	6/28/2017	Primary	**0.16**	**1100**	**0.09**	**500**	< 0.004	< 24	**0.082**	**330**	**0.053**	**210**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.019**	**75**	< 0.006	< 19	**0.404**	**2215**
VP-6A	9.25-9.75	9/27/2017	Primary	**0.2**	**1000**	**0.1**	**500**	< 0.01	< 60	**0.13**	**520**	**0.063**	**260**	< 0.012	< 49	**0.085**	**220**	< 0.01	< 40	< 0.011	< 51	**0.03**	**100**	< 0.015	< 48	**0.608**	**2600**
VP-6A	9.25-9.75	12/11/2017	Primary	**0.12**	**820**	**0.039**	**210**	< 0.01	< 60	**0.05**	**200**	**0.012**	**49**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015 J	< 48 J	**0.221**	**1279**
VP-6A	9.25-9.75	5/1/2018	Primary	**0.13**	**880**	**0.065**	**350**	< 0.004	< 24	**0.091**	**360**	**0.036**	**150**	< 0.005	< 20	**0.0079**	**20**	< 0.004	< 16	< 0.0044	< 20	**0.022**	**87**	< 0.006	< 19	**0.3519**	**1847**
VP-6B	20.25-20.75	2/15/2011	Primary	**5.3**	**36000**	**3.3**	**18000**	< 0.83	< 5000	**22**	**87000**	**2.5**	**10000**	< 1.2	< 4900	**6.7**	**17000**	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**39.8**	**168000**
VP-6B	20.25-20.75	5/25/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	**0.004**	**20**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.004**	**20**
VP-6B	20.25-20.75	9/21/2011	Primary	< 0.002 J	< 14 J	< 0.002 J	< 11 J	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002 J	< 8.1 J	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-6B	20.25-20.75	9/21/2011	Duplicate	**0.004 J**	**27 J**	**0.0063 J**	**34 J**	< 0.002	< 12	**0.011 J**	**44 J**	**0.0062 J**	**25 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0275**	**130**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-6B	20.25-20.75	12/6/2011	Primary	**0.09**	**600**	**0.043**	**230**	< 0.005	< 30	**0.068**	**270**	**0.0062**	**25**	< 0.0062	< 25	**0.014**	**36**	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**0.2212**	**1161**
VP-6B	20.25-20.75	12/6/2011	Duplicate	**0.1**	**700**	**0.056**	**300**	< 0.005	< 30	**0.081**	**320**	**0.0079**	**32**	< 0.0062	< 25	**0.011**	**28**	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**0.2559**	**1380**
VP-6B	20.25-20.75	3/29/2012	Primary	< 0.0099	< 67	< 0.01	< 50	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	ND	ND
VP-6B	20.25-20.75	3/29/2012	Duplicate	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.0024**	**9.5**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0024**	**9.5**
VP-6B	20.25-20.75	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-6B	20.25-20.75	9/19/2012	Primary	**0.0027**	**18**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0027**	**18**
VP-6B	20.25-20.75	12/12/2012	Primary	< 0.0099	< 67	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	ND	ND
VP-6B	20.25-20.75	3/20/2013	Primary	**0.012**	**82**	< 0.002	< 11	< 0.002	< 12	**0.0024**	**9.5**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0144**	**91.5**
VP-6B	20.25-20.75	6/25/2013	Primary	**0.0023**	**16**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0023**	**16**
VP-6B	20.25-20.75	12/18/2013	Primary	**0.0096**	**65**	**0.0025**	**13**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0121**	**78**
VP-6B	20.25-20.75	3/25/2015	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-6B	20.25-20.75	4/19/2016	Primary	< 0.001	< 6.8	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-6B	20.25-20.75	12/27/2016	Primary	**0.00055**	**3.7**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00055**	**3.7**
VP-6B	20.25-20.75	3/14/2017	Primary	**0.0087**	**59**	**0.0015**	**8.1**	< 0.0005	< 3.0	**0.0011**	**4.4**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0016**	**5.1**	**0.0129**	**76.6**
VP-6B	20.25-20.75	6/28/2017	Primary	**0.018**	**120**	**0.0032**	**17**	< 0.001	< 6.0	**0.0015**	**6.0**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0227**	**143**
VP-6B	20.25-20.75	9/27/2017	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-6B	20.25-20.75	12/11/2017	Primary	**0.061**	**410**	**0.014**	**75**	< 0.001	< 6.0	**0.066**	**260**	**0.01**	**40**	**0.0025**	**10**	< 0.002	< 5.1	< 0.001	< 4.0	**0.003**	**14**	**0.0013**	**5.2**	**0.014 J**	**45 J**	**0.1718**	**859.2**
VP-6B	20.25-20.75	5/1/2018	Primary	**0.0036**	**24**	**0.0007**	**3.8**	< 0.0005	< 3.0	**0.00055**	**2.2**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00485**	**30**
VP-6C	27.25-27.75	2/15/2011	Primary	**5.3**	**36000**	**3**	**16000**	< 0.83	< 5000	**30**	**100000**	**3.7**	**15000**	< 1.2	< 4900	**8.6**	**22000**	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**50.6**	**189000**
VP-6C	27.25-27.75	5/25/2011	Primary	**1.1 J**	**7500 J**	**1.1**	**5900**	< 0.2	< 1000	**1.5 J**	**6000 J**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.7**	**19400**
VP-6C	27.25-27.75	5/25/2011	Duplicate	**1.5 J**	**10000 J**	**1.2**	**6500**	< 0.2	< 1000	**1 J**	**4000 J**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.7**	**20500**
VP-6C	27.25-27.75	9/21/2011	Primary	**0.85**	**5800**	**0.43**	**2300**	< 0.04	< 200	**0.38**	**1500**	**0.04**	**200**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.7**	**9800**
VP-6C	27.25-27.75	12/6/2011	Primary	**2.2**	**15000**	**0.8**	**4000**	< 0.06	< 400	**0.71**	**2800**	**0.11**	**450**	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**3.82**	**22250**
VP-6C	27.25-27.75	3/29/2012	Primary	**5.9**	**40000**	**2.4**	**13000**	< 0.12	< 720	**3.3**	**13000**	**0.86**	**3500**	< 0.15	< 610	**1.3**	**3300**	< 0.12	< 480	< 0.13	< 600	< 0.12	< 480	< 0.18	< 580	**13.76**	**72800**
VP-6C	27.25-27.75	6/6/2012	Primary	**8.7 J**	**59000 J**	**2.8 J**	**15000 J**	< 0.2	< 1000	**3.8 J**	**15000 J**	**0.44 J**	**1800 J**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**15.74**	**90800**
VP-6C	27.25-27.75	6/6/2012	Duplicate	**2.5 J**	**17000 J**	**0.47 J**	**2500 J**	< 0.2	< 1000	**1.1 J**	**4400 J**	< 0.2 J	< 800 J	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**4.07**	**23900**
VP-6C	27.25-27.75	9/19/2012	Primary	**2.9 J**	**20000 J**	**0.8 J**	**4000 J**	< 0.002	< 12	**0.3 J**	**1000 J**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**4**	**25000**
VP-6C	27.25-27.75	9/19/2012	Duplicate	**1.5 J**	**10000 J**	**0.26 J**	**1400 J**	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**1.76**	**11400**
VP-6C	27.25-27.75	12/12/2012	Primary	**4.1**	**28000**	**0.59**	**3200**	< 0.1	< 600	**0.37**	**1500**	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**5.06**	**32700**
VP-6C	27.25-27.75	3/20/2013	Primary	**2.5**	**17000**	**0.4**	**2000**	< 0.2	< 1000	**0.64**	**2500**	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**3.54**	**21500**
VP-6C	27.25-27.75	6/25/2013	Primary	**0.013**	**88**	< 0.002	< 11	< 0.002	< 12	**0.075**	**300**	**0.02**	**80**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	< 0.003	< 9.6	**0.11**	**475.9**
VP-6C	27.25-27.75	12/18/2013	Primary	**0.2**	**1000**	**0.017**	**91**	< 0.008	< 48	< 0.008	< 32	< 0.008	< 32	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.217**	**1091**
VP-6C	27.25-27.75	12/9/2014	Primary	**0.37**	**2500**	**0.056**	**300**	< 0.002	< 12	**0.41**	**1600**	**0.097**	**390**	< 0.0025	< 10	**0.04**	**100**	**0.0031**	**12**	**0.004**	**19**	**0.012**	**48**	**0.0092**	**29**	**1.0013**	**4998**
VP-6C	27.25-27.75	3/25/2015	Primary	**0.0043**	**29**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0043**	**29**
VP-6C	27.25-27.75	4/19/2016	Primary	**0.24**	**1600**	**0.015 J**	**81 J**	< 0.001	< 6.0	**0.022 J**	**87 J**	**0.0032**	**13**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0022**	**8.7**	< 0.0015	< 4.8	**0.2824**	**1789.7**
VP-6C	27.25-27.75	12/27/2016	Primary	**0.0069**	**47**	**0.00078**	**4.2**	< 0.0005	< 3.0	**0.0012**	**4.8**	**0.00058**	**2.4**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00946**	**58.4**
VP-6C	27.25-27.75	3/14/2017	Primary	**0.038**	**260**	**0.0064**	**34**	< 0.001	< 6.0	**0.19**	**750**	**0.016**	**65**	**0.003**	**12**	< 0.002	< 5.1	< 0.001	< 4.0	**0.0024**	**11**	**0.0011**	**4.4**	**0.0035**	**11**	**0.2604**	**1147.4**
VP-6C	27.25-27.75	6/28/2017	Primary	**0.073**	**500**	**0.011**	**59**	< 0.004	< 24	**0.031**	**120**	**0.0055**	**22**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1205**	**701**
VP-6C	27.25-27.75	9/27/2017	Primary	**0.037**	**250**	**0.012**	**65**	< 0.0005	< 3.0	**0.026**	**100**	**0.0067**	**27**	< 0.00062	< 2.5	**0.0053**	**14**	< 0.0005	< 2.0	**0.00068**	**3.1**	**0.0028**	**11**	**0.0017**	**5.4**	**0.09218**	**475.5**
VP-6C	27.25-27.75	12/11/2017	Primary	**0.011**	**75**	< 0.002	< 11	< 0.002	< 12	**0.0046**	**18**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.022 J**	**70 J**	**0.0376**	**163**
VP-6C	27.25-27.75	5/1/2018	Primary	**0.0062**	**42**	< 0.002	< 11	< 0.002	< 12	**0.0026**	**10**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0088**	**52**
VP-7A	9.5-10	2/15/2011	Primary	< 15	< 100000	< 19	< 100000	< 17	< 100000	< 25	< 99000	< 25	< 100000	< 25	< 100000	< 39	< 100000	< 25	< 99000	< 22 J	< 100000 J	< 25	< 99000	< 31	< 99000	ND	ND
VP-7A	9.5-10	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-7A	9.5-10	5/24/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0027	< 11	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-7A	9.5-10	9/19/2011	Primary	**0.047**	**320**	**0.006**	**32**	< 0.002	< 12	< 0.002	< 7.9	**0.0044**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0574**	**370**
VP-7A	9.5-10	12/5/2011	Primary	**0.034**	**230**	**0.012**	**65**	< 0.002	< 12	**0.004**	**16**	**0.012**	**49**	< 0.0025	< 10	**0.0051**	**13**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0671**	**373**
VP-7A	9.5-10	3/27/2012	Primary	**0.015**	**100**	**0.0052**	**28**	< 0.002	< 12	< 0.002	< 7.9	**0.0035**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0237**	**142**
VP-7A	9.5-10	6/4/2012	Primary	**0.012**	**82**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0164**	**102.9**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-7A	9.5-10	9/17/2012	Primary	**0.015**	**100**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	**0.0032**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0204**	**125**
VP-7A	9.5-10	12/10/2012	Primary	**0.0061**	**41**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0061**	**41**
VP-7A	9.5-10	3/18/2013	Primary	**0.011**	**75**	**0.0026**	**14**	< 0.002	< 12	**0.0024**	**9.5**	**0.0047**	**19**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0207**	**117.5**
VP-7A	9.5-10	6/25/2013	Primary	**0.004**	**27**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.004**	**27**
VP-7A	9.5-10	12/18/2013	Primary	**0.01**	**70**	**0.0079**	**43**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0179**	**113**
VP-7A	9.5-10	3/25/2015	Primary	**0.005**	**34**	**0.0021**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0071**	**45**
VP-7A	9.5-10	4/19/2016	Primary	< 0.001	< 6.8	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-7A	9.5-10	12/27/2016	Primary	**0.001**	**6.8**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.001**	**6.8**
VP-7A	9.5-10	3/14/2017	Primary	**0.0023**	**16**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0015**	**4.8**	**0.0038**	**20.8**
VP-7A	9.5-10	6/28/2017	Primary	**0.0072**	**49**	**0.0017**	**9.1**	< 0.0005	< 3.0	**0.0012**	**4.8**	< 0.0005	< 2.0	**0.0007**	**2.8**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00082**	**2.6**	**0.01162**	**68.3**
VP-7A	9.5-10	9/27/2017	Primary	< 0.00084	< 5.7	< 0.00084	< 4.5	< 0.00084	< 5.1	< 0.00084	< 3.3	< 0.00084	< 3.4	< 0.001	< 4.1	< 0.0016	< 4.1	< 0.00084	< 3.3	< 0.00092	< 4.3	< 0.00084	< 3.3	< 0.0013	< 4.2	ND	ND
VP-7A	9.5-10	12/11/2017	Primary	**0.0055**	**37**	**0.0019**	**10**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.0074**	**47**
VP-7A	9.5-10	5/1/2018	Primary	**0.007**	**48**	**0.002**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.009**	**59**
VP-7B	18.75-19.25	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	**1.6**	**6400**	**1.4**	**5700**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**3**	**12100**
VP-7B	18.75-19.25	2/15/2011	Duplicate	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	**2**	**5100**	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**2**	**5100**
VP-7B	18.75-19.25	5/24/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0042	< 17	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-7B	18.75-19.25	9/19/2011	Primary	**0.013**	**88**	**0.008**	**43**	< 0.002	< 12	**0.0088**	**35**	**0.017**	**69**	< 0.0025	< 10	**0.013**	**33**	< 0.002	< 7.9	< 0.0022	< 10	**0.0023**	**9.1**	< 0.003	< 9.6	**0.0621**	**277.1**
VP-7B	18.75-19.25	12/5/2011	Primary	**1.1**	**7500**	**0.78**	**4200**	< 0.04	< 200	**0.91**	**3600**	**1.1**	**4500**	< 0.049	< 200	**1.1**	**2800**	**0.066**	**260**	< 0.043	< 200	**0.16**	**640**	**0.069**	**220**	**5.285**	**23720**
VP-7B	18.75-19.25	3/27/2012	Primary	**0.62**	**4200**	**0.3**	**2000**	< 0.04	< 200	**0.55**	**2200**	**0.67**	**2700**	< 0.049	< 200	**0.12**	**310**	< 0.04	< 200	< 0.043	< 200	**0.05**	**200**	< 0.06	< 200	**2.31**	**11610**
VP-7B	18.75-19.25	6/4/2012	Primary	**0.22**	**1500**	**0.067**	**360**	< 0.03	< 200	**0.038**	**150**	**0.086 J**	**350 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.411**	**2360**
VP-7B	18.75-19.25	6/4/2012	Duplicate	**0.25**	**1700**	**0.08**	**400**	< 0.03	< 200	**0.048**	**190**	**0.12 J**	**490 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.498**	**2780**
VP-7B	18.75-19.25	9/17/2012	Primary	**0.37**	**2500**	**0.12**	**650**	< 0.002	< 12	**0.061**	**240**	**0.21**	**850**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.761**	**4240**
VP-7B	18.75-19.25	12/10/2012	Primary	**0.36**	**2400**	**0.094**	**510**	< 0.01	< 60	**0.066**	**260**	**0.27 J**	**1100 J**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.79**	**4270**
VP-7B	18.75-19.25	3/18/2013	Primary	**1**	**7000**	**0.41**	**2200**	< 0.01	< 60	**0.29**	**1200**	**0.53**	**2100**	< 0.012	< 49	**0.31**	**790**	**0.031**	**120**	< 0.011	< 51	**0.038**	**150**	**0.036**	**120**	**2.645**	**13680**
VP-7B	18.75-19.25	6/25/2013	Primary	**0.19**	**1300**	**0.037**	**200**	< 0.01	< 60	**0.024**	**95**	**0.072**	**290**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.323**	**1885**
VP-7B	18.75-19.25	12/18/2013	Primary	**0.12**	**820**	**0.033**	**180**	< 0.004	< 24	**0.012**	**48**	**0.047**	**190**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.212**	**1238**
VP-7B	18.75-19.25	12/9/2014	Primary	**0.12**	**820**	**0.013**	**70**	< 0.002	< 12	**0.0075**	**30**	**0.017**	**69**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1575**	**989**
VP-7B	18.75-19.25	3/25/2015	Primary	**0.13**	**880**	**0.01**	**50**	< 0.002	< 12	< 0.002	< 7.9	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.154**	**987**
VP-7B	18.75-19.25	9/22/2015	Primary	**0.2**	**1000**	**0.014**	**75**	< 0.004	< 24	< 0.004	< 16	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.229**	**1136**
VP-7B	18.75-19.25	12/16/2015	Primary	**0.062**	**420**	**0.0046**	**25**	< 0.002	< 12	< 0.002	< 7.9	**0.0023**	**9.3**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0689**	**454.3**
VP-7B	18.75-19.25	4/19/2016	Primary	**0.0011**	**7.5**	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0011**	**7.5**
VP-7B	18.75-19.25	5/31/2016	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-7B	18.75-19.25	12/27/2016	Primary	**0.016**	**110**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.016**	**110**
VP-7B	18.75-19.25	3/14/2017	Primary	**0.78**	**5300**	**0.022**	**120**	< 0.001	< 6.0	< 0.001	< 4.0	**0.018**	**73**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.82**	**5493**
VP-7B	18.75-19.25	6/28/2017	Primary	**0.21**	**1400**	**0.01**	**50**	< 0.004	< 24	< 0.004	< 16	**0.0074**	**30**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.2274**	**1480**
VP-7B	18.75-19.25	9/27/2017	Primary	**0.0022**	**15**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0022**	**15**
VP-7B	18.75-19.25	12/11/2017	Primary	**0.053**	**360**	**0.0032**	**17**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.00068**	**2.8**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.05688**	**379.8**
VP-7B	18.75-19.25	5/1/2018	Primary	**0.37**	**2500**	**0.012**	**65**	< 0.0005	< 3.0	**0.0005**	**2.0**	**0.0074**	**30**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00078**	**3.6**	**0.00055**	**2.2**	< 0.00075	< 2.4	**0.39123**	**2602.8**
VP-7C	30.5-31	2/15/2011	Primary	< 0.74	< 5000	**0.95**	**5100**	< 0.83	< 5000	**1.6**	**6400**	**2.7**	**11000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**5.25**	**22500**
VP-7C	30.5-31	5/24/2011	Primary	< 0.04	< 300	**0.071**	**380**	< 0.04	< 200	**0.05**	**200**	**0.059**	**240**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.18**	**820**
VP-7C	30.5-31	9/19/2011	Primary	**0.027**	**180**	**0.061**	**330**	< 0.002	< 12	**0.019**	**75**	**0.089**	**360**	< 0.0025	< 10	< 0.0039	< 10	**0.0023**	**9.1**	< 0.0022	< 10	< 0.002	< 7.9	**0.0038**	**12**	**0.2021**	**966.1**
VP-7C	30.5-31	12/5/2011	Primary	**0.22**	**1500**	**0.47**	**2500**	< 0.03	< 200	**0.12**	**480**	**0.54**	**2200**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.35**	**6680**
VP-7C	30.5-31	3/27/2012	Primary	**0.19**	**1300**	**0.47**	**2500**	< 0.02	< 100	**0.11**	**440**	**0.67**	**2700**	< 0.025	< 100	< 0.039	< 100	**0.03**	**100**	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**1.47**	**7040**
VP-7C	30.5-31	6/4/2012	Primary	**0.0055**	**37**	**0.002**	**11**	< 0.002	< 12	< 0.002	< 7.9	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0097**	**56.9**
VP-7C	30.5-31	9/17/2012	Primary	**0.16**	**1100**	**0.24**	**1300**	< 0.002	< 12	**0.19**	**750**	**0.17**	**690**	< 0.0025	< 10	**0.022**	**56**	**0.0078**	**31**	**0.0028**	**13**	**0.028**	**110**	**0.0056**	**18**	**0.8262**	**4068**
VP-7C	30.5-31	12/10/2012	Primary	**0.33**	**2200**	**1.3**	**7000**	< 0.01	< 60	**2.8**	**11000**	**3.3 J**	**13000 J**	< 0.012	< 49	**0.17**	**440**	**0.21**	**830**	**0.015**	**69**	**0.11**	**440**	< 0.015	< 48	**8.235**	**34979**
VP-7C	30.5-31	3/18/2013	Primary	**0.061**	**410**	**0.048**	**260**	< 0.01	< 60	**0.094**	**370**	**0.099**	**400**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.302**	**1440**
VP-7C	30.5-31	6/25/2013	Primary	**0.056**	**380**	**0.067**	**360**	< 0.002	< 12	**0.9 J**	**4000 J**	**0.18 J**	**730 J**	< 0.0025	< 10	**0.0067**	**17**	< 0.002	< 7.9	**0.0026**	**12**	**0.0076**	**30**	< 0.003	< 9.6	**1.2199**	**5529**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-7C	30.5-31	9/24/2013	Primary	**0.042**	**290**	**0.045**	**240**	< 0.03	< 200	**0.16**	**640**	**0.13**	**530**	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.377**	**1700**
VP-7C	30.5-31	12/18/2013	Primary	**0.13**	**880**	**0.076**	**410**	< 0.008	< 48	**0.099**	**390**	**0.22**	**890**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.525**	**2570**
VP-7C	30.5-31	12/9/2014	Primary	**0.0097**	**66**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0097**	**66**
VP-7C	30.5-31	3/25/2015	Primary	**0.066**	**450**	**0.35**	**1900**	< 0.005	< 30	< 0.005	< 20	**0.0088**	**36**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.4248**	**2386**
VP-7C	30.5-31	9/22/2015	Primary	**0.047**	**320**	**0.054**	**290**	< 0.008	< 48	**0.011**	**44**	**0.013**	**53**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.125**	**707**
VP-7C	30.5-31	12/16/2015	Primary	**0.017**	**120**	**0.01**	**50**	< 0.0005	< 3.0	**0.0068**	**27**	**0.007**	**28**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0408**	**225**
VP-7C	30.5-31	4/19/2016	Primary	**0.0028**	**19**	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0028**	**19**
VP-7C	30.5-31	12/27/2016	Primary	**0.091**	**620**	**0.035**	**190**	< 0.0005	< 3.0	**0.011**	**44**	**0.011**	**45**	< 0.00062	< 2.5	**0.0013**	**3.3**	**0.0012**	**4.8**	< 0.00055	< 2.5	**0.00092**	**3.7**	**0.0012**	**3.8**	**0.15262**	**914.6**
VP-7C	30.5-31	3/14/2017	Primary	**0.051**	**350**	**0.038**	**200**	< 0.0005	< 3.0	**0.0037**	**15**	**0.013**	**53**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.003	< 9.6	**0.1057**	**618**
VP-7C	30.5-31	6/28/2017	Primary	**0.047**	**320**	**0.022**	**120**	< 0.004	< 24	< 0.004	< 16	**0.0065**	**26**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0755**	**466**
VP-7C	30.5-31	9/27/2017	Primary	**0.041**	**280**	**0.015**	**81**	< 0.0005	< 3.0	**0.0028**	**11**	**0.0066**	**27**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0654**	**399**
VP-7C	30.5-31	12/11/2017	Primary	**0.11**	**750**	**0.11**	**590**	< 0.004	< 24	**0.041**	**160**	**0.011**	**45**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006 J	< 19 J	**0.272**	**1545**
VP-7C	30.5-31	5/1/2018	Primary	**0.23 J**	**1600 J**	**0.16**	**860**	< 0.004	< 24	**0.0054**	**21**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.4074**	**2530**
VP-7C	30.5-31	9/19/2018	Primary	**0.039**	**260**	**0.51**	**2700**	< 0.004	< 24	**0.09**	**400**	**0.015**	**61**	< 0.005	< 20	< 0.0078 J	< 20 J	**0.054**	**210**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.708**	**3631**
VP-7C	30.5-31	12/27/2018	Primary	**0.09**	**600**	**0.37**	**2000**	< 0.004	< 24	**0.015**	**60**	**0.0076**	**31**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.4826**	**2691**
VP-7C	30.5-31	2/20/2019	Primary	**0.11**	**750**	**0.63**	**3400**	< 0.0005	< 3.0	**0.019**	**75**	**0.0062**	**25**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.7652**	**4250**
VP-7C	30.5-31	6/12/2019	Primary	**0.023**	**160**	**0.046**	**250**	< 0.0005	< 3.0	**0.0048**	**19**	**0.003**	**12**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0006**	**2.4**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0774**	**443.4**
VP-7D	34.5-35	2/16/2011	Primary	**1.4**	**9500**	**2**	**11000**	< 0.83	< 5000	**3**	**12000**	**5.2**	**21000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**11.6**	**53500**
VP-7D	34.5-35	5/24/2011	Primary	**0.028**	**190**	**0.026**	**140**	< 0.002	< 12	< 0.002	< 7.9	**0.003**	**10**	< 0.004	< 20	< 0.0039	< 10	**0.003**	**10**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.06**	**350**
VP-7D	34.5-35	9/19/2011	Primary	**0.037**	**250**	**0.03**	**200**	< 0.002	< 12	**0.005**	**20**	**0.044**	**180**	**0.0042**	**17**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1202**	**667**
VP-7D	34.5-35	12/5/2011	Primary	**0.34**	**2300**	**0.48**	**2600**	< 0.03	< 200	< 0.03	< 100	**0.69**	**2800**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.51**	**7700**
VP-7D	34.5-35	3/27/2012	Primary	**0.22**	**1500**	**0.61**	**3300**	< 0.03	< 200	**0.28**	**1100**	**0.72**	**2900**	< 0.037	< 150	**0.067**	**170**	**0.048**	**190**	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.945**	**9160**
VP-7D	34.5-35	6/4/2012	Primary	**0.18**	**1200**	**0.76**	**4100**	< 0.03	< 200	**0.63**	**2500**	**1.1**	**4500**	< 0.037	< 150	**0.67**	**1700**	**0.18**	**710**	< 0.032	< 150	**0.15**	**600**	< 0.045	< 140	**3.67**	**15310**
VP-7D	34.5-35	9/17/2012	Primary	**0.037**	**250**	**0.073**	**390**	< 0.002	< 12	< 0.002	< 7.9	**0.14**	**570**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.34**	**1100**	**0.59**	**2310**
VP-7D	34.5-35	12/10/2012	Primary	**0.092**	**630**	**0.15**	**810**	< 0.002	< 12	**0.066**	**260**	**0.12 J**	**490 J**	< 0.0025	< 10	**0.049 J**	**130 J**	**0.55 J**	**2200 J**	< 0.0022	< 10	**0.013 J**	**52 J**	< 0.003	< 9.6	**1.04**	**4572**
VP-7D	34.5-35	12/10/2012	Duplicate	**0.084**	**570**	**0.13**	**700**	< 0.002	< 12	**0.063**	**250**	**0.16 J**	**650 J**	< 0.0025	< 10	**0.034 J**	**87 J**	**0.38 J**	**1500 J**	**0.0023**	**11**	**0.0091 J**	**36 J**	< 0.003	< 9.6	**0.8624**	**3804**
VP-7D	34.5-35	3/18/2013	Primary	**0.1**	**700**	**0.12**	**650**	< 0.002	< 12	**0.038**	**150**	**0.23**	**930**	< 0.0025	< 10	< 0.0039	< 10	**0.0045**	**18**	< 0.0022	< 10	**0.0034**	**13**	**0.013**	**42**	**0.5089**	**2503**
VP-7D	34.5-35	12/18/2013	Primary	**0.093**	**630**	**0.25**	**1300**	< 0.002	< 12	**0.045**	**180**	**0.16**	**650**	< 0.0025	< 10	< 0.0039	< 10	**0.017**	**67**	**0.0024**	**11**	**0.0026**	**10**	< 0.003	< 9.6	**0.57**	**2848**
VP-7D	34.5-35	3/25/2015	Primary	**0.039**	**260**	**0.46**	**2500**	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.499**	**2760**
VP-7D	34.5-35	9/22/2015	Primary	**0.016**	**110**	**0.044**	**240**	< 0.002	< 12	**0.0079**	**31**	**0.0046**	**19**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0725**	**400**
VP-7D	34.5-35	12/16/2015	Primary	**0.009**	**61**	**0.0057**	**31**	< 0.0005	< 3.0	**0.0031**	**12**	**0.0023**	**9.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0201**	**113.3**
VP-7D	34.5-35	4/19/2016	Primary	**0.00054**	**3.7**	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00054**	**3.7**
VP-7D	34.5-35	9/12/2016	Primary	**0.022**	**150**	**0.14**	**750**	< 0.0005	< 3.0	**0.023**	**91**	**0.013**	**53**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0012**	**4.8**	**0.0013**	**4.2**	**0.2005**	**1053**
VP-7D	34.5-35	12/27/2016	Primary	**0.014**	**95**	**0.12**	**650**	< 0.0005	< 3.0	**0.056**	**220**	**0.011**	**45**	< 0.00062	< 2.5	**0.011**	**28**	**0.013**	**52**	**0.0011**	**5.1**	**0.0097**	**39**	**0.008**	**26**	**0.2438**	**1160.1**
VP-7D	34.5-35	3/14/2017	Primary	**0.022**	**150**	**0.02**	**100**	< 0.0005	< 3.0	**0.00076**	**3.0**	**0.0092**	**37**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0011**	**3.5**	**0.05306**	**293.5**
VP-7D	34.5-35	6/28/2017	Primary	**0.034**	**230**	**0.02**	**100**	< 0.004	< 24	< 0.004	< 16	**0.0051**	**21**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0591**	**351**
VP-7D	34.5-35	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-7D	34.5-35	12/11/2017	Primary	**0.13**	**880**	**0.11**	**590**	< 0.004	< 24	**0.017**	**67**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006 J	< 19 J	**0.269**	**1586**
VP-7D	34.5-35	5/1/2018	Primary	**0.15**	**1000**	**0.097**	**520**	< 0.004	< 24	< 0.004	< 16	**0.0081**	**33**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.2551**	**1553**
VP-8A	9.5-10	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-8A	9.5-10	5/24/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0042	< 17	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-8A	9.5-10	9/19/2011	Primary	**0.0022**	**15**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0022**	**15**
VP-8A	9.5-10	12/5/2011	Primary	**0.15**	**1000**	**0.11**	**590**	< 0.01	< 60.4	**0.023**	**91**	**0.027**	**110**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.31**	**1791**
VP-8A	9.5-10	3/27/2012	Primary	**0.074**	**500**	**0.035**	**190**	< 0.004	< 24	**0.012**	**48**	**0.0057**	**23**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.1267**	**761**
VP-8A	9.5-10	6/5/2012	Primary	**0.052**	**350**	**0.016**	**86**	**0.0028**	**17**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0708**	**453**
VP-8A	9.5-10	9/17/2012	Primary	**0.06**	**400**	**0.019**	**100**	**0.003**	**18**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.082**	**518**
VP-8A	9.5-10	12/10/2012	Primary	**0.014**	**95**	**0.005**	**27**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.019**	**122**
VP-8A	9.5-10	3/18/2013	Primary	**0.042**	**290**	**0.02**	**100**	< 0.002	< 12	**0.0039**	**15**	**0.0038**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0697**	**420**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-8A	9.5-10	6/25/2013	Primary	**0.037**	**250**	**0.014**	**75**	**0.0026**	**16**	**0.0032**	**13**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0568**	**354**
VP-8A	9.5-10	12/18/2013	Primary	**0.024**	**160**	**0.019**	**100**	< 0.004	< 24	**0.0044**	**17**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0474**	**277**
VP-8A	9.5-10	3/25/2015	Primary	**0.03**	**200**	**0.0068**	**37**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0368**	**237**
VP-8A	9.5-10	9/22/2015	Primary	**0.067**	**460**	**0.034**	**180**	< 0.002	< 12	< 0.002	< 7.9	**0.0022**	**8.9**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1032**	**648.9**
VP-8A	9.5-10	12/16/2015	Primary	**0.036**	**240**	**0.016**	**86**	< 0.001	< 6.0	**0.0026**	**10**	**0.0017**	**6.9**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0563**	**342.9**
VP-8A	9.5-10	4/19/2016	Primary	**0.0097**	**66**	**0.0025 J**	**13 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0122**	**79**
VP-8A	9.5-10	12/27/2016	Primary	**0.012**	**82**	**0.0025**	**13**	**0.00094**	**5.7**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01544**	**100.7**
VP-8A	9.5-10	3/14/2017	Primary	**0.011**	**75**	**0.0059**	**32**	**0.00072**	**4.3**	**0.0012**	**4.8**	**0.00088**	**3.6**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0197**	**119.7**
VP-8A	9.5-10	6/28/2017	Primary	**0.02**	**100**	**0.0053**	**29**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0253**	**129**
VP-8A	9.5-10	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-8A	9.5-10	12/11/2017	Primary	**0.022**	**150**	**0.0043**	**23**	**0.00072**	**4.3**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.02702**	**177.3**
VP-8A	9.5-10	5/2/2018	Primary	**0.03**	**200**	**0.011**	**59**	< 0.002 J	< 12 J	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.041**	**259**
VP-8B	18-18.5	2/15/2011	Primary	**4.3**	**29000**	**3.2**	**17000**	< 0.83	< 5000	**5**	**20000**	**4.2**	**17000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**16.7**	**83000**
VP-8B	18-18.5	2/15/2011	Duplicate	**3.5**	**24000**	**2.8**	**15000**	< 0.83	< 5000	**4.3**	**17000**	**3.5**	**14000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**14.1**	**70000**
VP-8B	18-18.5	5/24/2011	Primary	**0.06**	**400**	**0.022**	**120**	< 0.01	< 60.4	**0.011**	**44**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.093**	**564**
VP-8B	18-18.5	9/19/2011	Primary	**0.0068**	**46**	**0.0047**	**25**	< 0.002	< 12	**0.002**	**7.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0135**	**78.9**
VP-8B	18-18.5	12/5/2011	Primary	**0.69**	**4700**	**0.5**	**3000**	< 0.03	< 200	**0.16**	**640**	**0.14**	**570**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.49**	**8910**
VP-8B	18-18.5	12/5/2011	Duplicate	**0.75**	**5100**	**0.52**	**2800**	< 0.03	< 200	**0.16**	**640**	**0.14**	**570**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.57**	**9110**
VP-8B	18-18.5	3/27/2012	Primary	**0.31**	**2100**	**0.19**	**1000**	< 0.03	< 200	**0.073**	**290**	**0.037**	**150**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.61**	**3540**
VP-8B	18-18.5	6/5/2012	Primary	**0.15**	**1000**	**0.069**	**370**	< 0.01	< 60.4	**0.021**	**83**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.24**	**1453**
VP-8B	18-18.5	9/17/2012	Primary	**0.22**	**1500**	**0.12**	**650**	**0.0055 J**	**33 J**	**0.033**	**130**	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.3925**	**2370**
VP-8B	18-18.5	9/17/2012	Duplicate	**0.21**	**1400**	**0.1**	**500**	**0.0093 J**	**56 J**	**0.03**	**100**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.3603**	**2101**
VP-8B	18-18.5	12/10/2012	Primary	**0.25**	**1700**	**0.24**	**1300**	< 0.01	< 60	**0.013**	**52**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.503**	**3052**
VP-8B	18-18.5	3/18/2013	Primary	**0.24**	**1600**	**0.12**	**650**	< 0.01	< 60	**0.038**	**150**	**0.021**	**85**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.419**	**2485**
VP-8B	18-18.5	6/25/2013	Primary	**0.093**	**630**	**0.041**	**220**	< 0.008	< 48	**0.011**	**44**	< 0.008	< 32	< 0.0099	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	**0.145**	**894**
VP-8B	18-18.5	12/18/2013	Primary	**0.047**	**320**	**0.02**	**100**	**0.0072**	**43**	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0742**	**463**
VP-8B	18-18.5	3/25/2015	Primary	**0.036**	**240**	**0.013**	**70**	**0.0041**	**25**	**0.002**	**7.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0551**	**342.9**
VP-8B	18-18.5	9/22/2015	Primary	**0.093**	**630**	**0.04**	**200**	**0.014 J**	**85 J**	**0.0051**	**20**	**0.0039**	**16**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.156**	**951**
VP-8B	18-18.5	12/16/2015	Primary	**0.052**	**350**	**0.028**	**150**	**0.002**	**12**	**0.0062**	**25**	**0.004**	**16**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0922**	**553**
VP-8B	18-18.5	4/19/2016	Primary	**0.026**	**180**	**0.01 J**	**50 J**	**0.0026**	**16**	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0386**	**246**
VP-8B	18-18.5	5/16/2016	Primary	**0.047**	**320**	**0.019**	**100**	**0.0047**	**28**	**0.0016**	**6.4**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0723**	**454.4**
VP-8B	18-18.5	12/27/2016	Primary	**0.022**	**150**	**0.0053**	**29**	**0.0033**	**20**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0306**	**199**
VP-8B	18-18.5	3/14/2017	Primary	**0.03**	**200**	**0.012**	**65**	**0.0028**	**17**	**0.0014**	**5.6**	**0.001**	**4.1**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0472**	**291.7**
VP-8B	18-18.5	6/28/2017	Primary	**0.022**	**150**	**0.0095**	**51**	**0.0024**	**14**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0339**	**215**
VP-8B	18-18.5	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-8B	18-18.5	12/11/2017	Primary	**0.033**	**220**	**0.011**	**59**	**0.0028**	**17**	**0.00055**	**2.2**	**0.0008**	**3.2**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.04815**	**301.4**
VP-8B	18-18.5	5/1/2018	Primary	**0.032**	**220**	**0.013**	**70**	**0.003**	**18**	**0.0008**	**3.2**	**0.0014**	**5.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0502**	**316.9**
VP-8C	29.5-30	2/15/2011	Primary	< 0.74	< 5000	**1.8**	**9700**	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**1.8**	**9700**
VP-8C	29.5-30	5/24/2011	Primary	**0.06**	**400**	**0.22**	**1200**	< 0.01	< 60.4	**0.03**	**100**	**0.059**	**240**	< 0.012	< 49	< 0.02	< 50	**0.061**	**240**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.43**	**2180**
VP-8C	29.5-30	9/19/2011	Primary	**0.032**	**220**	**0.17**	**910**	< 0.01	< 60.4	**0.035**	**140**	**0.047**	**190**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.284**	**1460**
VP-8C	29.5-30	12/5/2011	Primary	**0.78**	**5300**	**2.4**	**13000**	< 0.06	< 400	**0.16**	**640**	**0.54**	**2200**	< 0.074	< 300	< 0.12	< 310	**0.14**	**560**	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**4.02**	**21700**
VP-8C	29.5-30	3/27/2012	Primary	**0.16**	**1100**	**0.22**	**1200**	< 0.01	< 60.4	**0.048**	**190**	**0.047**	**190**	< 0.012	< 49	< 0.02	< 50	**0.014**	**56**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.489**	**2736**
VP-8C	29.5-30	6/5/2012	Primary	**0.21**	**1400**	**0.35**	**1900**	< 0.01	< 60.4	**0.022**	**87**	**0.044**	**180**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.626**	**3567**
VP-8C	29.5-30	9/17/2012	Primary	**0.19**	**1300**	**0.19**	**1000**	**0.0058**	**35**	**0.024**	**95**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	**0.0068**	**27**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.4386**	**2546**
VP-8C	29.5-30	12/10/2012	Primary	**1.7**	**12000**	**0.14**	**750**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**1.84**	**12750**
VP-8C	29.5-30	3/18/2013	Primary	**0.18**	**1200**	**0.28**	**1500**	< 0.004	< 24	**0.016**	**64**	**0.046**	**190**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.522**	**2954**
VP-8C	29.5-30	6/25/2013	Primary	**0.11**	**750**	**0.12**	**650**	< 0.008	< 48	**0.011**	**44**	**0.01**	**40**	< 0.0099	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	**0.251**	**1484**
VP-8C	29.5-30	12/18/2013	Primary	**0.042**	**290**	**0.024**	**130**	**0.0084**	**51**	**0.0083**	**33**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0827**	**504**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-8C	29.5-30	3/25/2015	Primary	**0.038**	**260**	**0.016**	**86**	**0.0058**	**35**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0598**	**381**
VP-8C	29.5-30	9/22/2015	Primary	**0.036**	**240**	**0.017**	**91**	**0.0046 J**	**28 J**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0576**	**359**
VP-8C	29.5-30	12/16/2015	Primary	**0.018**	**120**	**0.0095**	**51**	**0.0012**	**7.2**	**0.0016**	**6.4**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0303**	**184.6**
VP-8C	29.5-30	4/19/2016	Primary	**0.0014**	**9.5**	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0014**	**9.5**
VP-8C	29.5-30	12/27/2016	Primary	**0.0012**	**8.2**	< 0.0005	< 2.7	**0.00073**	**4.4**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00193**	**12.6**
VP-8C	29.5-30	3/14/2017	Primary	**0.0042**	**29**	**0.0029**	**16**	**0.0012**	**7.2**	**0.00074**	**2.9**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0013**	**4.2**	**0.01034**	**59.3**
VP-8C	29.5-30	6/28/2017	Primary	**0.0035**	**24**	**0.00069**	**3.7**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00419**	**27.7**
VP-8C	29.5-30	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-8C	29.5-30	12/11/2017	Primary	**0.0097**	**66**	**0.0025**	**13**	**0.0018**	**11**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.014**	**90**
VP-8C	29.5-30	5/1/2018	Primary	**0.0015**	**10**	**0.00061**	**3.3**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00211**	**13.3**
VP-8D	33.5-34	2/15/2011	Primary	**4.9**	**33000**	**6.5**	**35000**	< 0.83	< 5000	**5**	**20000**	**7.9**	**32000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**24.3**	**120000**
VP-8D	33.5-34	5/24/2011	Primary	**0.062 J**	**420 J**	**0.14 J**	**750 J**	< 0.01	< 60.4	**0.17 J**	**670 J**	**0.12 J**	**490 J**	< 0.012	< 49	**0.035 J**	**90 J**	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.527**	**2420**
VP-8D	33.5-34	5/24/2011	Duplicate	**0.029 J**	**200 J**	**0.065 J**	**350 J**	< 0.002	< 12	**0.071 J**	**280 J**	**0.042 J**	**170 J**	< 0.0032	< 13	**0.012 J**	**31 J**	**0.003**	**10**	< 0.0022	< 10	**0.004**	**20**	< 0.003	< 9.6	**0.226**	**1061**
VP-8D	33.5-34	9/19/2011	Primary	**0.032**	**220**	**0.28**	**1500**	< 0.01	< 60.4	**0.17**	**670**	**0.16**	**650**	< 0.012	< 49	< 0.02	< 50	**0.015**	**60**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.657**	**3100**
VP-8D	33.5-34	12/5/2011	Primary	**0.18**	**1200**	**0.91**	**4900**	< 0.03	< 200	**0.33**	**1300**	**0.4**	**2000**	< 0.037	< 150	< 0.059	< 150	**0.066**	**260**	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.886**	**9660**
VP-8D	33.5-34	3/27/2012	Primary	**0.78**	**5300**	**8.2**	**44000**	< 0.03	< 200	**1.1**	**4400**	**1.4**	**5700**	< 0.037	< 150	< 0.059	< 150	**0.17**	**670**	< 0.032	< 150	**0.055**	**220**	< 0.045	< 140	**11.705**	**60290**
VP-8D	33.5-34	6/5/2012	Primary	< 0.002	< 14	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0022**	**12**
VP-8D	33.5-34	9/17/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-8D	33.5-34	12/10/2012	Primary	**0.0059**	**40**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0059**	**40**
VP-8D	33.5-34	3/18/2013	Primary	**0.055**	**370**	**0.14**	**750**	< 0.002	< 12	**0.095**	**380**	**0.094**	**380**	< 0.0025	< 10	**0.0062**	**16**	**0.0052**	**21**	< 0.0022	< 10	**0.0098**	**39**	**0.0034**	**11**	**0.4086**	**1967**
VP-8D	33.5-34	6/25/2013	Primary	**0.013**	**88**	**0.0091**	**49**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.0221**	**137**
VP-8D	33.5-34	12/18/2013	Primary	**0.013**	**88**	**0.0095**	**51**	**0.0043**	**26**	**0.0037**	**15**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0305**	**180**
VP-8D	33.5-34	3/25/2015	Primary	**0.011**	**75**	**0.008**	**43**	< 0.002	< 12	**0.033**	**130**	**0.012**	**49**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0032**	**13**	< 0.003	< 9.6	**0.0672**	**310**
VP-8D	33.5-34	9/22/2015	Primary	**0.25**	**1700**	**0.13**	**700**	**0.0016 J**	**9.7 J**	**0.058**	**230**	**0.026**	**110**	< 0.0012	< 4.9	< 0.002	< 5.1	**0.0014**	**5.6**	< 0.0011	< 5.1	**0.0073**	**29**	< 0.0015	< 4.8	**0.4743**	**2784.3**
VP-8D	33.5-34	12/16/2015	Primary	**0.007**	**48**	**0.0032**	**17**	**0.00078**	**4.7**	**0.0014**	**5.6**	**0.00072**	**2.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0131**	**78.2**
VP-8D	33.5-34	4/19/2016	Primary	**0.0014**	**9.5**	**0.25 J**	**1300 J**	< 0.0005	< 3.0	**0.12 J**	**480 J**	**0.007**	**28**	< 0.00062	< 2.5	**0.0011**	**2.8**	**0.001**	**4.0**	< 0.00055	< 2.5	**0.0033**	**13**	< 0.00075	< 2.4	**0.3838**	**1837.3**
VP-8D	33.5-34	12/27/2016	Primary	**0.0009**	**6.1**	< 0.0005	< 2.7	**0.00062**	**3.7**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00152**	**9.8**
VP-8D	33.5-34	3/14/2017	Primary	**0.012**	**82**	**0.16**	**860**	**0.00066**	**4.0**	**0.084**	**330**	**0.01**	**40**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.002**	**7.9**	< 0.00075	< 2.4	**0.26866**	**1323.9**
VP-8D	33.5-34	6/28/2017	Primary	**0.014**	**95**	**0.028**	**150**	< 0.001	< 6.0	**0.0065**	**26**	**0.005**	**20**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0535**	**291**
VP-8D	33.5-34	9/27/2017	Primary	**0.0054**	**37**	**0.013**	**70**	< 0.0005	< 3.0	**0.0023**	**9.1**	**0.0025**	**10**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0232**	**126.1**
VP-8D	33.5-34	12/11/2017	Primary	**0.033**	**220**	**0.019**	**100**	**0.0005**	**3.0**	**0.0016**	**6.4**	**0.0021**	**8.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00088**	**3.5**	< 0.00075 J	< 2.4 J	**0.05708**	**341.4**
VP-8D	33.5-34	5/1/2018	Primary	**0.0058**	**39**	**0.0082**	**44**	< 0.0005	< 3.0	**0.0014**	**5.6**	**0.0028**	**11**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0182**	**99.6**
VP-9A	8.5-9	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-9A	8.5-9	5/24/2011	Primary	**0.021**	**140**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0062	< 25	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.021**	**140**
VP-9A	8.5-9	9/19/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-9A	8.5-9	12/5/2011	Primary	**0.0062**	**42**	**0.0032**	**17**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0094**	**59**
VP-9A	8.5-9	3/28/2012	Primary	**0.0035**	**24**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0057**	**36**
VP-9A	8.5-9	6/5/2012	Primary	**0.0063**	**43**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0085**	**55**
VP-9A	8.5-9	9/17/2012	Primary	**0.0097**	**66**	**0.002**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0117**	**77**
VP-9A	8.5-9	12/10/2012	Primary	**0.0079**	**54**	**0.0025**	**13**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0104**	**67**
VP-9A	8.5-9	3/18/2013	Primary	**0.0063**	**43**	**0.033**	**180**	< 0.002	< 12	**0.0041**	**16**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0434**	**239**
VP-9A	8.5-9	6/25/2013	Primary	**0.013**	**88**	**0.0035**	**19**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0165**	**107**
VP-9A	8.5-9	12/19/2013	Primary	**0.0041**	**28**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0041**	**28**
VP-9A	8.5-9	3/25/2015	Primary	**0.0049**	**33**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0049**	**33**
VP-9A	8.5-9	4/19/2016	Primary	**0.0075**	**51**	**0.005 J**	**27 J**	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0125**	**78**
VP-9A	8.5-9	12/27/2016	Primary	**0.0012**	**8.2**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0012**	**8.2**
VP-9A	8.5-9	3/14/2017	Primary	**0.0024**	**16**	**0.0037**	**20**	< 0.0005	< 3.0	**0.0011**	**4.4**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0072**	**40.4**
VP-9A	8.5-9	6/28/2017	Primary	**0.0061**	**41**	**0.0019**	**10**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.008**	**51**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-9A	8.5-9	9/27/2017	Primary	**0.023**	**160**	**0.032**	**170**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.055**	**330**
VP-9A	8.5-9	12/11/2017	Primary	**0.0051**	**35**	**0.17**	**910**	< 0.0005	< 3.0	**0.066**	**260**	**0.022**	**89**	< 0.00062	< 2.5	**0.0016**	**4.1**	**0.0039**	**15**	< 0.00055	< 2.5	**0.0079**	**31**	< 0.00075 J	< 2.4 J	**0.2765**	**1344.1**
VP-9A	8.5-9	5/1/2018	Primary	**0.0065**	**44**	**0.0092**	**50**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0157**	**94**
VP-9B	17.5-18	2/15/2011	Primary	**1.2**	**8200**	**1.4**	**7500**	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**2.6**	**15700**
VP-9B	17.5-18	5/24/2011	Primary	**0.046**	**310**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.06**	**385**
VP-9B	17.5-18	9/19/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-9B	17.5-18	12/5/2011	Primary	**0.034**	**230**	**0.017**	**91**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.051**	**321**
VP-9B	17.5-18	3/28/2012	Primary	**0.032**	**220**	**0.011**	**59**	< 0.004	< 24	< 0.004	< 16	**0.0049**	**20**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.0479**	**299**
VP-9B	17.5-18	6/5/2012	Primary	**0.01**	**70**	**0.0024**	**13**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0124**	**83**
VP-9B	17.5-18	9/17/2012	Primary	**0.018**	**120**	**0.0037**	**20**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0217**	**140**
VP-9B	17.5-18	12/10/2012	Primary	**0.0091**	**62**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0113**	**74**
VP-9B	17.5-18	3/18/2013	Primary	**0.016**	**110**	**0.07**	**400**	< 0.002	< 12	**0.0071**	**28**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0931**	**538**
VP-9B	17.5-18	6/25/2013	Primary	**0.0099**	**67**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0121**	**79**
VP-9B	17.5-18	12/19/2013	Primary	**0.0053**	**36**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0053**	**36**
VP-9B	17.5-18	3/25/2015	Primary	**0.0053**	**36**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0053**	**36**
VP-9B	17.5-18	4/19/2016	Primary	**0.0054**	**37**	**0.004 J**	**22 J**	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0094**	**59**
VP-9B	17.5-18	12/27/2016	Primary	**0.0016**	**11**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0016**	**11**
VP-9B	17.5-18	3/14/2017	Primary	**0.005**	**34**	**0.0026**	**14**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0076**	**48**
VP-9B	17.5-18	6/28/2017	Primary	**0.0044**	**30**	**0.00073**	**3.9**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00513**	**33.9**
VP-9B	17.5-18	9/27/2017	Primary	**0.006**	**41**	**0.002**	**11**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.008**	**52**
VP-9B	17.5-18	12/11/2017	Primary	**0.0059**	**40**	**0.17**	**910**	< 0.0005	< 3.0	**0.055**	**220**	**0.016**	**65**	< 0.00062	< 2.5	**0.002**	**5.1**	**0.0035**	**14**	< 0.00055	< 2.5	**0.0071**	**28**	< 0.00075 J	< 2.4 J	**0.2595**	**1282.1**
VP-9B	17.5-18	5/1/2018	Primary	**0.0042**	**29**	**0.0029**	**16**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0071**	**45**
VP-9C	29.5-30	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-9C	29.5-30	5/24/2011	Primary	**0.29**	**2000**	**0.41**	**2200**	< 0.01	< 60.4	**0.023**	**91**	**0.03**	**100**	< 0.012	< 49	< 0.02	< 50	**0.014**	**56**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.767**	**4447**
VP-9C	29.5-30	9/19/2011	Primary	**0.13**	**880**	**0.28**	**1500**	< 0.01	< 60.4	**0.04**	**200**	**0.072**	**290**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.522**	**2870**
VP-9C	29.5-30	12/5/2011	Primary	**0.46**	**3100**	**0.8**	**4000**	< 0.03	< 200	**0.16**	**640**	**0.18**	**730**	< 0.037	< 150	< 0.059	< 150	**0.04**	**200**	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.64**	**8670**
VP-9C	29.5-30	3/28/2012	Primary	**0.4**	**3000**	**2.4**	**13000**	< 0.03	< 200	**2**	**8000**	**0.74**	**3000**	< 0.037	< 150	**0.16**	**410**	**0.38**	**1500**	< 0.032	< 150	**0.28**	**1100**	< 0.045	< 140	**6.36**	**30010**
VP-9C	29.5-30	6/5/2012	Primary	**0.53**	**3600**	**0.33**	**1800**	< 0.06	< 400	< 0.06	< 200	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**0.86**	**5400**
VP-9C	29.5-30	9/17/2012	Primary	**0.19**	**1300**	**1.7**	**9100**	< 0.002	< 12	**0.048**	**190**	< 0.002	< 8.1	< 0.0025	< 10	**0.21**	**540**	**0.13**	**520**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**2.278**	**11650**
VP-9C	29.5-30	12/10/2012	Primary	**0.079**	**540**	**0.046**	**250**	< 0.002	< 12	**0.0038**	**15**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1288**	**805**
VP-9C	29.5-30	3/18/2013	Primary	**0.18**	**1200**	**2.9**	**16000**	< 0.002	< 12	**0.55**	**2200**	**0.074**	**300**	< 0.0025	< 10	**0.0057**	**15**	**0.018**	**71**	< 0.0022	< 10	**0.016**	**64**	**0.013**	**42**	**3.7567**	**19892**
VP-9C	29.5-30	3/18/2013	Duplicate	**0.22**	**1500**	**2.7**	**15000**	< 0.06	< 400	**0.5**	**2000**	**0.075**	**300**	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**3.495**	**18800**
VP-9C	29.5-30	6/25/2013	Primary	**0.016**	**110**	**0.0082**	**44**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.0242**	**154**
VP-9C	29.5-30	12/19/2013	Primary	**0.0093**	**63**	**0.0032**	**17**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0125**	**80**
VP-9C	29.5-30	12/9/2014	Primary	**0.0057**	**39**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0057**	**39**
VP-9C	29.5-30	3/25/2015	Primary	**0.0065**	**44**	**0.0041**	**22**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0106**	**66**
VP-9C	29.5-30	4/19/2016	Primary	< 0.002	< 14	**0.026 J**	**140 J**	< 0.002	< 12	**0.0046 J**	**18 J**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0306**	**158**
VP-9C	29.5-30	8/15/2016	Primary	**0.0055**	**37**	**0.074**	**400**	< 0.001	< 6.0	**0.036**	**140**	**0.0065**	**26**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0022**	**8.7**	< 0.0015	< 4.8	**0.1242**	**611.7**
VP-9C	29.5-30	12/27/2016	Primary	**0.0014**	**9.5**	**0.00086**	**4.6**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0022**	**8.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00088**	**2.8**	**0.00534**	**25.8**
VP-9C	29.5-30	3/14/2017	Primary	**0.0075**	**51**	**0.16**	**860**	< 0.0005	< 3.0	**0.067**	**270**	**0.0093**	**38**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00074**	**2.9**	< 0.00055	< 2.5	**0.0028**	**11**	< 0.00075	< 2.4	**0.24734**	**1232.9**
VP-9C	29.5-30	6/28/2017	Primary	**0.006**	**41**	**0.029**	**160**	< 0.001	< 6.0	**0.011**	**44**	**0.006**	**24**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0011**	**4.4**	< 0.0015	< 4.8	**0.0531**	**273.4**
VP-9C	29.5-30	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-9C	29.5-30	12/11/2017	Primary	**0.0038**	**26**	**0.0045**	**24**	< 0.0005	< 3.0	**0.00082**	**3.3**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00092**	**3.7**	< 0.00075 J	< 2.4 J	**0.01004**	**57**
VP-9C	29.5-30	5/1/2018	Primary	**0.0067**	**46**	**0.19**	**1000**	< 0.0005	< 3.0	**0.068**	**270**	**0.014**	**57**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0008**	**3.2**	< 0.00055	< 2.5	**0.0037**	**15**	< 0.00075	< 2.4	**0.2832**	**1391.2**
VP-9D	33.5-34	2/15/2011	Primary	**4**	**27000**	**5**	**27000**	< 0.83	< 5000	**1.7**	**6700**	**3.2**	**13000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**13.9**	**73700**
VP-9D	33.5-34	5/24/2011	Primary	**0.06**	**400**	**0.1**	**500**	< 0.002	< 12	**0.093**	**370**	**0.057**	**230**	< 0.0084	< 34	**0.0047**	**12**	**0.011**	**44**	< 0.0022	< 10	**0.0033**	**13**	< 0.003	< 9.6	**0.329**	**1569**
VP-9D	33.5-34	9/19/2011	Primary	**0.068**	**460**	**0.095**	**510**	< 0.002	< 12	**0.091**	**360**	**0.11**	**450**	< 0.0025	< 10	**0.0055**	**14**	**0.0098**	**39**	< 0.0022	< 10	**0.0055**	**22**	< 0.003	< 9.6	**0.3848**	**1855**
VP-9D	33.5-34	12/5/2011	Primary	**0.047**	**320**	**0.08**	**400**	< 0.002	< 12	**0.04**	**200**	**0.047**	**190**	< 0.0025	< 10	< 0.0039	< 10	**0.013**	**52**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.227**	**1162**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-9D	33.5-34	3/28/2012	Primary	**0.1**	**700**	**2.2**	**12000**	< 0.002	< 12	**2**	**8000**	**0.74**	**3000**	**0.004**	**16**	**0.15**	**380**	**0.38**	**1500**	**0.0087**	**40**	**0.28**	**1100**	**0.012**	**38**	**5.8747**	**26774**
VP-9D	33.5-34	3/28/2012	Duplicate	**0.12**	**820**	**2.2**	**12000**	< 0.002	< 12	**2.4**	**9500**	**0.86**	**3500**	**0.0037**	**15**	**0.16**	**410**	**0.43**	**1700**	**0.0087**	**40**	**0.33**	**1300**	**0.012**	**38**	**6.5244**	**29323**
VP-9D	33.5-34	6/5/2012	Primary	**0.0083**	**56**	**0.0045**	**24**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0128**	**80**
VP-9D	33.5-34	9/17/2012	Primary	< 0.002	< 14	**0.014**	**75**	< 0.002	< 12	**0.0066**	**26**	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0243**	**116**
VP-9D	33.5-34	12/10/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-9D	33.5-34	3/18/2013	Primary	**0.075**	**510**	**2.1**	**11000**	< 0.06	< 400	**0.46**	**1800**	**0.063**	**260**	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**2.698**	**13570**
VP-9D	33.5-34	6/25/2013	Primary	**0.035**	**240**	**0.018**	**97**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.053**	**337**
VP-9D	33.5-34	12/19/2013	Primary	**0.0031**	**21**	**0.051**	**270**	< 0.002	< 12	**0.11**	**440**	**0.0056**	**23**	< 0.0025	< 10	**0.0089**	**23**	< 0.002	< 7.9	< 0.0022	< 10	**0.011**	**44**	< 0.003	< 9.6	**0.1896**	**821**
VP-9D	33.5-34	12/9/2014	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-9D	33.5-34	3/25/2015	Primary	**0.0048**	**33**	**0.0076**	**41**	< 0.002	< 12	**0.0086**	**34**	**0.0041**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0251**	**125**
VP-9D	33.5-34	4/19/2016	Primary	< 0.002	< 14	**0.02 J**	**100 J**	< 0.002	< 12	**0.0048 J**	**19 J**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0248**	**119**
VP-9D	33.5-34	5/16/2016	Primary	**0.0037**	**25**	**0.16**	**860**	< 0.002	< 12	**0.07**	**300**	**0.0059**	**24**	**0.019**	**77**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0028**	**11**	< 0.003	< 9.6	**0.2614**	**1297**
VP-9D	33.5-34	12/27/2016	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0032**	**13**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0016**	**5.1**	**0.0048**	**18.1**
VP-9D	33.5-34	3/14/2017	Primary	**0.0023**	**16**	**0.055**	**300**	< 0.0005	< 3.0	**0.023**	**91**	**0.0034**	**14**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00086**	**3.4**	**0.001**	**3.2**	**0.08556**	**427.6**
VP-9D	33.5-34	6/28/2017	Primary	**0.0055**	**37**	**0.04**	**200**	< 0.004	< 24	**0.016**	**64**	**0.0078**	**32**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0693**	**333**
VP-9D	33.5-34	9/27/2017	Primary	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-9D	33.5-34	12/11/2017	Primary	**0.0048**	**33**	**0.015**	**81**	< 0.0005	< 3.0	**0.0029**	**12**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00056**	**2.2**	< 0.00075 J	< 2.4 J	**0.02326**	**128.2**
VP-9D	33.5-34	5/1/2018	Primary	**0.0069**	**47**	**0.55**	**3000**	< 0.0005	< 3.0	**0.18**	**710**	**0.016**	**65**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00087**	**3.5**	< 0.00055	< 2.5	**0.0046**	**18**	< 0.00075	< 2.4	**0.75837**	**3843.5**
VP-9D	33.5-34	9/19/2018	Primary	< 0.004	< 27	**0.26**	**1400**	< 0.004	< 24	**0.11**	**440**	**0.017**	**69**	< 0.005	< 20	**0.0087 J**	**22 J**	**0.009**	**36**	< 0.0044	< 20	**0.017**	**67**	< 0.006	< 19	**0.4217**	**2034**
VP-9D	33.5-34	12/27/2018	Primary	< 0.01	< 70	**0.1**	**500**	< 0.01	< 60	**0.041**	**160**	**0.011**	**45**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.152**	**705**
VP-9D	33.5-34	2/20/2019	Primary	**0.0055**	**37**	**0.14**	**750**	< 0.0005	< 3.0	**0.065**	**260**	**0.018**	**73**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0036**	**14**	< 0.00055	< 2.5	**0.012**	**48**	**0.00097**	**3.1**	**0.24507**	**1185.1**
VP-9D	33.5-34	6/12/2019	Primary	**0.0036**	**24**	**0.041**	**220**	< 0.0005	< 3.0	**0.024**	**95**	**0.0061**	**25**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00082**	**3.3**	< 0.00055	< 2.5	**0.0044**	**17**	< 0.00075	< 2.4	**0.07992**	**384.3**
VP-10A	9.5-10	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	**1.4**	**5600**	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**1.4**	**5600**
VP-10A	9.5-10	5/24/2011	Primary	**0.024**	**160**	**0.017**	**91**	< 0.002	< 12	**0.0091**	**36**	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.003**	**10**	< 0.003	< 9.6	**0.0568**	**312**
VP-10A	9.5-10	9/19/2011	Primary	**0.011**	**75**	**0.022**	**120**	< 0.002	< 12	**0.024**	**95**	**0.0059**	**24**	< 0.0025	< 10	< 0.0039	< 10	**0.002**	**7.9**	< 0.0022	< 10	**0.0076**	**30**	< 0.003	< 9.6	**0.0725**	**351.9**
VP-10A	9.5-10	12/6/2011	Primary	**0.029**	**200**	**0.06**	**300**	< 0.002	< 12	**0.073**	**290**	**0.015**	**61**	< 0.0025	< 10	**0.017**	**44**	**0.0055**	**22**	< 0.0022	< 10	**0.028**	**110**	**0.0047**	**15**	**0.2322**	**1042**
VP-10A	9.5-10	3/28/2012	Primary	**0.072**	**490**	**0.082**	**440**	< 0.002	< 12	**0.083**	**330**	**0.062**	**250**	< 0.0025	< 10	**0.014**	**36**	**0.0035**	**14**	**0.011**	**51**	**0.028**	**110**	< 0.003	< 9.6	**0.3555**	**1721**
VP-10A	9.5-10	6/5/2012	Primary	**0.035**	**240**	**0.026**	**140**	< 0.002	< 12	**0.012**	**48**	**0.0032**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0033**	**13**	< 0.003	< 9.6	**0.0795**	**454**
VP-10A	9.5-10	9/18/2012	Primary	**0.031**	**210**	**0.1**	**500**	**0.0022**	**13**	**0.11**	**440**	**0.086**	**350**	**0.003**	**12**	**0.0047**	**12**	**0.3**	**1000**	**0.011**	**51**	**0.0061**	**24**	**0.01**	**30**	**0.664**	**2642**
VP-10A	9.5-10	12/11/2012	Primary	**0.016 J**	**110 J**	**0.0067**	**36**	< 0.004	< 24	**0.0043 J**	**17 J**	< 0.004 J	< 16 J	< 0.0049	< 20	< 0.0078 J	< 20 J	< 0.004 J	< 16 J	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.027**	**163**
VP-10A	9.5-10	12/11/2012	Duplicate	**0.099 J**	**670 J**	**0.045 J**	**240 J**	< 0.004	< 24	**0.054 J**	**210 J**	**0.013 J**	**53 J**	< 0.0049	< 20	< 0.0078 J	< 20 J	< 0.004	< 16	< 0.0043	< 20	**0.0055**	**22**	< 0.006	< 19	**0.2165**	**1195**
VP-10A	9.5-10	3/20/2013	Primary	**0.033**	**220**	**0.022**	**120**	< 0.002	< 12	**0.02**	**80**	**0.0071**	**29**	< 0.0025	< 10	**0.0039**	**10**	< 0.002	< 7.9	< 0.0022	< 10	**0.0098**	**39**	< 0.003	< 9.6	**0.0958**	**498**
VP-10A	9.5-10	6/25/2013	Primary	**0.023**	**160**	**0.015**	**81**	< 0.01	< 60	**0.024**	**95**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.062**	**336**
VP-10A	9.5-10	12/18/2013	Primary	**0.027**	**180**	**0.012**	**65**	< 0.01	< 60	**0.018**	**71**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.057**	**316**
VP-10A	9.5-10	3/25/2015	Primary	**0.022**	**150**	**0.0046**	**25**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0266**	**175**
VP-10A	9.5-10	9/22/2015	Primary	**0.043**	**290**	**0.014**	**75**	**0.0019 J**	**11 J**	**0.0085**	**34**	**0.0028**	**11**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0011**	**5.1**	**0.0011**	**4.4**	**0.0019**	**6.1**	**0.0743**	**436.6**
VP-10A	9.5-10	12/16/2015	Primary	**0.005**	**34**	**0.0012**	**6.5**	< 0.00066	< 4.0	< 0.00066	< 2.6	< 0.00066	< 2.7	< 0.00082	< 3.3	< 0.0013	< 3.3	< 0.00066	< 2.6	< 0.00073	< 3.4	< 0.00066	< 2.6	< 0.00099	< 3.2	**0.0062**	**40.5**
VP-10A	9.5-10	4/19/2016	Primary	**0.0032**	**22**	**0.0011 J**	**5.9 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0043**	**27.9**
VP-10A	9.5-10	12/27/2016	Primary	**0.0059**	**40**	**0.0014**	**7.5**	< 0.0005	< 3.0	**0.001**	**4.0**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0083**	**51.5**
VP-10A	9.5-10	3/14/2017	Primary	**0.0025**	**17**	**0.00084**	**4.5**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0014**	**4.5**	**0.00474**	**26**
VP-10A	9.5-10	6/28/2017	Primary	**0.0036**	**24**	**0.0025**	**13**	< 0.0005	< 3.0	**0.00057**	**2.3**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00667**	**39.3**
VP-10A	9.5-10	9/27/2017	Primary	< 0.00074	< 5.0	< 0.00074	< 4.0	< 0.00074	< 4.5	< 0.00074	< 2.9	< 0.00074	< 3.0	< 0.00092	< 3.7	< 0.0014	< 3.6	< 0.00074	< 2.9	< 0.00081	< 3.7	< 0.00074	< 2.9	< 0.0011	< 3.5	ND	ND
VP-10A	9.5-10	12/11/2017	Primary	**0.036 J**	**240 J**	**0.01**	**50**	**0.0016**	**9.7**	**0.0046**	**18**	**0.00053**	**2.1**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00079**	**3.7**	< 0.0005	< 2.0	**0.00094 J**	**3.0 J**	**0.05446**	**326.5**
VP-10A	9.5-10	5/1/2018	Primary	**0.013**	**88**	**0.0053**	**29**	< 0.0005	< 3.0	**0.0014**	**5.6**	**0.00074**	**3.0**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00072**	**2.9**	< 0.00075	< 2.4	**0.02116**	**128.5**
VP-10B	18-18.5	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-10B	18-18.5	5/24/2011	Primary	**0.021**	**140**	**0.0047**	**25**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0257**	**165**
VP-10B	18-18.5	9/19/2011	Primary	**18**	**120000**	**20**	**100000**	< 3	< 20000	**25**	**99000**	**8.6**	**35000**	< 3.7	< 15000	< 5.9	< 15000	< 3	< 10000	< 3.2	< 15000	**3.3**	**13000**	< 4.5	< 14000	**74.9**	**367000**
VP-10B	18-18.5	12/7/2011	Primary	**6.2**	**42000**	**6.9**	**37000**	< 0.4	< 2000	**9.1**	**36000**	**2.7**	**11000**	< 0.49	< 2000	**1.1**	**2800**	**0.71**	**2800**	< 0.43	< 2000	**1.2**	**4800**	< 0.6	< 2000	**27.91**	**136400**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-10B	18-18.5	3/28/2012	Primary	**0.71**	**4800**	< 0.41	< 2200	< 0.4	< 2000	< 0.4	< 2000	< 0.4	< 2000	< 0.49	< 2000	< 0.78	< 2000	< 0.4	< 2000	< 0.43	< 2000	< 0.4	< 2000	< 0.6	< 2000	**0.71**	**4800**
VP-10B	18-18.5	6/5/2012	Primary	**5.3**	**36000**	**3.7**	**20000**	< 0.2	< 1000	**4.8**	**19000**	**1.1**	**4500**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	**0.4**	**2000**	< 0.3	< 1000	**15.3**	**81500**
VP-10B	18-18.5	9/18/2012	Primary	**1.9**	**13000**	**7.8**	**42000**	< 0.002	< 12	**11**	**44000**	**4.9**	**20000**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.74**	**3400**	**0.73**	**2900**	**0.81**	**2600**	**27.88**	**127900**
VP-10B	18-18.5	12/11/2012	Primary	**7.1**	**48000**	**2.4**	**13000**	< 0.8	< 5000	**2.5**	**9900**	< 0.8	< 3000	< 0.99	< 4000	< 1.6 J	< 4100 J	< 0.8	< 3000	< 0.87	< 4000	< 0.8	< 3000	< 1.2	< 3800	**12**	**70900**
VP-10B	18-18.5	6/25/2013	Primary	**5.3**	**36000**	**4.4**	**24000**	< 0.5	< 3000	**5.7**	**23000**	**1.8**	**7300**	< 0.62	< 2500	**1.1**	**2800**	< 0.5	< 2000	< 0.54	< 2500	**0.96**	**3800**	< 0.75	< 2400	**19.26**	**96900**
VP-10B	18-18.5	9/24/2013	Primary	**0.11**	**750**	**0.055**	**300**	< 0.01	< 60	**0.092**	**370**	**0.015**	**61**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.272**	**1481**
VP-10B	18-18.5	12/18/2013	Primary	**3.2**	**22000**	**3.3**	**18000**	< 0.1	< 600	**4**	**20000**	**1.2**	**4900**	< 0.12	< 490	**0.22**	**560**	**0.12**	**480**	< 0.11	< 510	**0.5**	**2000**	**0.3**	**1000**	**12.84**	**68940**
VP-10B	18-18.5	3/25/2014	Primary	**3.8**	**26000**	**2.6**	**14000**	< 0.1	< 600	**1.5**	**6000**	**0.51**	**2100**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	**0.24**	**950**	< 0.15	< 480	**8.65**	**49050**
VP-10B	18-18.5	6/26/2014	Primary	**1.1**	**7500**	**0.39**	**2100**	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**1.49**	**9600**
VP-10B	18-18.5	9/23/2014	Primary	**0.16**	**1100**	**0.12**	**650**	< 0.05	< 300	**0.11**	**440**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**0.39**	**2190**
VP-10B	18-18.5	12/9/2014	Primary	**0.23**	**1600**	**0.24**	**1300**	< 0.01	< 60	**0.15**	**600**	**0.052**	**210**	< 0.012	< 49	**0.028**	**72**	< 0.01	< 40	< 0.011	< 51	**0.029**	**120**	< 0.015	< 48	**0.729**	**3902**
VP-10B	18-18.5	3/25/2015	Primary	**0.34**	**2300**	**0.18**	**970**	< 0.15	< 910	< 0.15	< 600	< 0.15	< 610	< 0.19	< 770	< 0.29	< 740	< 0.15	< 600	< 0.16	< 740	< 0.15	< 600	< 0.22	< 700	**0.52**	**3270**
VP-10B	18-18.5	9/22/2015	Primary	**0.25**	**1700**	**0.29**	**1600**	< 0.03	< 200	**0.23**	**910**	**0.091**	**370**	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	**0.046**	**180**	< 0.045	< 140	**0.907**	**4760**
VP-10B	18-18.5	12/16/2015	Primary	**0.012**	**82**	**0.0088**	**47**	< 0.0005	< 3.0	**0.0046**	**18**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	< 0.00075	< 2.4	**0.0277**	**156.3**
VP-10B	18-18.5	4/19/2016	Primary	**0.0045**	**31**	**0.0023 J**	**12 J**	< 0.0005	< 3.0	**0.001 J**	**4.0 J**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0011**	**3.5**	**0.0089**	**50.5**
VP-10B	18-18.5	6/13/2016	Primary	**0.1**	**700**	**0.15**	**810**	< 0.0005	< 3.0	**0.047**	**190**	**0.045**	**180**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.012**	**48**	**0.0036**	**17**	**0.024**	**95**	**0.0025**	**8.0**	**0.3841**	**2048**
VP-10B	18-18.5	12/27/2016	Primary	**0.43**	**2900**	**0.14**	**750**	< 0.004	< 24	**0.1**	**400**	**0.032**	**130**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	**0.0067**	**31**	**0.011**	**44**	**0.0062**	**20**	**0.7259**	**4275**
VP-10B	18-18.5	3/14/2017	Primary	**0.42**	**2900**	**0.65**	**3500**	< 0.1	< 600	**0.46**	**1800**	**0.12**	**490**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**1.65**	**8690**
VP-10B	18-18.5	6/28/2017	Primary	**1**	**7000**	**0.3**	**2000**	< 0.06	< 400	< 0.06	< 200	**0.12**	**490**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**1.42**	**9490**
VP-10B	18-18.5	9/27/2017	Primary	**1**	**7000**	**1.2**	**6500**	< 0.06	< 400	**0.51**	**2000**	**0.17**	**690**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	**0.1**	**400**	< 0.09	< 300	**2.98**	**16590**
VP-10B	18-18.5	12/11/2017	Primary	**0.18**	**1200**	**0.14**	**750**	< 0.015	< 91	**0.049**	**190**	**0.037**	**150**	< 0.019	< 77	< 0.029	< 74	< 0.015	< 60	< 0.016	< 74	**0.017**	**67**	< 0.022 J	< 70 J	**0.423**	**2357**
VP-10B	18-18.5	5/1/2018	Primary	**0.26**	**1800**	**0.46**	**2500**	< 0.06	< 400	**0.4**	**2000**	**0.1**	**400**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**1.22**	**6700**
VP-10B	18-18.5	9/19/2018	Primary	**0.04**	**300**	**0.024**	**130**	< 0.004	< 24	**0.017**	**67**	**0.0043**	**17**	< 0.005	< 20	< 0.0078 J	< 20 J	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.0853**	**514**
VP-10B	18-18.5	12/27/2018	Primary	**0.5**	**3000**	**0.18**	**970**	< 0.06	< 400	**0.14**	**560**	< 0.06	< 200	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**0.82**	**4530**
VP-10B	18-18.5	2/20/2019	Primary	**0.11**	**750**	**0.1**	**500**	**0.004**	**24**	**0.12**	**480**	**0.054**	**220**	**0.001**	**4.1**	**0.016**	**41**	**0.015**	**60**	**0.0064**	**30**	**0.032**	**130**	**0.014**	**45**	**0.4724**	**2284.1**
VP-10B	18-18.5	6/12/2019	Primary	**0.037**	**250**	**0.032**	**170**	< 0.0005	< 3.0	**0.03**	**100**	**0.015**	**61**	< 0.00062	< 2.5	**0.0074**	**19**	**0.0073**	**29**	**0.00072**	**3.3**	**0.0089**	**35**	**0.0048**	**15**	**0.14312**	**682.3**
VP-10C	30.5-31	2/15/2011	Primary	< 0.74	< 5000	**1.5**	**8100**	< 0.83	< 5000	**3.5**	**14000**	**3**	**12000**	< 1.2	< 4900	**4.7**	**12000**	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**12.7**	**46100**
VP-10C	30.5-31	5/24/2011	Primary	**0.0056 J**	**38 J**	**0.037 J**	**200 J**	< 0.002	< 12	**0.04 J**	**200 J**	**0.013 J**	**53 J**	< 0.0047	< 19	< 0.0039 J	< 10 J	< 0.002 J	< 7.9 J	**0.0022 J**	**10 J**	**0.005 J**	**20 J**	< 0.003 J	< 9.6 J	**0.1028**	**521**
VP-10C	30.5-31	5/24/2011	Duplicate	**0.015 J**	**100 J**	**0.087 J**	**470 J**	< 0.002	< 12	**0.13 J**	**520 J**	**0.054 J**	**220 J**	< 0.0079	< 32	**0.007 J**	**20 J**	**0.0071 J**	**28 J**	**0.0074 J**	**34 J**	**0.016 J**	**64 J**	**0.0034 J**	**11 J**	**0.3269**	**1467**
VP-10C	30.5-31	9/19/2011	Primary	**0.97**	**6600**	**4.3**	**23000**	< 0.4	< 2000	**8.3**	**33000**	**3**	**10000**	< 0.49	< 2000	< 0.78	< 2000	**0.4**	**2000**	**0.48**	**2200**	**0.61**	**2400**	< 0.6	< 2000	**18.06**	**79200**
VP-10C	30.5-31	12/6/2011	Primary	**1.2**	**8200**	**7.1**	**38000**	< 0.2	< 1000	**13**	**52000**	**4.4**	**18000**	< 0.25	< 1000	**1.3**	**3300**	**0.68**	**2700**	**0.76**	**3500**	**1.1**	**4400**	**0.59**	**1900**	**30.13**	**132000**
VP-10C	30.5-31	3/28/2012	Primary	**0.65**	**4400**	**3.5**	**19000**	< 0.3	< 2000	**12**	**48000**	**3.2**	**13000**	< 0.37	< 1500	**1.2 J**	**3100 J**	**0.48**	**1900**	**0.61 J**	**2800 J**	**0.88**	**3500**	**0.56 J**	**1800 J**	**23.08**	**97500**
VP-10C	30.5-31	6/5/2012	Primary	**1.9**	**13000**	**11**	**59000**	< 0.3	< 2000	**13**	**52000**	**6.2**	**25000**	< 0.37	< 1500	< 0.59	< 1500	**0.35**	**1400**	**0.61**	**2800**	**1.2**	**4800**	**0.78**	**2500**	**35.04**	**160500**
VP-10C	30.5-31	9/18/2012	Primary	**8.4 J**	**57000 J**	**8.7 J**	**47000 J**	< 0.002	< 12	**11**	**44000**	**4.9**	**20000**	< 0.0025	< 10	**4.3**	**11000**	**2.1**	**8300**	< 0.0022	< 10	**2.3**	**9100**	**0.69 J**	**2200 J**	**42.39**	**198600**
VP-10C	30.5-31	9/18/2012	Duplicate	**14 J**	**95000 J**	**12 J**	**65000 J**	< 0.002	< 12	**14**	**56000**	**5.9**	**24000**	< 0.0025	< 10	**3.8**	**9700**	**1.9**	**7500**	< 0.0022	< 10	**2.5**	**9900**	**1.1 J**	**3500 J**	**55.2**	**270600**
VP-10C	30.5-31	12/11/2012	Primary	**0.8**	**5000**	**1.1**	**5900**	< 0.3	< 2000	**1.3**	**5200**	< 0.3	< 1000	< 0.37	< 1500	< 0.59 J	< 1500 J	< 0.3	< 1000	< 0.32	< 1500	< 0.3	< 1000	< 0.45	< 1400	**3.2**	**16100**
VP-10C	30.5-31	3/20/2013	Primary	**1.1**	**7500**	**3.9**	**21000**	< 0.6	< 4000	**15**	**60000**	**4.2**	**17000**	< 0.74	< 3000	< 1.2	< 3100	< 0.6	< 2000	**0.73**	**3400**	**0.64**	**2500**	< 0.9	< 3000	**25.57**	**111400**
VP-10C	30.5-31	3/20/2013	Duplicate	**1.3**	**8800**	**4.2**	**23000**	< 0.6	< 4000	**16**	**64000**	**4.4**	**18000**	< 0.74	< 3000	< 1.2	< 3100	< 0.6	< 2000	**0.82**	**3800**	**0.7**	**3000**	< 0.9	< 3000	**27.42**	**120600**
VP-10C	30.5-31	6/25/2013	Primary	**0.64**	**4300**	**1.9**	**10000**	< 0.1	< 600	**7.6 J**	**30000 J**	**1.5**	**6100**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	**0.41**	**1900**	**0.18**	**710**	**0.24**	**770**	**12.47**	**53780**
VP-10C	30.5-31	9/24/2013	Primary	**0.66**	**4500**	**1**	**5000**	< 0.4	< 2000	**4.6**	**18000**	**0.78**	**3200**	< 0.5	< 2000	< 0.78	< 2000	< 0.4	< 2000	< 0.44	< 2000	< 0.4	< 2000	< 0.6	< 2000	**7.04**	**30700**
VP-10C	30.5-31	12/18/2013	Primary	**0.76**	**5200**	**0.76**	**4100**	< 0.008	< 48	**2.5**	**9900**	**0.36**	**1500**	**0.046**	**190**	< 0.016	< 41	< 0.008	< 32	**0.17**	**790**	**0.047**	**190**	**0.079**	**250**	**4.722**	**22120**
VP-10C	30.5-31	3/25/2014	Primary	**0.54**	**3700**	**0.53**	**2900**	< 0.1	< 600	**1.3**	**5200**	**0.2**	**800**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.57**	**12600**
VP-10C	30.5-31	6/26/2014	Primary	**0.34**	**2300**	**0.24**	**1300**	< 0.06	< 400	**0.66**	**2600**	**0.11**	**450**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**1.35**	**6650**
VP-10C	30.5-31	9/23/2014	Primary	**0.17**	**1200**	**0.19**	**1000**	< 0.075	< 450	**0.67**	**2700**	**0.14**	**570**	< 0.094	< 380	< 0.15	< 380	< 0.075	< 300	< 0.082	< 380	< 0.075	< 300	< 0.11	< 350	**1.17**	**5470**
VP-10C	30.5-31	12/9/2014	Primary	**0.1**	**700**	**0.29**	**1600**	< 0.01	< 60	**0.46**	**1800**	**0.11**	**450**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	**0.038**	**180**	**0.027**	**110**	**0.022**	**70**	**1.047**	**4910**
VP-10C	30.5-31	3/25/2015	Primary	**0.21**	**1400**	**0.2**	**1000**	< 0.1	< 600	**2**	**8000**	**0.42**	**1700**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.83**	**12100**
VP-10C	30.5-31	9/22/2015	Primary	**0.16**	**1100**	**0.4**	**2000**	< 0.06	< 400	**1.8**	**7100**	**0.41**	**1700**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	**0.11**	**510**	**0.077**	**310**	< 0.09	< 300	**2.957**	**12720**
VP-10C	30.5-31	12/16/2015	Primary	**0.055**	**370**	**0.13**	**700**	< 0.008	< 48	**0.32**	**1300**	**0.11**	**450**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	**0.023**	**110**	**0.026**	**100**	< 0.012	< 38	**0.664**	**3030**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-10C	30.5-31	4/19/2016	Primary	< 0.002	< 14	< 0.002 J	< 11 J	< 0.002	< 12	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-10C	30.5-31	9/12/2016	Primary	**0.021**	**140**	**0.019**	**100**	< 0.001	< 6.0	**0.012**	**48**	**0.014**	**57**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0026**	**12**	**0.0029**	**12**	< 0.0015	< 4.8	**0.0715**	**369**
VP-10C	30.5-31	12/27/2016	Primary	**0.11**	**750**	**0.051**	**270**	< 0.004	< 24	**0.16**	**640**	**0.037**	**150**	**0.01**	**40**	< 0.0078	< 20	< 0.004	< 16	**0.023**	**110**	**0.0045**	**18**	**0.019**	**61**	**0.4145**	**2039**
VP-10C	30.5-31	3/14/2017	Primary	**0.061**	**410**	**0.053**	**290**	< 0.001	< 6.0	**0.037**	**150**	**0.013**	**53**	< 0.0012	< 4.9	< 0.002	< 5.1	**0.0011**	**4.4**	**0.004**	**19**	**0.0056**	**22**	**0.0036**	**12**	**0.1783**	**960.4**
VP-10C	30.5-31	6/28/2017	Primary	**0.063**	**430**	**0.1**	**500**	< 0.01	< 60	**0.16**	**640**	**0.07**	**300**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	**0.017**	**79**	**0.014**	**56**	< 0.015	< 48	**0.424**	**2005**
VP-10C	30.5-31	9/27/2017	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-10C	30.5-31	12/11/2017	Primary	**0.56**	**3800**	**0.34**	**1800**	< 0.01	< 60	**0.27**	**1100**	**0.091**	**370**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	**0.025**	**120**	**0.021**	**83**	< 0.015 J	< 48 J	**1.307**	**7273**
VP-10C	30.5-31	5/1/2018	Primary	**0.23**	**1600**	**0.44**	**2400**	< 0.06	< 400	**0.39**	**1500**	**0.092**	**370**	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**1.152**	**5870**
VP-10D	33.5-34	2/16/2011	Primary	< 0.74	< 5000	**5.8**	**31000**	< 0.83	< 5000	**11**	**44000**	**8.6**	**35000**	< 1.2	< 4900	**12**	**31000**	< 1.3	< 5200	< 1.1	< 5100	**3.3**	**13000**	< 1.6	< 5100	**40.7**	**154000**
VP-10D	33.5-34	5/24/2011	Primary	**0.04**	**300**	**0.47**	**2500**	< 0.01	< 60.4	**0.63**	**2500**	**0.25**	**1000**	**0.024**	**97**	**0.063**	**160**	**0.035**	**140**	**0.041**	**190**	**0.061**	**240**	**0.023**	**74**	**1.637**	**7201**
VP-10D	33.5-34	9/19/2011	Primary	**0.4**	**3000**	**0.86**	**4600**	< 0.1	< 600	**0.61**	**2400**	**0.4**	**2000**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.27**	**12000**
VP-10D	33.5-34	12/6/2011	Primary	**0.25**	**1700**	**2.2**	**12000**	< 0.04	< 200	**1.1**	**4400**	**1.1**	**4500**	< 0.049	< 200	**0.13**	**330**	**0.16**	**640**	**0.13**	**600**	**0.081**	**320**	**0.13**	**420**	**5.281**	**24910**
VP-10D	33.5-34	3/28/2012	Primary	**0.28**	**1900**	**3.2**	**17000**	< 0.04	< 200	**3**	**10000**	**1.8**	**7300**	< 0.049	< 200	**1.2 J**	**3100 J**	**0.28**	**1100**	**0.19 J**	**880 J**	**0.33**	**1300**	**0.18 J**	**580 J**	**10.46**	**43160**
VP-10D	33.5-34	6/5/2012	Primary	**0.15**	**1000**	**0.28**	**1500**	< 0.1	< 600	**0.25**	**990**	**0.12**	**490**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**0.8**	**3980**
VP-10D	33.5-34	9/18/2012	Primary	**0.44**	**3000**	**0.37**	**2000**	< 0.002	< 12	**0.4**	**2000**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**1.21**	**7000**
VP-10D	33.5-34	12/11/2012	Primary	< 0.04	< 300	< 0.041	< 220	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.049	< 200	< 0.078 J	< 200 J	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	ND	ND
VP-10D	33.5-34	3/20/2013	Primary	**0.28**	**1900**	**0.58**	**3100**	< 0.01	< 60	**0.32**	**1300**	**0.23**	**930**	< 0.012	< 49	< 0.02	< 50	**0.097**	**390**	**0.029**	**130**	**0.027**	**110**	**0.041**	**130**	**1.604**	**7990**
VP-10D	33.5-34	6/25/2013	Primary	**0.062**	**420**	**0.028**	**150**	< 0.008	< 48	**0.031**	**120**	< 0.008	< 32	< 0.0099	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	**0.121**	**690**
VP-10D	33.5-34	12/18/2013	Primary	**0.044**	**300**	**0.045**	**240**	< 0.04	< 200	**0.059**	**230**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**0.148**	**770**
VP-10D	33.5-34	12/9/2014	Primary	**0.034**	**230**	**0.0063**	**34**	< 0.002	< 12	**0.0039**	**15**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0442**	**279**
VP-10D	33.5-34	3/25/2015	Primary	**0.095**	**650**	**0.039**	**210**	< 0.005	< 30	**0.047**	**190**	**0.019**	**77**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.2**	**1127**
VP-10D	33.5-34	9/22/2015	Primary	**0.043**	**290**	**0.042**	**230**	**0.0032 J**	**19 J**	**0.051**	**200**	**0.037**	**150**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	**0.0084**	**39**	**0.0061**	**24**	< 0.003	< 9.6	**0.1907**	**952**
VP-10D	33.5-34	12/16/2015	Primary	**0.022**	**150**	**0.028**	**150**	< 0.001	< 6.0	**0.035**	**140**	**0.017**	**69**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	**0.0036**	**17**	**0.0034**	**13**	< 0.0015	< 4.8	**0.109**	**539**
VP-10D	33.5-34	4/19/2016	Primary	**0.0078**	**53**	**0.0015 J**	**8.1 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0093**	**61.1**
VP-10D	33.5-34	12/27/2016	Primary	**0.027**	**180**	**0.0026**	**14**	< 0.0005	< 3.0	**0.0016**	**6.4**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0312**	**200.4**
VP-10D	33.5-34	3/14/2017	Primary	**0.041**	**280**	**0.027**	**150**	< 0.0005	< 3.0	**0.0096**	**38**	**0.0018**	**7.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0026**	**10**	**0.0023**	**7.4**	**0.0843**	**492.7**
VP-10D	33.5-34	6/28/2017	Primary	**0.049**	**330**	**0.033**	**180**	< 0.004	< 24	**0.012**	**48**	**0.008**	**32**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.102**	**590**
VP-10D	33.5-34	9/27/2017	Primary	**0.026**	**180**	**0.018**	**97**	< 0.0013	< 7.8	**0.0076**	**30**	**0.011**	**45**	< 0.0017	< 6.9	< 0.0026	< 6.7	< 0.0013	< 5.2	**0.0028**	**13**	**0.0017**	**6.7**	< 0.002	< 6.4	**0.0671**	**371.7**
VP-10D	33.5-34	12/11/2017	Primary	**0.055**	**370**	**0.026**	**140**	< 0.002	< 12	**0.012**	**48**	**0.006**	**24**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0023**	**9.1**	< 0.003 J	< 9.6 J	**0.1013**	**591.1**
VP-10D	33.5-34	5/1/2018	Primary	**0.047**	**320**	**0.014**	**75**	< 0.0005	< 3.0	**0.0055**	**22**	**0.009**	**36**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.0028**	**13**	**0.0017**	**6.7**	< 0.00075	< 2.4	**0.08**	**472.7**
VP-11A	9-9.5	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-11A	9-9.5	5/24/2011	Primary	**0.15**	**1000**	**0.035**	**190**	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.185**	**1190**
VP-11A	9-9.5	9/20/2011	Primary	**0.072**	**490**	**0.019**	**100**	< 0.002	< 12	**0.0053**	**21**	**0.0057**	**23**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.102**	**634**
VP-11A	9-9.5	12/6/2011	Primary	**0.068**	**460**	**0.015**	**81**	< 0.002	< 12	**0.0045**	**18**	**0.0044**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0919**	**577**
VP-11A	9-9.5	3/28/2012	Primary	**0.021**	**140**	**0.012**	**65**	< 0.002	< 12	**0.0078**	**31**	**0.0054**	**22**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0462**	**258**
VP-11A	9-9.5	6/5/2012	Primary	**0.059**	**400**	**0.012**	**65**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.071**	**465**
VP-11A	9-9.5	9/18/2012	Primary	**0.021**	**140**	**0.0056**	**30**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0266**	**170**
VP-11A	9-9.5	12/11/2012	Primary	**0.017**	**120**	**0.0031**	**17**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039 J	< 10 J	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0201**	**137**
VP-11A	9-9.5	3/18/2013	Primary	**0.022**	**150**	**0.0043**	**23**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0263**	**173**
VP-11A	9-9.5	6/25/2013	Primary	**0.017**	**120**	**0.0055**	**30**	< 0.002	< 12	**0.0028**	**11**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0253**	**161**
VP-11A	9-9.5	12/19/2013	Primary	**0.015**	**100**	**0.0028**	**15**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0178**	**115**
VP-11A	9-9.5	3/25/2015	Primary	**0.029**	**200**	**0.0036**	**19**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0326**	**219**
VP-11A	9-9.5	9/22/2015	Primary	**0.043**	**290**	**0.0074**	**40**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0504**	**330**
VP-11A	9-9.5	12/16/2015	Primary	**0.014**	**95**	**0.0025**	**13**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0165**	**108**
VP-11A	9-9.5	4/19/2016	Primary	**0.011**	**75**	**0.00097 J**	**5.2 J**	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00082**	**2.6**	**0.01279**	**82.8**
VP-11A	9-9.5	12/27/2016	Primary	**0.00083**	**5.6**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00083**	**5.6**
VP-11A	9-9.5	3/14/2017	Primary	**0.0021**	**14**	**0.0008**	**4.3**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0013**	**4.2**	**0.0042**	**22.5**
VP-11A	9-9.5	6/28/2017	Primary	**0.0078**	**53**	**0.0022**	**12**	< 0.0005	< 3.0	**0.00068**	**2.7**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01068**	**67.7**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-11A	9-9.5	9/27/2017	Primary	**0.013**	**88**	**0.0026**	**14**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0156**	**102**
VP-11A	9-9.5	12/11/2017	Primary	**0.0038**	**26**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00066**	**2.6**	**0.0051 J**	**16 J**	**0.00956**	**44.6**
VP-11A	9-9.5	5/1/2018	Primary	**0.0086**	**58**	**0.00074**	**4.0**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00934**	**62**
VP-11B	19-19.5	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-11B	19-19.5	5/24/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0042	< 17	< 0.0039	< 10	**0.0035**	**14**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0035**	**14**
VP-11B	19-19.5	9/20/2011	Primary	**0.13**	**880**	**0.091**	**490**	< 0.01	< 60.4	**0.068**	**270**	**0.084**	**340**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.373**	**1980**
VP-11B	19-19.5	12/6/2011	Primary	**0.44**	**3000**	**0.22**	**1200**	< 0.01	< 60.4	**0.13**	**520**	**0.22**	**890**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	**0.011**	**51**	**0.035**	**140**	< 0.015	< 48	**1.056**	**5801**
VP-11B	19-19.5	3/28/2012	Primary	**0.24**	**1600**	**0.084**	**450**	< 0.01	< 60.4	**0.033**	**130**	**0.049**	**200**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.406**	**2380**
VP-11B	19-19.5	6/5/2012	Primary	**0.078**	**530**	**0.016**	**86**	< 0.002	< 12	**0.0033**	**13**	**0.0027**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1**	**640**
VP-11B	19-19.5	9/18/2012	Primary	**0.038**	**260**	**0.0069**	**37**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0449**	**297**
VP-11B	19-19.5	12/11/2012	Primary	**0.028**	**190**	**0.004**	**22**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039 J	< 10 J	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.032**	**212**
VP-11B	19-19.5	3/18/2013	Primary	**0.066**	**450**	**0.016**	**86**	< 0.002	< 12	**0.0021**	**8.3**	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0878**	**559.3**
VP-11B	19-19.5	6/25/2013	Primary	**0.036**	**240**	**0.0071**	**38**	< 0.002	< 12	**0.0025**	**9.9**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0456**	**287.9**
VP-11B	19-19.5	12/19/2013	Primary	**0.016**	**110**	**0.0034**	**18**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0194**	**128**
VP-11B	19-19.5	3/25/2015	Primary	**0.025**	**170**	**0.0036**	**19**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0286**	**189**
VP-11B	19-19.5	9/22/2015	Primary	**0.0065**	**44**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0065**	**44**
VP-11B	19-19.5	4/19/2016	Primary	**0.0015**	**10**	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0008**	**2.6**	**0.0023**	**12.6**
VP-11B	19-19.5	12/27/2016	Primary	**0.0016**	**11**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0016**	**11**
VP-11B	19-19.5	3/14/2017	Primary	**0.011**	**75**	**0.0022**	**12**	< 0.0005	< 3.0	**0.00068**	**2.7**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00082**	**2.6**	**0.0147**	**92.3**
VP-11B	19-19.5	6/28/2017	Primary	**0.00096**	**6.5**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00096**	**6.5**
VP-11B	19-19.5	9/27/2017	Primary	**0.0034**	**23**	**0.00088**	**4.7**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00428**	**27.7**
VP-11B	19-19.5	12/11/2017	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.0089 J**	**28 J**	**0.0089**	**28**
VP-11B	19-19.5	5/1/2018	Primary	**0.0071**	**48**	**0.00094**	**5.1**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00804**	**53.1**
VP-11C	29.5-30	2/15/2011	Primary	< 0.74	< 5000	**2**	**11000**	< 0.83	< 5000	**3.3**	**13000**	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	**5.3**	**24000**
VP-11C	29.5-30	5/24/2011	Primary	**0.091**	**620**	**0.35**	**1900**	< 0.04	< 200	**0.93**	**3700**	**0.42**	**1700**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	**0.04**	**200**	< 0.06	< 200	**1.831**	**8120**
VP-11C	29.5-30	9/20/2011	Primary	**0.06**	**400**	**0.26**	**1400**	< 0.01	< 60.4	**0.48**	**1900**	**0.27**	**1100**	< 0.012	< 49	**0.032**	**82**	**0.022**	**87**	< 0.011	< 51	**0.038**	**150**	< 0.015	< 48	**1.162**	**5119**
VP-11C	29.5-30	12/6/2011	Primary	**0.24**	**1600**	**1.1**	**5900**	< 0.1	< 600	**2.2**	**8700**	**1.2**	**4900**	< 0.12	< 490	< 0.2	< 500	**0.1**	**400**	< 0.11	< 510	**0.15**	**600**	< 0.15	< 480	**4.99**	**22100**
VP-11C	29.5-30	3/28/2012	Primary	**0.21**	**1400**	**1.2**	**6500**	< 0.1	< 600	**2.3**	**9100**	**1.1**	**4500**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	**0.13**	**520**	< 0.15	< 480	**4.94**	**22020**
VP-11C	29.5-30	6/5/2012	Primary	**0.19**	**1300**	**0.33**	**1800**	< 0.1	< 600	**0.48**	**1900**	**0.54**	**2200**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**1.54**	**7200**
VP-11C	29.5-30	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-11C	29.5-30	12/11/2012	Primary	**0.044**	**300**	**0.033**	**180**	< 0.002	< 12	**0.019**	**75**	**0.032**	**130**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0021**	**8.3**	< 0.003	< 9.6	**0.1301**	**693.3**
VP-11C	29.5-30	3/18/2013	Primary	**0.0091**	**62**	**0.012**	**65**	< 0.002	< 12	**0.012**	**48**	**0.019**	**77**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0021**	**8.3**	< 0.003	< 9.6	**0.0542**	**260.3**
VP-11C	29.5-30	6/25/2013	Primary	**0.032**	**220**	**0.013**	**70**	**0.0037**	**22**	**0.007**	**28**	**0.0061**	**25**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0618**	**365**
VP-11C	29.5-30	12/19/2013	Primary	**0.012**	**82**	**0.0027**	**15**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0147**	**97**
VP-11C	29.5-30	3/25/2015	Primary	**0.024**	**160**	**0.0068**	**37**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0308**	**197**
VP-11C	29.5-30	9/22/2015	Primary	**0.009**	**61**	**0.0019**	**10**	**0.0012 J**	**7.2 J**	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0121**	**78.2**
VP-11C	29.5-30	4/19/2016	Primary	**0.0039**	**26**	**0.0022 J**	**12 J**	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00091**	**3.6**	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00075**	**2.4**	**0.00776**	**44**
VP-11C	29.5-30	8/29/2016	Primary	**0.01**	**70**	**0.0052**	**28**	**0.00073**	**4.4**	**0.0013**	**5.2**	**0.0013**	**5.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00062**	**2.5**	< 0.00075	< 2.4	**0.01915**	**115.4**
VP-11C	29.5-30	12/27/2016	Primary	**0.01**	**70**	**0.0023**	**12**	< 0.0005	< 3.0	**0.00056**	**2.2**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01286**	**84.2**
VP-11C	29.5-30	3/14/2017	Primary	**0.0086**	**58**	**0.0089**	**48**	< 0.0005	< 3.0	**0.0034**	**13**	**0.0023**	**9.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00071**	**2.8**	< 0.00075	< 2.4	**0.02391**	**131.1**
VP-11C	29.5-30	6/28/2017	Primary	**0.0021**	**14**	**0.0031**	**17**	< 0.0005	< 3.0	**0.0025**	**9.9**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0089**	**45.8**
VP-11C	29.5-30	9/27/2017	Primary	**0.0011**	**7.5**	**0.0014**	**7.5**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0025**	**15**
VP-11C	29.5-30	12/11/2017	Primary	**0.0075**	**51**	**0.0015**	**8.1**	< 0.0005	< 3.0	**0.00051**	**2.0**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00084**	**3.3**	**0.001 J**	**3.2 J**	**0.01135**	**67.6**
VP-11C	29.5-30	5/1/2018	Primary	**0.013**	**88**	**0.0088**	**47**	< 0.0005	< 3.0	**0.0018**	**7.1**	**0.0022**	**8.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00058**	**2.7**	**0.00059**	**2.3**	< 0.00075	< 2.4	**0.02697**	**156**
VP-11D	33.5-34	2/16/2011	Primary	**0.77**	**5200**	**3**	**16000**	< 0.83	< 5000	**8.6**	**34000**	**5.7**	**23000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**18.07**	**78200**
VP-11D	33.5-34	2/16/2011	Duplicate	**0.74**	**5000**	**2.8**	**15000**	< 0.83	< 5000	**8.1**	**32000**	**4.9**	**20000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**16.54**	**72000**
VP-11D	33.5-34	5/24/2011	Primary	**0.018**	**120**	**0.063**	**340**	< 0.002	< 12	**0.14**	**560**	**0.084**	**340**	< 0.0035	< 14	**0.014**	**36**	**0.013**	**52**	< 0.0022	< 10	**0.0098**	**39**	< 0.003	< 9.6	**0.3418**	**1487**
VP-11D	33.5-34	9/20/2011	Primary	**0.044**	**300**	**0.15**	**810**	< 0.002	< 12	**0.43**	**1700**	**0.19**	**770**	< 0.012	< 49	**0.033**	**84**	**0.02**	**80**	< 0.011	< 51	**0.03**	**100**	< 0.015	< 48	**0.897**	**3844**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-11D	33.5-34	12/6/2011	Primary	**0.21**	**1400**	**1**	**5000**	< 0.1	< 600	**2.1**	**8300**	**1**	**4000**	< 0.12	< 490	< 0.2	< 500	**0.1**	**400**	< 0.11	< 510	**0.15**	**600**	< 0.15	< 480	**4.56**	**19700**
VP-11D	33.5-34	3/28/2012	Primary	**0.28**	**1900**	**1.7**	**9100**	< 0.1	< 600	**3.5**	**14000**	**1.7**	**6900**	< 0.12	< 490	< 0.2	< 500	**0.15**	**600**	< 0.11	< 510	**0.2**	**800**	< 0.15	< 480	**7.53**	**33300**
VP-11D	33.5-34	6/5/2012	Primary	**0.015**	**100**	**0.024**	**130**	< 0.002	< 12	**0.033**	**130**	**0.04**	**200**	< 0.0025	< 10	**0.0043**	**11**	< 0.002	< 7.9	< 0.0022	< 10	**0.0058**	**23**	< 0.003	< 9.6	**0.1221**	**594**
VP-11D	33.5-34	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-11D	33.5-34	12/11/2012	Primary	**0.0076**	**52**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.003**	**12**	< 0.0025	< 10	< 0.0039 J	< 10 J	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0106**	**64**
VP-11D	33.5-34	3/18/2013	Primary	**0.048**	**330**	**0.082**	**440**	< 0.002	< 12	**0.097**	**390**	**0.12**	**490**	< 0.0025	< 10	**0.0064**	**16**	**0.0066**	**26**	**0.0048**	**22**	**0.02**	**80**	< 0.003	< 9.6	**0.3848**	**1794**
VP-11D	33.5-34	3/18/2013	Duplicate	**0.045**	**310**	**0.077**	**410**	< 0.002	< 12	**0.1**	**400**	**0.13**	**530**	< 0.0025	< 10	**0.0072**	**18**	**0.0071**	**28**	**0.0045**	**21**	**0.021**	**83**	< 0.003	< 9.6	**0.3918**	**1800**
VP-11D	33.5-34	6/25/2013	Primary	**0.0029**	**20**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0029**	**20**
VP-11D	33.5-34	12/19/2013	Primary	**0.0022**	**15**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0022**	**15**
VP-11D	33.5-34	3/25/2015	Primary	**0.0058**	**39**	**0.0056**	**30**	< 0.002	< 12	**0.0038**	**15**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0152**	**84**
VP-11D	33.5-34	4/19/2016	Primary	< 0.0005	< 3.4	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0009**	**2.9**	**0.0009**	**2.9**
VP-11D	33.5-34	12/27/2016	Primary	**0.0052**	**35**	**0.0096**	**52**	< 0.0005	< 3.0	**0.0098**	**39**	**0.0054**	**22**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	< 0.00075	< 2.4	**0.0311**	**152.4**
VP-11D	33.5-34	3/14/2017	Primary	**0.0078**	**53**	**0.016**	**86**	< 0.0005	< 3.0	**0.0074**	**29**	**0.0064**	**26**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00079**	**3.1**	**0.00056**	**2.6**	**0.0014**	**5.6**	< 0.00075	< 2.4	**0.04035**	**205.3**
VP-11D	33.5-34	6/28/2017	Primary	**0.0023**	**16**	**0.0059**	**32**	< 0.0005	< 3.0	**0.0051**	**20**	**0.0046**	**19**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00079**	**3.1**	< 0.00075	< 2.4	**0.01869**	**90.1**
VP-11D	33.5-34	9/27/2017	Primary	**0.0071**	**48**	**0.015**	**81**	**0.00062**	**3.7**	**0.0062**	**25**	**0.0079**	**32**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00068**	**3.1**	**0.00057**	**2.3**	< 0.00075	< 2.4	**0.03807**	**195.1**
VP-11D	33.5-34	12/11/2017	Primary	**0.0029**	**20**	**0.0029**	**16**	< 0.0005	< 3.0	**0.0019**	**7.5**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	**0.00076 J**	**2.4 J**	**0.01076**	**55.2**
VP-11D	33.5-34	5/1/2018	Primary	**0.01**	**70**	**0.011**	**59**	< 0.002	< 12	**0.0022**	**8.7**	**0.0028**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.026**	**148.7**
VP-12A	10-10.5	2/15/2011	Primary	< 0.74	< 5000	**1**	**5400**	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**1**	**5400**
VP-12A	10-10.5	5/25/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	**0.0032**	**13**	< 0.0039	< 10	**0.013**	**52**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0162**	**65**
VP-12A	10-10.5	9/20/2011	Primary	**0.031**	**210**	**0.01**	**50**	< 0.002	< 12	**0.0043**	**17**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0453**	**277**
VP-12A	10-10.5	12/6/2011	Primary	**0.41**	**2800**	**0.26**	**1400**	**0.016**	**97**	**0.035**	**140**	**0.035**	**140**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.756**	**4577**
VP-12A	10-10.5	3/28/2012	Primary	**0.038**	**260**	**0.015**	**81**	< 0.01	< 60.4	< 0.01	< 39.7	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.053**	**341**
VP-12A	10-10.5	6/5/2012	Primary	**0.19**	**1300**	**0.073**	**390**	**0.013**	**78**	**0.012**	**48**	**0.0069**	**28**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2949**	**1844**
VP-12A	10-10.5	9/18/2012	Primary	**0.18**	**1200**	**0.061**	**330**	**0.01**	**60**	**0.0068**	**27**	**0.0049**	**20**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2627**	**1637**
VP-12A	10-10.5	12/11/2012	Primary	**0.12**	**820**	**0.054**	**290**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02 J	< 50 J	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.174**	**1110**
VP-12A	10-10.5	3/18/2013	Primary	**0.25**	**1700**	**0.11**	**590**	**0.0075**	**45**	**0.018**	**71**	**0.015**	**61**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**0.4005**	**2467**
VP-12A	10-10.5	6/25/2013	Primary	**0.11**	**750**	**0.039**	**210**	**0.0031**	**19**	**0.0076**	**30**	**0.0033**	**13**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.163**	**1022**
VP-12A	10-10.5	12/19/2013	Primary	**0.066**	**450**	**0.018**	**97**	**0.0085**	**51**	**0.0029**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0954**	**610**
VP-12A	10-10.5	3/25/2015	Primary	**0.099**	**670**	**0.036**	**190**	**0.0064**	**39**	**0.003**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1444**	**911**
VP-12A	10-10.5	9/22/2015	Primary	**0.091**	**620**	**0.062**	**330**	**0.0037 J**	**22 J**	**0.0042**	**17**	**0.0034**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1643**	**1003**
VP-12A	10-10.5	12/16/2015	Primary	**0.072**	**490**	**0.029**	**160**	**0.002**	**12**	**0.0026**	**10**	**0.0089**	**36**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.004**	**16**	< 0.003	< 9.6	**0.1185**	**724**
VP-12A	10-10.5	4/19/2016	Primary	**0.045**	**310**	**0.015 J**	**81 J**	**0.0025**	**15**	< 0.002 J	< 7.9 J	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0625**	**406**
VP-12A	10-10.5	12/27/2016	Primary	**0.034**	**230**	**0.0081**	**44**	**0.0019**	**11**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.044**	**285**
VP-12A	10-10.5	3/14/2017	Primary	**0.067**	**460**	**0.019**	**100**	**0.0018**	**11**	< 0.0005	< 2.0	**0.00075**	**3.0**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00082**	**2.6**	**0.08937**	**576.6**
VP-12A	10-10.5	6/28/2017	Primary	**0.052**	**350**	**0.018**	**97**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.07**	**447**
VP-12A	10-10.5	9/27/2017	Primary	< 0.0005	< 3.4	**0.00053**	**2.9**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00053**	**2.9**
VP-12A	10-10.5	12/11/2017	Primary	**0.04**	**300**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003 J	< 9.6 J	**0.054**	**375**
VP-12A	10-10.5	5/1/2018	Primary	**0.087**	**590**	**0.025**	**130**	**0.0018**	**11**	**0.00056**	**2.2**	**0.0016**	**6.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.11596**	**739.7**
VP-12B	17.5-18	2/15/2011	Primary	**1.1**	**7500**	**2.6**	**14000**	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**3.7**	**21500**
VP-12B	17.5-18	5/25/2011	Primary	**0.072**	**490**	**0.054**	**290**	**0.01**	**60**	**0.03**	**100**	**0.011**	**45**	**0.0067**	**27**	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1837**	**1012**
VP-12B	17.5-18	9/20/2011	Primary	**0.041**	**280**	**0.017**	**91**	< 0.002	< 12	**0.0083**	**33**	**0.004**	**16**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0703**	**420**
VP-12B	17.5-18	12/6/2011	Primary	**0.71**	**4800**	**0.45**	**2400**	< 0.03	< 200	**0.14**	**560**	**0.074**	**300**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.374**	**8060**
VP-12B	17.5-18	3/28/2012	Primary	**0.37 J**	**2500 J**	**0.18 J**	**970 J**	< 0.03	< 200	**0.04 J**	**200 J**	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.59**	**3670**
VP-12B	17.5-18	3/28/2012	Duplicate	**0.27 J**	**1800 J**	**0.11 J**	**590 J**	< 0.03	< 200	< 0.03 J	< 100 J	< 0.03	< 100	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.38**	**2390**
VP-12B	17.5-18	6/5/2012	Primary	**0.22**	**1500**	**0.1**	**500**	**0.0055**	**33**	**0.023**	**91**	**0.01**	**40**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.3585**	**2164**
VP-12B	17.5-18	9/18/2012	Primary	**0.27**	**1800**	**0.1**	**500**	< 0.002	< 12	**0.023**	**91**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.393**	**2391**
VP-12B	17.5-18	12/11/2012	Primary	**0.45**	**3100**	**0.18**	**970**	**0.015**	**91**	**0.032**	**130**	**0.014**	**57**	< 0.012	< 49	< 0.02 J	< 50 J	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.691**	**4348**
VP-12B	17.5-18	3/18/2013	Primary	**0.47**	**3200**	**0.24**	**1300**	**0.015**	**91**	**0.055**	**220**	**0.041**	**170**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.821**	**4981**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-12B	17.5-18	6/25/2013	Primary	**0.075**	**510**	**0.025**	**130**	**0.0043**	**26**	**0.0057**	**23**	**0.0026**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1126**	**700**
VP-12B	17.5-18	12/19/2013	Primary	**0.086**	**580**	**0.028**	**150**	**0.0094**	**57**	**0.0047**	**19**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1281**	**806**
VP-12B	17.5-18	3/25/2015	Primary	**0.088**	**600**	**0.031**	**170**	**0.0089**	**54**	**0.0023**	**9.1**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1302**	**833.1**
VP-12B	17.5-18	9/22/2015	Primary	**0.12**	**820**	**0.073**	**390**	**0.0093 J**	**56 J**	**0.0044**	**17**	**0.0041**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2108**	**1300**
VP-12B	17.5-18	12/16/2015	Primary	**0.057**	**390**	**0.035**	**190**	**0.0019**	**11**	**0.004**	**16**	**0.0066**	**27**	< 0.0012	< 4.9	**0.0052**	**13**	**0.002**	**7.9**	< 0.0011	< 5.1	**0.0028**	**11**	< 0.0015	< 4.8	**0.1145**	**665.9**
VP-12B	17.5-18	4/19/2016	Primary	**0.062**	**420**	**0.027 J**	**150 J**	**0.006**	**36**	**0.0013 J**	**5.2 J**	**0.0017**	**6.9**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.098**	**618.1**
VP-12B	17.5-18	5/16/2016	Primary	**0.095**	**650**	**0.04**	**200**	**0.0081**	**49**	**0.0017**	**6.7**	**0.0014**	**5.7**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.1462**	**911.4**
VP-12B	17.5-18	8/29/2016	Primary	**0.14**	**950**	**0.058**	**310**	**0.0056**	**34**	**0.0021**	**8.3**	**0.0034**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2091**	**1316.3**
VP-12B	17.5-18	12/27/2016	Primary	**0.076**	**520**	**0.019**	**100**	**0.0055**	**33**	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.1005**	**653**
VP-12B	17.5-18	3/14/2017	Primary	**0.082**	**560**	**0.019**	**100**	**0.0016**	**9.7**	< 0.0005	< 2.0	**0.00062**	**2.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.10322**	**672.2**
VP-12B	17.5-18	6/28/2017	Primary	**0.075**	**510**	**0.024**	**130**	**0.0051**	**31**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1041**	**671**
VP-12B	17.5-18	9/27/2017	Primary	< 0.0005	< 3.4	**0.00077**	**4.1**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00077**	**4.1**
VP-12B	17.5-18	12/11/2017	Primary	**0.064**	**430**	**0.015**	**81**	**0.0039**	**24**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003 J	< 9.6 J	**0.0829**	**535**
VP-12B	17.5-18	5/1/2018	Primary	**0.099**	**670**	**0.029**	**160**	**0.006**	**36**	**0.00056**	**2.2**	**0.0013**	**5.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00076**	**3.0**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.13662**	**876.5**
VP-12C	29.5-30	2/15/2011	Primary	**4.4**	**30000**	**6.3**	**34000**	< 0.83	< 5000	< 1.3	< 5200	**2.7**	**11000**	< 1.2	< 4900	< 2	< 5100	**2**	**7900**	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**15.4**	**82900**
VP-12C	29.5-30	5/25/2011	Primary	**2.4**	**16000**	**2.6**	**14000**	< 0.2	< 1000	< 0.2	< 800	**0.49**	**2000**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**5.49**	**32000**
VP-12C	29.5-30	9/20/2011	Primary	**0.14**	**950**	**0.39**	**2100**	< 0.01	< 60.4	**0.081**	**320**	**0.015**	**61**	< 0.012	< 49	< 0.02	< 50	**0.03**	**100**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.656**	**3531**
VP-12C	29.5-30	12/6/2011	Primary	**3.5**	**24000**	**2.8**	**15000**	< 0.1	< 600	**0.11**	**440**	**0.44**	**1800**	< 0.12	< 490	< 0.2	< 500	**0.11**	**440**	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**6.96**	**41680**
VP-12C	29.5-30	3/28/2012	Primary	**1.9**	**13000**	**3.3**	**18000**	< 0.1	< 600	**0.38**	**1500**	**0.86**	**3500**	< 0.12	< 490	< 0.2	< 500	**0.15**	**600**	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**6.59**	**36600**
VP-12C	29.5-30	6/5/2012	Primary	**6.3**	**43000**	**5 J**	**30000 J**	< 0.1	< 600	**0.3 J**	**1000 J**	**0.86 J**	**3500 J**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**12.46**	**77500**
VP-12C	29.5-30	6/5/2012	Duplicate	**5**	**30000**	**3.3 J**	**18000 J**	< 0.1	< 600	**0.17 J**	**670 J**	**0.49 J**	**2000 J**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**8.96**	**50670**
VP-12C	29.5-30	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-12C	29.5-30	12/11/2012	Primary	**4**	**30000**	**3.9**	**21000**	< 0.03	< 200	**0.51**	**2000**	**0.78**	**3200**	< 0.037	< 150	< 0.059 J	< 150 J	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**9.19**	**56200**
VP-12C	29.5-30	12/11/2012	Duplicate	**3.6**	**24000**	**3.9**	**21000**	**0.012**	**72**	**0.44**	**1700**	**0.73**	**3000**	< 0.0025	< 10	< 0.0039 J	< 10 J	**0.018**	**71**	**0.0034**	**16**	**0.0085**	**34**	**0.011**	**35**	**8.7229**	**49928**
VP-12C	29.5-30	3/18/2013	Primary	**4.1**	**28000**	**3.6**	**19000**	< 0.2	< 1000	**0.35**	**1400**	**0.7**	**3000**	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**8.75**	**51400**
VP-12C	29.5-30	6/25/2013	Primary	**0.0056**	**38**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0056**	**38**
VP-12C	29.5-30	12/19/2013	Primary	**0.35**	**2400**	**0.28**	**1500**	**0.013**	**78**	**0.081**	**320**	**0.056**	**230**	< 0.0025	< 10	< 0.0039	< 10	**0.0026**	**10**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.7826**	**4538**
VP-12C	29.5-30	12/9/2014	Primary	**0.065**	**440**	**0.019**	**100**	**0.0041**	**25**	**0.0032**	**13**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0913**	**578**
VP-12C	29.5-30	3/25/2015	Primary	**0.17**	**1200**	**0.086**	**460**	**0.022**	**130**	**0.01**	**40**	**0.0042**	**17**	< 0.0025	< 10	< 0.0039	< 10	**0.0067 J**	**27 J**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.2989**	**1874**
VP-12C	29.5-30	9/22/2015	Primary	**0.038**	**260**	**0.014**	**75**	**0.0036 J**	**22 J**	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	**0.0026**	**10**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0582**	**367**
VP-12C	29.5-30	12/16/2015	Primary	**0.015**	**100**	**0.0054**	**29**	< 0.001	< 6.0	**0.0015**	**6.0**	**0.0021**	**8.5**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0019**	**7.5**	< 0.0015	< 4.8	**0.0259**	**151**
VP-12C	29.5-30	4/19/2016	Primary	**0.0011**	**7.5**	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0011**	**7.5**
VP-12C	29.5-30	12/27/2016	Primary	**0.01**	**70**	**0.0042**	**23**	**0.00076**	**4.6**	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01496**	**97.6**
VP-12C	29.5-30	3/14/2017	Primary	**0.16**	**1100**	**0.077**	**410**	**0.0047**	**28**	**0.0031**	**12**	**0.0021**	**8.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0041**	**16**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.251**	**1574.5**
VP-12C	29.5-30	6/28/2017	Primary	**0.0048**	**33**	**0.0032**	**17**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00083**	**2.7**	**0.00883**	**52.7**
VP-12C	29.5-30	9/27/2017	Primary	**0.05**	**300**	**0.037**	**200**	**0.0021**	**13**	**0.0014**	**5.6**	**0.0019**	**7.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0038**	**15**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0962**	**541.3**
VP-12C	29.5-30	12/11/2017	Primary	**0.02**	**100**	**0.0086**	**46**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003 J	< 9.6 J	**0.0286**	**146**
VP-12C	29.5-30	5/1/2018	Primary	**0.096**	**650**	**0.051**	**270**	**0.0076**	**46**	**0.0027**	**11**	**0.0032**	**13**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00066**	**2.6**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.16116**	**992.6**
VP-12D	33.5-34	2/15/2011	Primary	**3.1**	**21000**	**4.5**	**24000**	< 0.83	< 5000	**1.4**	**5600**	**4.4**	**18000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**13.4**	**68600**
VP-12D	33.5-34	2/15/2011	Duplicate	**3.1**	**21000**	**4.3**	**23000**	< 0.83	< 5000	**1.3**	**5200**	**4.7**	**19000**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**13.4**	**68200**
VP-12D	33.5-34	5/25/2011	Primary	**0.044**	**300**	**0.032**	**170**	< 0.002	< 12	**0.01**	**40**	**0.014**	**57**	**0.0027**	**11**	**0.011**	**28**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.0053**	**17**	**0.119**	**623**
VP-12D	33.5-34	9/20/2011	Primary	**0.12**	**820**	**0.32**	**1700**	< 0.01	< 60.4	**0.083**	**330**	**0.18**	**730**	< 0.012	< 49	**0.047**	**120**	**0.03**	**100**	< 0.011	< 51	**0.014**	**56**	< 0.015	< 48	**0.794**	**3856**
VP-12D	33.5-34	12/6/2011	Primary	**1.9**	**13000**	**3.5**	**19000**	< 0.04	< 200	**0.66**	**2600**	**1.4**	**5700**	< 0.049	< 200	< 0.078	< 200	**0.35**	**1400**	< 0.043	< 200	**0.076**	**300**	< 0.06	< 200	**7.886**	**42000**
VP-12D	33.5-34	3/28/2012	Primary	**0.97**	**6600**	**2.4**	**13000**	< 0.04	< 200	**0.25**	**990**	**0.67**	**2700**	< 0.049	< 200	< 0.078	< 200	**0.11**	**440**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**4.4**	**23730**
VP-12D	33.5-34	6/5/2012	Primary	**0.034**	**230**	**0.015**	**81**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.049**	**311**
VP-12D	33.5-34	9/18/2012	Primary	**0.0034**	**23**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0034**	**23**
VP-12D	33.5-34	12/11/2012	Primary	**0.075**	**510**	**0.054**	**290**	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.037	< 150	< 0.059 J	< 150 J	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.129**	**800**
VP-12D	33.5-34	3/18/2013	Primary	**0.26**	**1800**	**0.26**	**1400**	< 0.005	< 30	**0.022**	**87**	**0.073**	**300**	< 0.0062	< 25	< 0.0098	< 25	**0.0057**	**23**	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**0.6207**	**3610**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-12D	33.5-34	6/25/2013	Primary	**0.016**	**110**	**0.01**	**50**	< 0.002	< 12	**0.0071**	**28**	**0.035**	**140**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0081**	**32**	< 0.003	< 9.6	**0.0762**	**360**
VP-12D	33.5-34	12/19/2013	Primary	**0.013**	**88**	**0.0038**	**20**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0168**	**108**
VP-12D	33.5-34	3/25/2015	Primary	**0.0032**	**22**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0032**	**22**
VP-12D	33.5-34	4/19/2016	Primary	**0.0043**	**29**	**0.0018 J**	**9.7 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	**0.0086**	**35**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0017**	**6.7**	< 0.0015	< 4.8	**0.0164**	**80.4**
VP-12D	33.5-34	12/27/2016	Primary	**0.00073**	**5.0**	**0.00068**	**3.7**	< 0.0005	< 3.0	**0.00093**	**3.7**	**0.0096**	**39**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01194**	**51.4**
VP-12D	33.5-34	3/14/2017	Primary	**0.027**	**180**	**0.02**	**100**	**0.0015**	**9.1**	**0.0044**	**17**	**0.015**	**61**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0014**	**5.6**	< 0.00055	< 2.5	**0.001**	**4.0**	< 0.00075	< 2.4	**0.0703**	**376.7**
VP-12D	33.5-34	6/28/2017	Primary	**0.0026**	**18**	**0.0037**	**20**	< 0.0005	< 3.0	**0.0008**	**3.2**	**0.0055**	**22**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00097 J**	**3.9 J**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01357**	**67.1**
VP-12D	33.5-34	9/27/2017	Primary	**0.033**	**220**	**0.033**	**180**	**0.00065**	**3.9**	**0.0062**	**25**	**0.023**	**93**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00066**	**3.1**	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.09651**	**525**
VP-12D	33.5-34	12/11/2017	Primary	**0.013**	**88**	**0.0076**	**41**	< 0.001	< 6.0	< 0.001	< 4.0	**0.0016**	**6.5**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015 J	< 4.8 J	**0.0222**	**135.5**
VP-12D	33.5-34	5/1/2018	Primary	**0.022**	**150**	**0.021**	**110**	**0.0022**	**13**	**0.019**	**75**	**0.024**	**97**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	**0.0019**	**8.8**	**0.0012**	**4.8**	< 0.00075	< 2.4	**0.0925**	**463.4**
VP-13A	9.5-10	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-13A	9.5-10	5/24/2011	Primary	**0.0027**	**18**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0035	< 14	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0027**	**18**
VP-13A	9.5-10	9/19/2011	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-13A	9.5-10	12/5/2011	Primary	**0.057**	**390**	**0.0041**	**22**	< 0.002	< 12	< 0.002	< 7.9	**0.0035**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0646**	**426**
VP-13A	9.5-10	3/28/2012	Primary	**0.0032**	**22**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0032**	**22**
VP-13A	9.5-10	6/6/2012	Primary	**0.0024**	**16**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0024**	**16**
VP-13A	9.5-10	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-13A	9.5-10	12/11/2012	Primary	**0.0035**	**24**	**0.0026**	**14**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0061**	**38**
VP-13A	9.5-10	3/20/2013	Primary	**0.016**	**110**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.016**	**110**
VP-13A	9.5-10	6/25/2013	Primary	**0.0076**	**52**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0076**	**52**
VP-13A	9.5-10	12/18/2013	Primary	**0.0042**	**29**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0042**	**29**
VP-13A	9.5-10	3/26/2015	Primary	**0.0064**	**43**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0064**	**43**
VP-13A	9.5-10	4/19/2016	Primary	< 0.001	< 6.8	< 0.001 J	< 5.4 J	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-13A	9.5-10	12/27/2016	Primary	**0.00089**	**6.0**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00089**	**6**
VP-13A	9.5-10	3/14/2017	Primary	**0.0021**	**14**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00089**	**2.8**	**0.00299**	**16.8**
VP-13A	9.5-10	6/28/2017	Primary	**0.00081**	**5.5**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00084**	**2.7**	**0.00165**	**8.2**
VP-13A	9.5-10	9/27/2017	Primary	< 0.0005	< 3.4	**0.00059**	**3.2**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00059**	**3.2**
VP-13A	9.5-10	12/11/2017	Primary	**0.0054**	**37**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006 J	< 19 J	**0.0054**	**37**
VP-13A	9.5-10	5/1/2018	Primary	**0.0021**	**14**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0057**	**18**	**0.0078**	**32**
VP-13B	21-21.5	2/15/2011	Primary	< 1.5	< 10000	< 1.9	< 10000	< 1.7	< 10000	< 2.5	< 9900	**4.2**	**17000**	< 2.5	< 10000	< 3.9	< 10000	< 2.5	< 9900	< 2.2 J	< 10000 J	< 2.5	< 9900	< 3.1	< 9900	**4.2**	**17000**
VP-13B	21-21.5	5/24/2011	Primary	**0.21**	**1400**	**0.12**	**650**	< 0.02	< 100	**0.028**	**110**	**0.37**	**1500**	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.728**	**3660**
VP-13B	21-21.5	9/19/2011	Primary	**0.053**	**360**	**0.047**	**250**	< 0.002	< 12	**0.012**	**48**	**0.099**	**400**	< 0.0025	< 10	< 0.0039	< 10	**0.0025**	**9.9**	< 0.0022	< 10	**0.0023**	**9.1**	**0.011**	**35**	**0.2268**	**1112**
VP-13B	21-21.5	12/5/2011	Primary	**0.44**	**3000**	**0.41**	**2200**	< 0.1	< 600	< 0.1	< 400	**0.79**	**3200**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	**0.17**	**540**	**1.81**	**8940**
VP-13B	21-21.5	3/28/2012	Primary	**0.84**	**5700**	**0.63**	**3400**	< 0.1	< 600	**0.15**	**600**	**0.62**	**2500**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.24**	**12200**
VP-13B	21-21.5	6/6/2012	Primary	**0.91**	**6200**	**0.26**	**1400**	< 0.06	< 400	**0.086**	**340**	**0.4**	**2000**	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	**0.12**	**380**	**1.776**	**10320**
VP-13B	21-21.5	9/18/2012	Primary	**0.085**	**580**	**0.0082**	**44**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0932**	**624**
VP-13B	21-21.5	12/11/2012	Primary	**1**	**7000**	**0.13**	**700**	< 0.002	< 12	**0.058**	**230**	**0.21**	**850**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.004**	**16**	**0.12**	**380**	**1.522**	**9176**
VP-13B	21-21.5	3/20/2013	Primary	**1**	**7000**	**0.16**	**860**	< 0.04	< 200	**0.042**	**170**	**0.21**	**850**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	**0.089**	**280**	**1.501**	**9160**
VP-13B	21-21.5	6/25/2013	Primary	**0.62**	**4200**	< 0.2	< 1000	< 0.2	< 1000	< 0.2	< 800	< 0.2	< 800	< 0.25	< 1000	< 0.39	< 1000	< 0.2	< 800	< 0.22	< 1000	< 0.2	< 800	< 0.3	< 1000	**0.62**	**4200**
VP-13B	21-21.5	9/24/2013	Primary	**1.1**	**7500**	< 0.4	< 2000	< 0.4	< 2000	< 0.4	< 2000	< 0.4	< 2000	< 0.5	< 2000	< 0.78	< 2000	< 0.4	< 2000	< 0.44	< 2000	< 0.4	< 2000	< 0.6	< 2000	**1.1**	**7500**
VP-13B	21-21.5	12/18/2013	Primary	**1.3**	**8800**	**0.061**	**330**	< 0.002	< 12	**0.0076**	**30**	**0.027**	**110**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.053**	**170**	**1.4486**	**9440**
VP-13B	21-21.5	3/25/2014	Primary	**1.2**	**8200**	< 0.1	< 500	< 0.1	< 600	< 0.1	< 400	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**1.2**	**8200**
VP-13B	21-21.5	6/26/2014	Primary	**0.23**	**1600**	< 0.02	< 100	< 0.02	< 100	< 0.02	< 80	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**0.23**	**1600**
VP-13B	21-21.5	12/9/2014	Primary	**0.037**	**250**	**0.015**	**81**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.052**	**331**
VP-13B	21-21.5	3/26/2015	Primary	**0.42**	**2900**	< 0.05	< 300	< 0.05	< 300	< 0.05	< 200	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.055	< 250	< 0.05	< 200	< 0.075	< 240	**0.42**	**2900**
VP-13B	21-21.5	9/22/2015	Primary	**0.25**	**1700**	**0.011**	**59**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.02**	**60**	**0.281**	**1819**
VP-13B	21-21.5	12/16/2015	Primary	**0.0092**	**63**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00085**	**2.7**	**0.01005**	**65.7**
VP-13B	21-21.5	4/19/2016	Primary	**0.00072**	**4.9**	**0.00056 J**	**3.0 J**	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00098**	**3.1**	**0.00226**	**11**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-13B	21-21.5	5/31/2016	Primary	**0.099**	**670**	**0.006**	**32**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.012**	**38**	**0.117**	**740**
VP-13B	21-21.5	6/13/2016	Primary	**0.11**	**750**	**0.0076**	**41**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0014**	**5.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.013**	**42**	**0.132**	**838.7**
VP-13B	21-21.5	6/27/2016	Primary	**0.06**	**400**	**0.0067**	**36**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0015**	**6.1**	**0.00086**	**3.5**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.01**	**30**	**0.07906**	**475.6**
VP-13B	21-21.5	7/29/2016	Primary	< 0.0005	< 3	< 0.0005	< 3	< 0.0005	< 3	< 0.0005	< 2	< 0.0005	< 2	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2	< 0.00055	< 2.5	< 0.0005	< 2	**0.00088**	**2.8**	**0.00088**	**2.8**
VP-13B	21-21.5	8/15/2016	Primary	**0.022**	**150**	**0.0016**	**8.6**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0053**	**17**	**0.0289**	**175.6**
VP-13B	21-21.5	8/29/2016	Primary	**0.29 J**	**2000 J**	**0.013**	**70**	**0.0059**	**36**	< 0.0005	< 2.0	**0.0031**	**13**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00076**	**3.5**	< 0.0005	< 2.0	**0.024**	**77**	**0.33676**	**2199.5**
VP-13B	21-21.5	9/12/2016	Primary	**0.13**	**880**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.032**	**100**	**0.162**	**980**
VP-13B	21-21.5	12/27/2016	Primary	**0.26 J+**	**1800 J+**	**0.0053 J+**	**29 J+**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.016 J+**	**51 J+**	**0.2813**	**1880**
VP-13B	21-21.5	3/14/2017	Primary	**0.32**	**2200**	**0.014**	**75**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.031**	**99**	**0.365**	**2374**
VP-13B	21-21.5	6/28/2017	Primary	**0.12**	**820**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.02**	**60**	**0.14**	**880**
VP-13B	21-21.5	9/27/2017	Primary	**0.14**	**950**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	**0.021**	**67**	**0.161**	**1017**
VP-13B	21-21.5	12/11/2017	Primary	**0.1**	**700**	**0.013**	**70**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015 J	< 48 J	**0.113**	**770**
VP-13B	21-21.5	5/1/2018	Primary	**0.14**	**950**	< 0.03	< 200	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.14**	**950**
VP-13B	21-21.5	9/19/2018	Primary	**0.098**	**670**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078 J	< 20 J	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	**0.0063**	**20**	**0.1043**	**690**
VP-13B	21-21.5	12/27/2018	Primary	**0.14**	**950**	< 0.03	< 200	< 0.03	< 200	< 0.03	< 100	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**0.14**	**950**
VP-13B	21-21.5	2/20/2019	Primary	**0.15**	**1000**	**0.0044**	**24**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.0017**	**6.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.014**	**45**	**0.1701**	**1075.9**
VP-13B	21-21.5	6/12/2019	Primary	**0.087**	**590**	**0.0053**	**29**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.011**	**35**	**0.1033**	**654**
VP-13C	26-26.5	2/15/2011	Primary	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1 J	< 5100 J	< 1.3	< 5200	< 1.6	< 5100	ND	ND
VP-13C	26-26.5	5/24/2011	Primary	**0.074**	**500**	**0.17**	**910**	< 0.01	< 60.4	**0.014**	**56**	**0.21**	**850**	< 0.012	< 49	< 0.02	< 50	**0.019**	**75**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.487**	**2391**
VP-13C	26-26.5	9/19/2011	Primary	**0.01**	**70**	**0.045**	**240**	< 0.002	< 12	**0.0023**	**9.1**	**0.03**	**100**	< 0.0025	< 10	< 0.0039	< 10	**0.0038**	**15**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0911**	**434.1**
VP-13C	26-26.5	12/5/2011	Primary	**0.43**	**2900**	**0.61**	**3300**	< 0.04	< 200	< 0.04	< 200	**0.35**	**1400**	< 0.049	< 200	< 0.078	< 200	**0.055**	**220**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.445**	**7820**
VP-13C	26-26.5	3/28/2012	Primary	**0.85**	**5800**	**0.65**	**3500**	< 0.04	< 200	**0.05**	**200**	**0.59**	**2400**	< 0.049	< 200	< 0.078	< 200	**0.055**	**220**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.195**	**12120**
VP-13C	26-26.5	6/6/2012	Primary	**0.41 J**	**2800 J**	**0.2 J**	**1000 J**	< 0.03	< 200	**0.093 J**	**370 J**	**0.54 J**	**2200 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	**0.15 J**	**480 J**	**1.393**	**6850**
VP-13C	26-26.5	6/6/2012	Duplicate	**0.21 J**	**1400 J**	**0.093 J**	**500 J**	< 0.03	< 200	**0.035 J**	**140 J**	**0.18 J**	**730 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	**0.05 J**	**200 J**	**0.568**	**2970**
VP-13C	26-26.5	9/18/2012	Primary	**0.015**	**100**	**0.003**	**16**	< 0.002	< 12	< 0.002	< 7.9	**0.0074**	**30**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0254**	**146**
VP-13C	26-26.5	12/11/2012	Primary	**0.5**	**3000**	**0.11**	**590**	< 0.002	< 12	**0.042 J**	**170 J**	**0.18 J**	**730 J**	< 0.0025	< 10	< 0.0039 J	< 10 J	< 0.002	< 7.9	< 0.0022	< 10	**0.0063 J**	**25 J**	**0.021**	**67**	**0.8593**	**4582**
VP-13C	26-26.5	12/11/2012	Duplicate	**0.4**	**3000**	**0.082**	**440**	< 0.002	< 12	**0.029 J**	**120 J**	**0.12 J**	**490 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.004 J**	**16 J**	**0.016**	**51**	**0.651**	**4117**
VP-13C	26-26.5	3/20/2013	Primary	**0.19**	**1300**	**0.041**	**220**	< 0.03	< 200	< 0.03	< 100	**0.034**	**140**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**0.265**	**1660**
VP-13C	26-26.5	6/25/2013	Primary	**0.021**	**140**	**0.0028**	**15**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0238**	**155**
VP-13C	26-26.5	12/18/2013	Primary	**0.44**	**3000**	**0.059**	**320**	< 0.002	< 12	**0.0055**	**22**	**0.029**	**120**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.0065**	**21**	**0.54**	**3483**
VP-13C	26-26.5	3/26/2015	Primary	**0.18**	**1200**	< 0.015	< 81	< 0.015	< 91	< 0.015	< 60	< 0.015	< 61	< 0.019	< 77	< 0.029	< 74	< 0.015	< 60	< 0.016	< 74	< 0.015	< 60	< 0.022	< 70	**0.18**	**1200**
VP-13C	26-26.5	9/22/2015	Primary	**0.16**	**1100**	**0.017**	**91**	< 0.008	< 48	< 0.008	< 32	< 0.008	< 32	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.177**	**1191**
VP-13C	26-26.5	12/16/2015	Primary	**0.029**	**200**	**0.0033**	**18**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	**0.0026**	**8.3**	**0.0349**	**226.3**
VP-13C	26-26.5	4/19/2016	Primary	< 0.0005	< 3.4	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-13C	26-26.5	12/27/2016	Primary	**0.15**	**1000**	**0.042**	**230**	< 0.001	< 6.0	**0.003**	**12**	**0.0019**	**7.7**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.1969**	**1249.7**
VP-13C	26-26.5	3/14/2017	Primary	**0.063**	**430**	**0.022**	**120**	< 0.001	< 6.0	**0.0014**	**5.6**	**0.0011**	**4.5**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0875**	**560.1**
VP-13C	26-26.5	6/28/2017	Primary	**0.091**	**620**	**0.01**	**50**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.101**	**670**
VP-13C	26-26.5	9/27/2017	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-13C	26-26.5	12/11/2017	Primary	**0.068 J**	**460 J**	**0.029**	**160**	< 0.001	< 6.0	**0.0036**	**14**	**0.0026**	**11**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0019**	**7.5**	< 0.0015 J	< 4.8 J	**0.1051**	**652.5**
VP-13C	26-26.5	5/1/2018	Primary	**0.036**	**240**	**0.007**	**38**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.043**	**278**
VP-13D	33-33.5	2/16/2011	Primary	< 0.74	< 5000	**1.5**	**8100**	< 0.83	< 5000	< 1.3	< 5200	**1.3**	**5300**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	**2.8**	**13400**
VP-13D	33-33.5	5/24/2011	Primary	**0.057**	**390**	**0.17**	**910**	< 0.01	< 60.4	**0.017**	**67**	**0.24**	**970**	< 0.012	< 49	< 0.02	< 50	**0.021**	**83**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.505**	**2420**
VP-13D	33-33.5	9/19/2011	Primary	**0.014**	**95**	**0.024**	**130**	< 0.002	< 12	< 0.002	< 7.9	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.052**	**282**
VP-13D	33-33.5	9/21/2011	Primary	**0.028**	**190**	**0.039**	**210**	< 0.002	< 12	**0.0058 J**	**23 J**	**0.035**	**140**	< 0.0025	< 10	< 0.0039	< 10	**0.0053**	**21**	< 0.0022	< 10	< 0.002	< 7.9	**0.0034**	**11**	**0.1165**	**595**
VP-13D	33-33.5	12/5/2011	Primary	**0.14**	**950**	**0.12**	**650**	< 0.04	< 200	< 0.04	< 200	< 0.04	< 200	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**0.26**	**1600**
VP-13D	33-33.5	3/28/2012	Primary	**1.3**	**8800**	**1.1**	**5900**	< 0.01	< 60.4	**0.061**	**240**	**0.99**	**4000**	< 0.012	< 49	**0.025 J**	**64 J**	**0.068**	**270**	< 0.011	< 51	**0.024**	**95**	**0.05 J**	**200 J**	**3.618**	**19569**
VP-13D	33-33.5	6/6/2012	Primary	**0.01**	**70**	**0.0041**	**22**	< 0.002	< 12	< 0.002	< 7.9	**0.0059**	**24**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.02**	**116**
VP-13D	33-33.5	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-13D	33-33.5	9/18/2012	Duplicate	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-13D	33-33.5	12/11/2012	Primary	**0.0025**	**17**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0025**	**17**
VP-13D	33-33.5	3/20/2013	Primary	**0.11**	**750**	**0.037**	**200**	< 0.002	< 12	**0.002**	**7.9**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	**0.003**	**9.6**	**0.174**	**1056.5**
VP-13D	33-33.5	3/20/2013	Duplicate	**0.088**	**600**	**0.041**	**220**	< 0.002	< 12	< 0.002	< 7.9	**0.023**	**93**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.152**	**913**
VP-13D	33-33.5	6/25/2013	Primary	**0.017**	**120**	**0.0028**	**15**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0198**	**135**
VP-13D	33-33.5	12/18/2013	Primary	**0.3**	**2000**	**0.13**	**700**	< 0.002	< 12	**0.0046**	**18**	**0.0051**	**21**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.4397**	**2739**
VP-13D	33-33.5	3/26/2015	Primary	**0.025**	**170**	**0.021**	**110**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.046**	**280**
VP-13D	33-33.5	9/22/2015	Primary	**0.043**	**290**	**0.048**	**260**	< 0.001	< 6.0	**0.0013**	**5.2**	**0.0012**	**4.9**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	**0.002**	**6.4**	**0.0955**	**566.5**
VP-13D	33-33.5	12/16/2015	Primary	**0.038**	**260**	**0.014**	**75**	< 0.0005	< 3.0	**0.00078**	**3.1**	**0.00079**	**3.2**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0011**	**3.5**	**0.05467**	**344.8**
VP-13D	33-33.5	4/19/2016	Primary	< 0.0005	< 3.4	< 0.0005 J	< 2.7 J	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	ND	ND
VP-13D	33-33.5	12/27/2016	Primary	**0.036**	**240**	**0.1**	**500**	< 0.0005	< 3.0	**0.0095**	**38**	< 0.0005	< 2.0	**0.0007**	**2.8**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0022**	**8.7**	< 0.00075	< 2.4	**0.1484**	**789.5**
VP-13D	33-33.5	3/14/2017	Primary	**0.026**	**180**	**0.024**	**130**	< 0.0005	< 3.0	**0.0017**	**6.7**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.001**	**4.0**	**0.00097**	**3.1**	**0.05367**	**323.8**
VP-13D	33-33.5	6/28/2017	Primary	**0.058**	**390**	**0.024**	**130**	< 0.002	< 12	**0.0021**	**8.3**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0841**	**528.3**
VP-13D	33-33.5	9/27/2017	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-13D	33-33.5	12/11/2017	Primary	**0.062 J**	**420 J**	**0.046**	**250**	< 0.001	< 6.0	**0.011**	**44**	**0.0055**	**22**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0032**	**13**	< 0.0015 J	< 4.8 J	**0.1277**	**749**
VP-13D	33-33.5	5/1/2018	Primary	**0.025**	**170**	**0.018**	**97**	< 0.0005	< 3.0	**0.0025**	**9.9**	**0.00069**	**2.8**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00069**	**3.2**	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.04688**	**282.9**
VP-14A	9.5-10	8/24/2011	Primary	< 0.0015	< 10	**0.0056**	**30**	< 0.0017	< 10	< 0.0025	< 9.9	< 0.0025	< 10	< 0.0025	< 10	< 0.0039	< 10	< 0.0025	< 9.9	< 0.0022	< 10	< 0.0025	< 9.9	< 0.0031	< 9.9	**0.0056**	**30**
VP-14A	9.5-10	9/20/2011	Primary	**0.094**	**640**	**0.024**	**130**	< 0.002	< 12	**0.0038**	**15**	**0.04**	**200**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1618**	**985**
VP-14A	9.5-10	12/7/2011	Primary	**1.6**	**11000**	**0.3**	**2000**	< 0.1	< 600	< 0.1	< 400	**0.2**	**800**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**2.1**	**13800**
VP-14A	9.5-10	3/27/2012	Primary	**1.8**	**12000**	**0.54**	**2900**	< 0.04	< 200	**0.088**	**350**	**0.4**	**2000**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.828**	**17250**
VP-14A	9.5-10	6/4/2012	Primary	**0.05**	**300**	**0.0052**	**28**	< 0.002	< 12	< 0.002	< 7.9	**0.002**	**8.1**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0572**	**336.1**
VP-14A	9.5-10	9/18/2012	Primary	**0.021**	**140**	**0.0026**	**14**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0236**	**154**
VP-14A	9.5-10	9/18/2012	Duplicate	**0.018**	**120**	**0.0022**	**12**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0202**	**132**
VP-14A	9.5-10	12/10/2012	Primary	**0.004**	**27**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.004**	**27**
VP-14A	9.5-10	3/20/2013	Primary	**0.061**	**410**	**0.0071**	**38**	< 0.002	< 12	**0.0028**	**11**	**0.0036**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0745**	**474**
VP-14A	9.5-10	6/26/2013	Primary	**0.027**	**180**	**0.0021**	**11**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0291**	**191**
VP-14A	9.5-10	12/18/2013	Primary	**0.025**	**170**	**0.0024**	**13**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0274**	**183**
VP-14A	9.5-10	12/18/2014	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-14A	9.5-10	3/26/2015	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-14A	9.5-10	9/22/2015	Primary	**0.031**	**210**	**0.0044**	**24**	< 0.001	< 6.0	< 0.001	< 4.0	**0.0022**	**8.9**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0376**	**242.9**
VP-14A	9.5-10	12/16/2015	Primary	**0.004**	**27**	**0.00074**	**4.0**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00474**	**31**
VP-14A	9.5-10	4/20/2016	Primary	**0.002**	**14**	**0.00055**	**3.0**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00255**	**17**
VP-14A	9.5-10	5/16/2016	Primary	**0.0046**	**31**	**0.00052**	**2.8**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00512**	**33.8**
VP-14A	9.5-10	5/31/2016	Primary	**0.0028**	**19**	**0.0053**	**29**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	**0.0032**	**13**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0113**	**61**
VP-14A	9.5-10	6/13/2016	Primary	**0.003**	**20**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.003**	**20**
VP-14A	9.5-10	6/27/2016	Primary	**0.0037**	**25**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0037**	**25**
VP-14A	9.5-10	7/29/2016	Primary	**0.0032**	**22**	< 0.001	< 5	< 0.001	< 6	< 0.001	< 4	< 0.001	< 4	< 0.0012	< 4.9	< 0.002	< 5	< 0.001	< 4	< 0.0011	< 5.1	< 0.001	< 4	< 0.0015	< 4.8	**0.0032**	**22**
VP-14A	9.5-10	3/14/2017	Primary	**0.018**	**120**	**0.0028**	**15**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.00084**	**3.4**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.02164**	**138.4**
VP-14A	9.5-10	6/28/2017	Primary	**0.014**	**95**	**0.0015**	**8.1**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0155**	**103.1**
VP-14A	9.5-10	9/27/2017	Primary	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	ND	ND
VP-14A	9.5-10	12/11/2017	Primary	**0.0011**	**7.5**	**0.0012**	**6.5**	< 0.001	< 6.0	**0.0012**	**4.8**	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015 J	< 4.8 J	**0.0035**	**18.8**
VP-14A	9.5-10	5/1/2018	Primary	**0.009**	**61**	**0.00084**	**4.5**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	**0.00058**	**2.7**	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01042**	**68.2**
VP-14A	9.5-10	2/20/2019	Primary	**0.073**	**500**	**0.0039**	**21**	< 0.0005	< 3.0	< 0.0005	< 2.0	**0.00091**	**3.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.07781**	**524.7**
VP-14B	19-19.5	8/24/2011	Primary	< 0.0015	< 10	< 0.0019	< 10	< 0.0017	< 10	< 0.0025	< 9.9	< 0.0025	< 10	< 0.0025	< 10	< 0.0039	< 10	< 0.0025	< 9.9	< 0.0022	< 10	< 0.0025	< 9.9	< 0.0031	< 9.9	ND	ND
VP-14B	19-19.5	9/20/2011	Primary	**0.46**	**3100**	**0.41**	**2200**	< 0.04	< 200	**0.11**	**440**	**1.9**	**7700**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.88**	**13440**
VP-14B	19-19.5	12/7/2011	Primary	**0.34 J**	**2300 J**	**0.32 J**	**1700 J**	< 0.03	< 200	**0.16 J**	**640 J**	**1.1 J**	**4500 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.92**	**9140**
VP-14B	19-19.5	12/7/2011	Duplicate	**0.19 J**	**1300 J**	**0.16 J**	**860 J**	< 0.005	< 30	**0.066 J**	**260 J**	**0.44 J**	**1800 J**	< 0.0062	< 25	< 0.0098	< 25	**0.0088**	**35**	< 0.0054	< 25	**0.0076**	**30**	< 0.0075	< 24	**0.8724**	**4285**
VP-14B	19-19.5	3/27/2012	Primary	**0.59**	**4000**	**0.61**	**3300**	< 0.01	< 60.4	**0.19**	**750**	**1.8**	**7300**	< 0.012	< 49	**0.047**	**120**	**0.035**	**140**	< 0.011	< 51	**0.023**	**91**	**0.019**	**61**	**3.314**	**15762**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-14B	19-19.5	6/4/2012	Primary	**0.96**	**6500**	**0.47**	**2500**	< 0.04	< 200	**0.11**	**440**	**1.4**	**5700**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.94**	**15140**
VP-14B	19-19.5	9/18/2012	Primary	**0.015**	**100**	**0.0052**	**28**	< 0.002	< 12	**0.0025**	**9.9**	**0.015**	**61**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0377**	**198.9**
VP-14B	19-19.5	12/10/2012	Primary	**0.26**	**1800**	**0.054**	**290**	< 0.004	< 24	**0.0089**	**35**	**0.14 J**	**570 J**	< 0.0049	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0043	< 20	< 0.004	< 16	< 0.006	< 19	**0.4629**	**2695**
VP-14B	19-19.5	3/20/2013	Primary	**0.57**	**3900**	**0.2**	**1000**	< 0.01	< 60	**0.079**	**310**	**0.47**	**1900**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.319**	**7110**
VP-14B	19-19.5	6/26/2013	Primary	**0.25 J**	**1700 J**	**0.089**	**480**	< 0.002	< 12	**0.023**	**91**	**0.15 J**	**610 J**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.512**	**2881**
VP-14B	19-19.5	12/18/2013	Primary	**0.41**	**2800**	**0.1**	**500**	< 0.008	< 48	**0.018**	**71**	**0.13**	**530**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.658**	**3901**
VP-14B	19-19.5	12/9/2014	Primary	**0.047**	**320**	**0.0074**	**40**	< 0.002	< 12	**0.0027**	**11**	**0.0056**	**23**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0627**	**394**
VP-14B	19-19.5	3/26/2015	Primary	**0.039**	**260**	**0.016**	**86**	< 0.002	< 12	**0.043**	**170**	**0.062**	**250**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.16**	**766**
VP-14B	19-19.5	9/22/2015	Primary	**0.008**	**54**	**0.0019**	**10**	< 0.001	< 6.0	**0.0016**	**6.4**	**0.0018**	**7.3**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0133**	**77.7**
VP-14B	19-19.5	12/16/2015	Primary	**0.0018**	**12**	**0.00067**	**3.6**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00247**	**15.6**
VP-14B	19-19.5	4/20/2016	Primary	**0.00052**	**3.5**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00052**	**3.5**
VP-14B	19-19.5	3/14/2017	Primary	**0.0032**	**22**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.0014**	**4.5**	**0.0046**	**26.5**
VP-14B	19-19.5	6/28/2017	Primary	**0.0017**	**12**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0017**	**12**
VP-14B	19-19.5	9/27/2017	Primary	**0.0016**	**11**	**0.00065**	**3.5**	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00225**	**14.5**
VP-14B	19-19.5	12/11/2017	Primary	< 0.0005	< 3.4	**0.002**	**11**	< 0.0005	< 3.0	**0.0017**	**6.7**	**0.00084**	**3.4**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0013**	**5.2**	< 0.00075 J	< 2.4 J	**0.00584**	**26.3**
VP-14B	19-19.5	5/1/2018	Primary	**0.0025**	**17**	**0.00097**	**5.2**	< 0.0005	< 3.0	**0.0018**	**7.1**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00647**	**34.2**
VP-14B	19-19.5	2/20/2019	Primary	**0.0075**	**51**	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0075**	**51**
VP-14B	19-19.5	6/12/2019	Primary	**0.011**	**75**	**0.00088**	**4.7**	< 0.0005	< 3.0	**0.00078**	**3.1**	**0.0024**	**9.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.01506**	**92.5**
VP-14C	29-29.5	8/25/2011	Primary	**0.028 J**	**190 J**	**0.074**	**400**	< 0.0017	< 10	**0.018**	**71**	**0.22**	**890**	< 0.0025	< 10	**0.0063**	**16**	< 0.0025	< 9.9	< 0.0022	< 10	**0.003**	**12**	**0.0053**	**17**	**0.3546**	**1596**
VP-14C	29-29.5	8/25/2011	Duplicate	**0.018 J**	**120 J**	**0.069**	**370**	< 0.0017	< 10	**0.019**	**75**	**0.23**	**930**	< 0.0025	< 10	**0.0063**	**16**	< 0.0025	< 9.9	< 0.0022	< 10	**0.0033**	**13**	**0.0056**	**18**	**0.3512**	**1542**
VP-14C	29-29.5	9/20/2011	Primary	**0.28**	**1900**	**0.76**	**4100**	< 0.04	< 200	**0.14**	**560**	**1.7**	**6900**	< 0.049	< 200	< 0.078	< 200	**0.045**	**180**	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**2.925**	**13640**
VP-14C	29-29.5	12/7/2011	Primary	**0.41**	**2800**	**0.78**	**4200**	< 0.1	< 600	**0.4**	**2000**	**3**	**10000**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**4.59**	**19000**
VP-14C	29-29.5	3/27/2012	Primary	**0.49**	**3300**	**0.91**	**4900**	< 0.1	< 600	**0.28**	**1100**	**3.5**	**14000**	< 0.12	< 490	< 0.2	< 500	**0.11**	**440**	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**5.29**	**23740**
VP-14C	29-29.5	6/4/2012	Primary	**1.3**	**8800**	**0.84**	**4500**	< 0.1	< 600	**0.17**	**670**	**2.5**	**10000**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**4.81**	**23970**
VP-14C	29-29.5	9/18/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-14C	29-29.5	12/10/2012	Primary	**0.52**	**3500**	**0.14**	**750**	< 0.03	< 200	**0.031**	**120**	**0.37 J**	**1500 J**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.061**	**5870**
VP-14C	29-29.5	3/20/2013	Primary	**0.38**	**2600**	**0.32**	**1700**	< 0.04	< 200	**0.072**	**290**	**1.1**	**4500**	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.872**	**9090**
VP-14C	29-29.5	6/26/2013	Primary	**0.38**	**2600**	**0.099**	**530**	< 0.008	< 48	**0.012**	**48**	**0.15**	**610**	< 0.0099	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	**0.641**	**3788**
VP-14C	29-29.5	12/18/2013	Primary	**0.37**	**2500**	**0.076**	**410**	< 0.008	< 48	< 0.008	< 32	**0.088**	**360**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	**0.534**	**3270**
VP-14C	29-29.5	12/9/2014	Primary	**0.0079**	**54**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0079**	**54**
VP-14C	29-29.5	3/26/2015	Primary	**0.076**	**520**	**0.013**	**70**	< 0.005	< 30	< 0.005	< 20	**0.015**	**61**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**0.104**	**651**
VP-14C	29-29.5	9/22/2015	Primary	**0.075**	**510**	**0.022**	**120**	< 0.004	< 24	< 0.004	< 16	**0.027**	**110**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.124**	**740**
VP-14C	29-29.5	12/16/2015	Primary	**0.015**	**100**	**0.0031**	**17**	< 0.001	< 6.0	< 0.001	< 4.0	**0.004**	**16**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0221**	**133**
VP-14C	29-29.5	4/20/2016	Primary	**0.036**	**240**	**0.004**	**22**	< 0.001	< 6.0	< 0.001	< 4.0	**0.0039**	**16**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0439**	**278**
VP-14C	29-29.5	6/27/2016	Primary	**0.015**	**100**	**0.0064**	**34**	< 0.001	< 6.0	**0.0073**	**29**	**0.0045**	**18**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0332**	**181**
VP-14C	29-29.5	7/29/2016	Primary	**0.01**	**70**	< 0.002	< 10	< 0.002	< 10	**0.003**	**12**	**0.0026**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 8	< 0.0022	< 10	< 0.002	< 8	< 0.003	< 10	**0.0156**	**93**
VP-14C	29-29.5	9/12/2016	Primary	**0.02**	**100**	**0.01**	**50**	< 0.001	< 6.0	**0.0025**	**9.9**	**0.006**	**24**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0385**	**183.9**
VP-14C	29-29.5	3/14/2017	Primary	**0.023**	**160**	**0.0077**	**41**	< 0.0005	< 3.0	**0.0016**	**6.4**	**0.0028**	**11**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0351**	**218.4**
VP-14C	29-29.5	6/28/2017	Primary	**0.016**	**110**	**0.0075**	**40**	< 0.0005	< 3.0	**0.0016**	**6.4**	**0.0032**	**13**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.001**	**4.0**	< 0.00075	< 2.4	**0.0293**	**173.4**
VP-14C	29-29.5	9/27/2017	Primary	**0.03**	**200**	< 0.01	< 50	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.03**	**200**
VP-14C	29-29.5	12/11/2017	Primary	< 0.0005	< 3.4	**0.0016**	**8.6**	< 0.0005	< 3.0	**0.0011**	**4.4**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00066**	**2.6**	< 0.00075 J	< 2.4 J	**0.00336**	**15.6**
VP-14C	29-29.5	2/20/2019	Primary	**0.068**	**460**	**0.012**	**65**	< 0.0005	< 3.0	**0.0026**	**10**	**0.00086**	**3.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0016**	**6.4**	< 0.00075	< 2.4	**0.08506**	**544.9**
VP-14C	29-29.5	6/12/2019	Primary	**0.031**	**210**	**0.0076**	**41**	< 0.0005	< 3.0	**0.0017**	**6.7**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0014**	**5.6**	< 0.00075	< 2.4	**0.0429**	**268.2**
VP-14D	33-33.5	9/20/2011	Primary	**0.32**	**2200**	**0.69**	**3700**	< 0.03	< 200	**0.098**	**390**	**0.84**	**3400**	< 0.037	< 150	< 0.059	< 150	< 0.03	< 100	< 0.032	< 150	< 0.03	< 100	< 0.045	< 140	**1.948**	**9690**
VP-14D	33-33.5	12/7/2011	Primary	**0.65**	**4400**	**1.1**	**5900**	< 0.1	< 600	**0.35**	**1400**	**2.7**	**11000**	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	< 0.15	< 480	**4.8**	**22700**
VP-14D	33-33.5	3/27/2012	Primary	**0.035**	**240**	**0.063**	**340**	< 0.01	< 60.4	**0.016**	**64**	**0.12**	**490**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.234**	**1134**
VP-14D	33-33.5	6/4/2012	Primary	**0.65**	**4400**	**0.45**	**2400**	< 0.002	< 12	**0.088**	**350**	**1.4**	**5700**	< 0.0025	< 10	**0.007**	**18**	**0.018**	**71**	**0.0037**	**17**	**0.025**	**99**	**0.018**	**58**	**2.6597**	**13113**
VP-14D	33-33.5	9/18/2012	Primary	**0.18**	**1200**	**0.078**	**420**	< 0.002	< 12	**0.015**	**60**	**0.24**	**970**	< 0.0025	< 10	< 0.0039	< 10	**0.0021**	**8.3**	< 0.0022	< 10	< 0.002	< 7.9	**0.0031**	**9.9**	**0.5182**	**2668.2**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-14D	33-33.5	12/10/2012	Primary	**0.61**	**4100**	**0.21**	**1100**	< 0.005	< 30	**0.035**	**140**	**0.4 J**	**2000 J**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**1.255**	**7340**
VP-14D	33-33.5	3/20/2013	Primary	**0.13**	**880**	**0.22**	**1200**	< 0.01	< 60	**0.044**	**170**	**0.28**	**1100**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.674**	**3350**
VP-14D	33-33.5	6/26/2013	Primary	**0.028**	**190**	**0.0051**	**27**	< 0.002	< 12	< 0.002	< 7.9	**0.0044**	**18**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0375**	**235**
VP-14D	33-33.5	12/18/2013	Primary	**0.23**	**1600**	**0.043**	**230**	< 0.002	< 12	**0.0085**	**34**	**0.045**	**180**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.3265**	**2044**
VP-14D	33-33.5	3/26/2015	Primary	**0.0025**	**17**	**0.0031**	**17**	< 0.002	< 12	**0.0029**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0085**	**46**
VP-14D	33-33.5	9/22/2015	Primary	**0.053**	**360**	**0.043**	**230**	< 0.004	< 24	< 0.004	< 16	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.108**	**639**
VP-14D	33-33.5	12/16/2015	Primary	**0.0031**	**21**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0031**	**21**
VP-14D	33-33.5	4/20/2016	Primary	**0.0048**	**33**	**0.016**	**86**	< 0.002	< 12	**0.005**	**20**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0258**	**139**
VP-14D	33-33.5	8/29/2016	Primary	**0.017**	**120**	**0.018**	**97**	< 0.002	< 12	**0.0072**	**29**	**0.0025**	**10**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0447**	**256**
VP-14D	33-33.5	3/14/2017	Primary	**0.019**	**130**	**0.013**	**70**	< 0.0005	< 3.0	**0.0038**	**15**	**0.00099**	**4.0**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	< 0.00075	< 2.4	**0.03789**	**223.4**
VP-14D	33-33.5	6/28/2017	Primary	**0.016**	**110**	**0.012**	**65**	< 0.0005	< 3.0	**0.003**	**12**	**0.00087**	**3.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0013**	**5.2**	< 0.00075	< 2.4	**0.03317**	**195.7**
VP-14D	33-33.5	9/27/2017	Primary	**0.041**	**280**	**0.019**	**100**	< 0.01	< 60	< 0.01	< 40	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**0.06**	**380**
VP-14D	33-33.5	12/11/2017	Primary	**0.002**	**14**	**0.0038**	**20**	< 0.0005	< 3.0	**0.0033**	**13**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00083**	**3.3**	< 0.00075 J	< 2.4 J	**0.00993**	**50.3**
VP-14D	33-33.5	5/1/2018	Primary	**0.072**	**490**	**0.019**	**100**	< 0.0005	< 3.0	**0.0022**	**8.7**	**0.0011**	**4.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	< 0.00075	< 2.4	**0.0954**	**607.6**
VP-14D	33-33.5	2/20/2019	Primary	**0.045**	**310**	**0.007**	**38**	< 0.0005	< 3.0	**0.0013**	**5.2**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00091**	**3.6**	< 0.00075	< 2.4	**0.05541**	**361.7**
VP-14D	33-33.5	6/12/2019	Primary	**0.049**	**330**	**0.013**	**70**	< 0.0005	< 3.0	**0.0035**	**14**	**0.00056**	**2.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0025**	**9.9**	< 0.00075	< 2.4	**0.06856**	**426.2**
VP-15A	10-10.5	9/21/2011	Primary	**0.018**	**120**	**0.15**	**810**	< 0.002	< 12	**0.076**	**300**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	**0.013**	**52**	< 0.0022	< 10	**0.0043**	**17**	< 0.003	< 9.6	**0.2833**	**1388**
VP-15A	10-10.5	12/5/2011	Primary	**0.011**	**75**	**0.058**	**310**	< 0.002	< 12	< 0.002	< 7.9	**0.0037**	**15**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0727**	**400**
VP-15A	10-10.5	3/29/2012	Primary	**0.0053**	**36**	**0.0056**	**30**	< 0.002	< 12	**0.0058**	**23**	**0.003**	**12**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0197**	**101**
VP-15A	10-10.5	6/6/2012	Primary	**0.0035**	**24**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0035**	**24**
VP-15A	10-10.5	9/19/2012	Primary	**0.0047**	**32**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0047**	**32**
VP-15A	10-10.5	12/12/2012	Primary	< 0.002	< 14	**0.042**	**230**	< 0.002	< 12	**0.018**	**71**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.06**	**301**
VP-15A	10-10.5	3/20/2013	Primary	**0.016**	**110**	**0.034**	**180**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.05**	**290**
VP-15A	10-10.5	6/25/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15A	10-10.5	12/19/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15A	10-10.5	3/26/2015	Primary	< 0.002	< 14	**0.0043**	**23**	< 0.002	< 12	**0.0033**	**13**	**0.0054**	**22**	< 0.0025	< 10	< 0.0039	< 10	**0.0023 J**	**9.1 J**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0153**	**67.1**
VP-15A	10-10.5	9/22/2015	Primary	**0.0016**	**11**	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0016**	**11**
VP-15A	10-10.5	4/19/2016	Primary	**0.00052**	**3.5**	**0.0085 J**	**46 J**	< 0.0005	< 3.0	**0.00052 J**	**2.1 J**	**0.00056**	**2.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0101**	**53.9**
VP-15A	10-10.5	6/27/2016	Primary	**0.0019**	**13**	**0.15**	**810**	< 0.0005	< 3.0	**0.018**	**71**	**0.0022**	**8.9**	**0.015**	**61**	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.1871**	**963.9**
VP-15A	10-10.5	7/29/2016	Primary	< 0.001	< 7	**0.011**	**59**	< 0.001	< 6	< 0.001	< 4	< 0.001	< 4	< 0.0012	< 4.9	< 0.002	< 5	< 0.001	< 4	< 0.0011	< 5.1	< 0.001	< 4	< 0.0015	< 4.8	**0.011**	**59**
VP-15A	10-10.5	12/27/2016	Primary	< 0.0005	< 3.4	**0.0011**	**5.9**	< 0.0005	< 3.0	**0.0043**	**17**	**0.0009**	**3.6**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0063**	**26.5**
VP-15A	10-10.5	3/14/2017	Primary	**0.0014**	**9.5**	**0.16**	**860**	< 0.0005	< 3.0	**0.014**	**56**	**0.0025**	**10**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00058**	**2.3**	< 0.00075	< 2.4	**0.17848**	**937.8**
VP-15A	10-10.5	6/28/2017	Primary	**0.00068**	**4.6**	**0.0027**	**15**	< 0.0005	< 3.0	**0.00057**	**2.3**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00395**	**21.9**
VP-15A	10-10.5	9/27/2017	Primary	**0.0074**	**50**	**0.018**	**97**	< 0.0005	< 3.0	**0.0027**	**11**	**0.0011**	**4.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0292**	**162.5**
VP-15A	10-10.5	12/11/2017	Primary	**0.0034**	**23**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003 J	< 9.6 J	**0.0034**	**23**
VP-15A	10-10.5	5/1/2018	Primary	< 0.0005	< 3.4	**0.0051**	**27**	< 0.0005	< 3.0	**0.00079**	**3.1**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00589**	**30.1**
VP-15B	20-20.5	9/21/2011	Primary	**0.038**	**260**	**0.2 J**	**1000 J**	< 0.005	< 30	**0.096 J**	**380 J**	**0.023 J**	**93 J**	< 0.0062	< 25	< 0.0098	< 25	**0.018 J**	**71 J**	< 0.0054	< 25	**0.005**	**20**	< 0.0075	< 24	**0.38**	**1824**
VP-15B	20-20.5	9/21/2011	Duplicate	**0.035**	**240**	**0.5 J**	**3000 J**	< 0.01	< 60.4	**0.2 J**	**800 J**	**0.052 J**	**210 J**	< 0.012	< 49	< 0.02	< 50	**0.025 J**	**99 J**	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	**0.812**	**4349**
VP-15B	20-20.5	12/5/2011	Primary	**0.012**	**82**	**0.052**	**280**	< 0.002	< 12	< 0.002	< 7.9	**0.0035**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0675**	**376**
VP-15B	20-20.5	3/29/2012	Primary	**0.0072**	**49**	**0.0073**	**39**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0145**	**88**
VP-15B	20-20.5	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15B	20-20.5	9/19/2012	Primary	**0.0037**	**25**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0037**	**25**
VP-15B	20-20.5	12/12/2012	Primary	< 0.002	< 14	**0.0077**	**41**	< 0.002	< 12	**0.0031**	**12**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0108**	**53**
VP-15B	20-20.5	3/20/2013	Primary	**0.017**	**120**	**0.035**	**190**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.052**	**310**
VP-15B	20-20.5	6/25/2013	Primary	**0.0025**	**17**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0025**	**17**
VP-15B	20-20.5	12/19/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15B	20-20.5	3/26/2015	Primary	< 0.002	< 14	**0.0042**	**23**	< 0.002	< 12	**0.0023**	**9.1**	**0.0061**	**25**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0126**	**57.1**
VP-15B	20-20.5	9/22/2015	Primary	**0.0018**	**12**	**0.0015**	**8.1**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0033**	**20.1**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VP-15B	20-20.5	4/19/2016	Primary	< 0.0005	< 3.4	**0.0028 J**	**15 J**	< 0.0005	< 3.0	< 0.0005 J	< 2.0 J	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	**0.00075**	**2.4**	**0.00355**	**17.4**
VP-15B	20-20.5	6/27/2016	Primary	**0.0015**	**10**	**0.14**	**750**	< 0.0005	< 3.0	**0.018**	**71**	**0.0038**	**15**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.1633**	**846**
VP-15B	20-20.5	8/15/2016	Primary	**0.0015**	**10**	**0.32**	**1700**	< 0.0005	< 3.0	**0.076**	**300**	**0.011**	**45**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0014**	**5.6**	**0.0012**	**3.8**	**0.4111**	**2064.4**
VP-15B	20-20.5	12/27/2016	Primary	< 0.0005	< 3.4	**0.00099**	**5.3**	< 0.0005	< 3.0	**0.0029**	**12**	**0.00061**	**2.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.0045**	**19.8**
VP-15B	20-20.5	3/14/2017	Primary	**0.0029**	**20**	**0.25**	**1300**	< 0.0005	< 3.0	**0.022**	**87**	**0.0041**	**17**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00078**	**3.1**	< 0.00075	< 2.4	**0.27978**	**1427.1**
VP-15B	20-20.5	6/28/2017	Primary	**0.00072**	**4.9**	**0.0033**	**18**	< 0.0005	< 3.0	**0.00082**	**3.3**	**0.00052**	**2.1**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00536**	**28.3**
VP-15B	20-20.5	9/27/2017	Primary	**0.0039**	**26**	**0.024**	**130**	< 0.0005	< 3.0	**0.0039**	**15**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.033**	**175.9**
VP-15B	20-20.5	12/11/2017	Primary	**0.0011**	**7.5**	**0.00088**	**4.7**	< 0.0005	< 3.0	**0.0005**	**2.0**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.0011**	**4.4**	**0.00081 J**	**2.6 J**	**0.00439**	**21.2**
VP-15B	20-20.5	5/1/2018	Primary	**0.00075**	**5.1**	**0.016**	**86**	< 0.0005	< 3.0	**0.0035**	**14**	**0.0011**	**4.5**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00051**	**2.0**	< 0.00075	< 2.4	**0.02186**	**111.6**
VP-15C	29.5-30	9/21/2011	Primary	**0.0065**	**44**	**0.095**	**510**	< 0.002	< 12	**0.063**	**250**	**0.015**	**61**	< 0.0025	< 10	< 0.0039	< 10	**0.0078**	**31**	< 0.0022	< 10	**0.0025**	**9.9**	< 0.003	< 9.6	**0.1898**	**905.9**
VP-15C	29.5-30	12/5/2011	Primary	**0.011**	**75**	**0.056**	**300**	< 0.002	< 12	**0.0023**	**9.1**	**0.0047**	**19**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.074**	**403.1**
VP-15C	29.5-30	12/5/2011	Duplicate	**0.011**	**75**	**0.056**	**300**	< 0.002	< 12	**0.0023**	**9.1**	**0.0042**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0735**	**401.1**
VP-15C	29.5-30	3/29/2012	Primary	**0.0071**	**48**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0211**	**123**
VP-15C	29.5-30	6/6/2012	Primary	**0.0052**	**35**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0052**	**35**
VP-15C	29.5-30	9/19/2012	Primary	**0.0053**	**36**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0053**	**36**
VP-15C	29.5-30	12/12/2012	Primary	< 0.002	< 14	**0.0079 J**	**43 J**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0079**	**43**
VP-15C	29.5-30	12/12/2012	Duplicate	< 0.002	< 14	**0.011 J**	**59 J**	< 0.002	< 12	**0.0022**	**8.7**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0132**	**67.7**
VP-15C	29.5-30	3/20/2013	Primary	**0.019**	**130**	**0.037**	**200**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.056**	**330**
VP-15C	29.5-30	6/25/2013	Primary	**0.0022**	**15**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0022**	**15**
VP-15C	29.5-30	12/19/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15C	29.5-30	3/26/2015	Primary	< 0.002	< 14	**0.0028**	**15**	< 0.002	< 12	< 0.002	< 7.9	**0.0041**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0069**	**32**
VP-15C	29.5-30	9/22/2015	Primary	**0.0021**	**14**	**0.0019**	**10**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.004**	**24**
VP-15C	29.5-30	4/19/2016	Primary	< 0.001	< 6.8	**0.0061 J**	**33 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0061**	**33**
VP-15C	29.5-30	6/13/2016	Primary	**0.0015**	**10**	**0.27**	**1500**	< 0.001	< 6.0	**0.04**	**200**	**0.0045**	**18**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	**0.0012**	**4.8**	< 0.0015	< 4.8	**0.3172**	**1732.8**
VP-15C	29.5-30	6/27/2016	Primary	**0.0022**	**15**	**0.39**	**2100**	< 0.001	< 6.0	**0.096**	**380**	**0.012**	**49**	< 0.0012	< 4.9	< 0.002	< 5.1	**0.0014**	**5.6**	< 0.0011	< 5.1	**0.0024**	**9.5**	< 0.0015	< 4.8	**0.504**	**2559.1**
VP-15C	29.5-30	9/12/2016	Primary	**0.002**	**14**	**0.7**	**4000**	< 0.002	< 12	**0.29**	**1200**	**0.053**	**210**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0086**	**34**	< 0.003	< 9.6	**1.0536**	**5458**
VP-15C	29.5-30	12/27/2016	Primary	< 0.0005	< 3.4	**0.00088**	**4.7**	< 0.0005	< 3.0	**0.0019**	**7.5**	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00278**	**12.2**
VP-15C	29.5-30	3/14/2017	Primary	**0.0042**	**29**	**0.66**	**3600**	< 0.0005	< 3.0	**0.12**	**480**	**0.013**	**53**	< 0.00062	< 2.5	**0.0012**	**3.1**	**0.0024**	**9.5**	< 0.00055	< 2.5	**0.0044**	**17**	**0.00084**	**2.7**	**0.80604**	**4194.3**
VP-15C	29.5-30	6/28/2017	Primary	< 0.002	< 14	**0.054**	**290**	< 0.002	< 12	**0.014**	**56**	**0.0027**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0707**	**357**
VP-15C	29.5-30	9/27/2017	Primary	**0.0087**	**59**	**0.12**	**650**	< 0.002	< 12	**0.038**	**150**	**0.0046**	**19**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.1713**	**878**
VP-15C	29.5-30	12/11/2017	Primary	**0.015**	**100**	**0.0046**	**25**	< 0.0005	< 3.0	**0.0015**	**6.0**	**0.0018**	**7.3**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075 J	< 2.4 J	**0.0229**	**138.3**
VP-15C	29.5-30	5/1/2018	Primary	**0.00087**	**5.9**	**0.023**	**120**	< 0.0005	< 3.0	**0.0094**	**37**	**0.0014**	**5.7**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	**0.00086**	**3.4**	< 0.00075	< 2.4	**0.03553**	**172**
VP-15D	34.5-35	9/21/2011	Primary	**0.025**	**170**	**0.39**	**2100**	< 0.005	< 30	**0.14**	**560**	**0.037**	**150**	< 0.0062	< 25	< 0.0098	< 25	**0.023**	**91**	< 0.0054	< 25	**0.0063**	**25**	< 0.0075	< 24	**0.6213**	**3096**
VP-15D	34.5-35	12/5/2011	Primary	**0.01**	**70**	**0.06**	**300**	< 0.002	< 12	**0.0025**	**9.9**	**0.0059**	**24**	< 0.0025	< 10	< 0.0039	< 10	**0.0023**	**9.1**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0807**	**413**
VP-15D	34.5-35	3/29/2012	Primary	**0.0065**	**44**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0205**	**119**
VP-15D	34.5-35	3/29/2012	Duplicate	**0.008**	**54**	**0.014**	**75**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.022**	**129**
VP-15D	34.5-35	6/6/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15D	34.5-35	9/19/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15D	34.5-35	12/12/2012	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15D	34.5-35	3/20/2013	Primary	**0.018**	**120**	**0.034**	**180**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.052**	**300**
VP-15D	34.5-35	6/25/2013	Primary	**0.0025**	**17**	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0025**	**17**
VP-15D	34.5-35	12/19/2013	Primary	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	ND	ND
VP-15D	34.5-35	3/26/2015	Primary	< 0.002	< 14	**0.0052**	**28**	< 0.002	< 12	**0.0024**	**9.5**	**0.007**	**28**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**0.0146**	**65.5**
VP-15D	34.5-35	9/22/2015	Primary	**0.0015**	**10**	**0.0015**	**8.1**	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.003**	**18.1**
VP-15D	34.5-35	4/19/2016	Primary	< 0.001	< 6.8	**0.0088 J**	**47 J**	< 0.001	< 6.0	< 0.001 J	< 4.0 J	< 0.001	< 4.1	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	**0.0088**	**47**
VP-15D	34.5-35	12/27/2016	Primary	< 0.0005	< 3.4	**0.0014**	**7.5**	< 0.0005	< 3.0	**0.0031**	**12**	**0.00074**	**3.0**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	**0.00524**	**22.5**
VP-15D	34.5-35	3/14/2017	Primary	**0.0071**	**48**	**0.82**	**4400**	< 0.0005	< 3.0	**0.2**	**800**	**0.019**	**77**	< 0.00062	< 2.5	**0.0018**	**4.6**	**0.0039**	**15**	< 0.00055	< 2.5	**0.0067**	**27**	< 0.00075	< 2.4	**1.0585**	**5371.6**
VP-15D	34.5-35	6/28/2017	Primary	< 0.004	< 27	**0.1**	**500**	< 0.004	< 24	**0.032**	**130**	**0.0045**	**18**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**0.1365**	**648**

TABLE 5
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screen Interval (ft bgs)	Sample Date	Sample Type	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		Total COCs	
				ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3
VP-15D	34.5-35	9/27/2017	Primary	**0.0082**	**56**	**0.1**	**500**	< 0.0005	< 3.0	**0.032**	**130**	**0.0096**	**39**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00061**	**2.4**	< 0.00055	< 2.5	**0.0035**	**14**	**0.00076**	**2.4**	**0.15467**	**743.8**
VP-15D	34.5-35	12/11/2017	Primary	**0.0097**	**66**	**0.012**	**65**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006 J	< 19 J	**0.0217**	**131**
VP-15D	34.5-35	5/1/2018	Primary	**0.0017**	**12**	**0.046**	**250**	< 0.0005	< 3.0	**0.018**	**71**	**0.0027**	**11**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00056**	**2.2**	< 0.00055	< 2.5	**0.0016**	**6.4**	< 0.00075	< 2.4	**0.07056**	**352.6**

Notes:

1. Results are reported in parts per million by volume (ppmv) and converted to µg/m^3. The laboratory provides electronic data deliverables in units of ppbv only. Conversion from ppbv to µg/m3 using the same temperature, gas constant and molecular weights provided by the laboratory. A slight discrepancy may occur between this table and the laboratory report due to rounding of significant figures.
2. Samples were analyzed for volatile organic compounds (VOCs) using Environmental Protection Agency (EPA) Method 8260B during February 2011 sampling events and using EPA Method TO-15 thereafter.
3. Concentrations detected above laboratory reporting limits are shown in **BOLD** font.

Abbreviations:

µg/m^3: micrograms per cubic meter.
< = not detected at or above the laboratory reporting limit shown
COCs = constituents of concern
ft bgs = feet below ground suface
J = The J qualifier indicates that the associated result is quantitatively uncertain. J qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
ppmV = parts per million by volume
R = The R qualifier indicates that a result has been rejected due to serious QC problems. It is not possible to definitively determine whether the analyte is present or absent in the sample.
U = The U qualifier indicates that the associated analyte is considered not detected at or greater than the concentration listed. U qualifiers added during validation are typically a result of detection of target analytes in laboratory or rinsate blanks.
UJ = The reporting limit is estimated. UJ qualifiers added during validation may indicate either a high or low bias related to a quality control element that exceeds required acceptance limits.
PCE = Tetrachloroethene
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
VC = Vinyl chloride
1,1-DCE = 1,1-Dichloroethene
1,2-DCP = 1,2-Dichloropropane
1,2,3-TCP = 1,2,3-Trichloropropane
tDCE = trans-1,2-Dichloroethene

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VINF	2/23/2011	**14**	**95000**	**5.3**	**29000**	< 0.83	< 5000	**11**	**44000**	**4.7**	**19000**	< 1.2	< 4900	**2.6**	**6700**	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	**37.6**	**193700**
VINF	3/22/2011	**8.4**	**57000**	**2.8**	**15000**	< 0.83	< 5000	**6.3**	**25000**	**1.7**	**6900**	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	**19.2**	**103900**
VINF	4/12/2011	**4**	**30000**	**0.89**	**4800**	< 0.067	< 400	**2.1**	**8300**	**0.62**	**2500**	< 0.1	< 400	**0.092 J**	**240 J**	< 0.067	< 270	< 0.1	< 500	< 0.067	< 270	**0.056 J**	**180 J**	NT	NT	**7.758**	**46020**
VINF	4/27/2011	**3.5**	**24000**	**0.89**	**4800**	< 0.067	< 400	**2.6**	**10000**	**0.44**	**1800**	< 0.1	< 400	< 0.13	< 330	< 0.067	< 270	< 0.1	< 500	**0.051 J**	**200 J**	**0.052 J**	**170 J**	**37**	**130000**	**44.533**	**170970**
VINF	5/17/2011	**2.5**	**17000**	**0.43**	**2300**	< 0.04	< 200	**0.75**	**3000**	**0.2**	**800**	< 0.06	< 200	< 0.08	< 200	< 0.04	< 200	< 0.06	< 300	< 0.04	< 200	< 0.06	< 200	**22**	**77000**	**25.88**	**100100**
VINF	6/7/2011	**3.4**	**23000**	**0.58**	**3100**	< 0.046	< 280	**0.84**	**3300**	**0.19**	**770**	< 0.046	< 190	**0.047**	**120**	< 0.046	< 180	< 0.057	< 260	< 0.046	< 180	**0.028 J**	**90 J**	**31**	**110000**	**36.085**	**140380**
VINF	6/21/2011	**3.5**	**24000**	**0.43**	**2300**	< 0.1	< 600	**0.8**	**3000**	**0.21**	**850**	< 0.1	< 400	< 0.1	< 300	< 0.1	< 400	< 0.12	< 560	< 0.1	< 400	< 0.1	< 300	**36**	**130000**	**40.94**	**160150**
VINF	7/19/2011	**9.2**	**63000**	**0.55**	**3000**	< 0.067	< 400	**0.13**	**520**	**0.37**	**1500**	< 0.067	< 270	< 0.067	< 170	< 0.067	< 270	< 0.083	< 380	< 0.067	< 270	< 0.067	< 210	**69**	**240000**	**79.25**	**308020**
VINF	8/23/2011	< 0.04	< 300	**0.35**	**1900**	< 0.04	< 200	**0.51**	**2000**	**0.1**	**400**	< 0.04	< 200	**0.028 J**	**72 J**	< 0.04	< 200	< 0.05	< 200	< 0.04	< 200	< 0.04	< 100	**91**	**320000**	**91.988**	**324372**
VINF	9/20/2011	**0.52**	**3500**	**0.14**	**750**	< 0.008	< 48	**0.11**	**440**	**0.035**	**140**	< 0.008	< 32	< 0.008	< 20	< 0.008	< 32	< 0.01	< 50	**0.0059 J**	**23 J**	< 0.008	< 26	**3.2**	**11000**	**4.0109**	**15853**
VINF	9/21/2011	**0.38**	**2600**	**0.086**	**460**	< 0.01	< 60.4	**0.05**	**200**	**0.021**	**85**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 39.7	< 0.011	< 51	< 0.01	< 39.7	< 0.015	< 48	NT	NT	**0.537**	**3345**
VINF	10/11/2011	**1**	**7000**	**0.15**	**810**	< 0.04	< 200	**0.06**	**200**	< 0.04	< 200	< 0.04	< 200	< 0.04	< 100	< 0.04	< 200	< 0.05	< 200	< 0.04	< 200	< 0.04	< 100	**6.9**	**24000**	**8.11**	**32010**
VINF	1/13/2012	**0.53**	**3600**	**0.097**	**520**	< 0.004	< 24	**0.038**	**150**	**0.028**	**110**	< 0.004	< 16	**0.035**	**90**	**0.0033 J**	**13 J**	< 0.005	< 23	**0.0033 J**	**13 J**	**0.0026 J**	**8.3 J**	**2.4**	**8500**	**3.1372**	**13004**
VINF	2/21/2012	**0.66**	**4500**	**0.093**	**500**	< 0.02	< 100	**0.084**	**330**	**0.041**	**170**	< 0.02	< 80	**0.016 J**	**41 J**	< 0.02	< 80	< 0.025	< 120	< 0.02	< 80	< 0.02	< 60	< 2.5	< 8800	**0.894**	**5541**
VINF	3/27/2012	**1.5**	**10000**	**0.12**	**650**	< 0.05	< 300	**0.044 J**	**170 J**	**0.027 J**	**110 J**	< 0.05	< 200	< 0.05	< 100	< 0.05	< 200	< 0.063	< 290	< 0.05	< 200	< 0.05	< 200	< 6.3	< 22000	**1.691**	**10930**
VINF	4/24/2012	**1.1**	**7500**	**0.12**	**650**	< 0.02	< 100	**0.043**	**170**	**0.028**	**110**	< 0.02	< 80	< 0.02	< 50	< 0.02	< 80	< 0.025	< 120	< 0.02	< 80	< 0.02	< 60	**1.8 J**	**6300 J**	**3.091**	**14730**
VINF	5/22/2012	**2**	**10000**	**0.19**	**1000**	< 0.08	< 500	**0.19**	**750**	**0.067 J**	**270 J**	< 0.08	< 300	< 0.08	< 200	< 0.08	< 300	< 0.1	< 500	< 0.08	< 300	< 0.08	< 300	**8.6 J**	**30000 J**	**11.047**	**42020**
VINF	6/12/2012	**2.1**	**14000**	**0.28**	**1500**	< 0.067	< 400	**0.31**	**1200**	**0.097**	**390**	< 0.067	< 270	< 0.067	< 170	**0.078**	**310**	< 0.084	< 390	< 0.067	< 270	**0.7**	**2000**	**16**	**56000**	**19.565**	**75400**
VINF	7/20/2012	**8.4**	**57000**	**0.58**	**3100**	< 0.14	< 850	**0.11 J**	**440 J**	**0.078 J**	**320 J**	< 0.14	< 570	< 0.14	< 360	**0.17**	**670**	< 0.18	< 830	< 0.14	< 560	**2.3**	**7400**	< 71	< 250000	**11.638**	**68930**
VINF	8/7/2012	**5.4**	**37000**	**0.67**	**3600**	< 0.13	< 780	**0.068 J**	**270 J**	< 0.13	< 530	< 0.13	< 530	< 0.13	< 330	< 0.13	< 520	< 0.17	< 790	< 0.13	< 520	**1.3**	**4200**	< 67	< 240000	**7.438**	**45070**
VINF	9/7/2012	**5.3**	**36000**	**0.33**	**1800**	< 0.25	< 1500	< 0.25	< 990	< 0.25	< 1000	< 0.25	< 1000	< 0.25	< 640	< 0.25	< 990	< 0.31	< 1400	< 0.25	< 990	**1.5**	**4800**	< 130	< 460000	**7.13**	**42600**
VINF	10/16/2012	**2**	**10000**	**0.68**	**3700**	< 0.05	< 300	**0.11**	**440**	**0.043 J**	**170 J**	< 0.05	< 200	< 0.05	< 100	< 0.05	< 200	< 0.063	< 290	< 0.05	< 200	**1.2**	**3800**	< 25	< 88000	**4.033**	**18110**
VINF	12/14/2012	**0.49**	**3300**	**0.45**	**2400**	< 0.049	< 300	**0.086**	**340**	< 0.049	< 200	< 0.049	< 200	< 0.049	< 130	< 0.049	< 190	< 0.12	< 560	< 0.049	< 190	**0.47**	**1500**	< 25	< 88000	**1.496**	**7540**
VINF	5/24/2017	**0.75**	**5100**	**0.054**	**290**	< 0.004	< 24	**0.022**	**87**	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	**0.0042**	**17**	< 0.006	< 19	NT	NT	**0.8452**	**5555**
VGACI	2/23/2011	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	ND	ND
VGACI	3/22/2011	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	ND	ND
VGACI	4/12/2011	**0.024**	**160**	**0.055**	**300**	< 0.0033	< 20	**0.31**	**1200**	**0.09**	**400**	< 0.005	< 20	**0.092 J**	**240 J**	**0.028**	**110**	< 0.005	< 23	**0.023**	**91**	< 0.005	< 16	NT	NT	**0.622**	**2501**
VGACI	4/27/2011	**0.039**	**260**	**0.066**	**360**	< 0.002	< 12	< 0.002	< 7.9	**0.11**	**450**	**0.0032**	**13**	**0.036**	**92**	**0.024**	**95**	< 0.003	< 14	**0.029**	**120**	**0.0038**	**12**	< 2.1	< 7400	**0.311**	**1402**
VGACI	5/17/2011	**0.011**	**75**	**0.017**	**91**	< 0.002	< 12	**0.11**	**440**	**0.045**	**180**	< 0.003	< 12	**0.0076**	**19**	< 0.002	< 7.9	< 0.003	< 14	**0.0033**	**13**	**0.0021 J**	**6.7 J**	< 0.61	< 2100	**0.196**	**824.7**
VGACI	6/7/2011	**0.04**	**300**	**0.05**	**300**	< 0.004	< 24	**0.19**	**750**	**0.067**	**270**	< 0.004	< 16	**0.076**	**190**	**0.015**	**60**	< 0.005	< 23	**0.023**	**91**	**0.0048**	**15**	**3.4**	**12000**	**3.8658**	**13976**
VGACI	7/19/2011	**0.013**	**88**	**0.011**	**59**	< 0.004	< 24	**0.048**	**190**	< 0.004	< 16	**0.0021 J**	**8.5 J**	**0.069**	**180**	**0.0073**	**29**	< 0.005	< 23	**0.0094**	**37**	< 0.004	< 13	**2.1**	**7400**	**2.2598**	**7991.5**
VGACI	8/23/2011	< 0.01	< 70	**0.23**	**1200**	< 0.01	< 60	**0.51**	**2000**	**0.092**	**370**	< 0.01	< 40	**0.036**	**92**	< 0.01	< 40	< 0.012	< 56	< 0.01	< 40	**0.0069 J**	**22 J**	**6.6**	**23000**	**7.4749**	**26684**
VGACI	9/20/2011	**0.023**	**160**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.89**	**3100**	**0.913**	**3260**
VGACI	10/11/2011	**0.0054**	**37**	**0.002 J**	**11 J**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	**0.0021 J**	**8.5 J**	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**1.3**	**4600**	**1.3095**	**4656.5**
VGACI	1/13/2012	**0.0061**	**41**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	**0.009**	**29**	< 0.5	< 2000	**0.0151**	**70**
VGACI	2/21/2012	**0.45**	**3100**	**0.098**	**530**	< 0.008	< 48	**0.1**	**400**	**0.05**	**200**	< 0.008	< 32	**0.02**	**50**	< 0.008	< 32	< 0.01	< 50	**0.0046 J**	**18 J**	< 0.008	< 26	**0.79 J**	**2800 J**	**1.5126**	**7098**
VGACI	3/27/2012	**0.38**	**2600**	**0.079**	**430**	< 0.01	< 60	**0.054**	**210**	**0.033**	**130**	< 0.01	< 40	< 0.01	< 30	< 0.01	< 40	< 0.013	< 60	< 0.01	< 40	< 0.01	< 30	**0.96 J**	**3400 J**	**1.506**	**6770**
VGACI	4/24/2012	**0.36**	**2400**	**0.067**	**360**	< 0.0067	< 40	**0.045**	**180**	**0.03**	**100**	< 0.0067	< 27	**0.0065 J**	**17 J**	< 0.0067	< 27	< 0.0084	< 39	**0.0036 J**	**14 J**	< 0.0067	< 21	**0.89**	**3100**	**1.4021**	**6171**
VGACI	5/22/2012	**0.63**	**4300**	**0.16**	**860**	< 0.02	< 100	**0.17**	**670**	**0.072**	**290**	< 0.02	< 80	< 0.02	< 50	< 0.02	< 80	< 0.025	< 120	< 0.02	< 80	< 0.02	< 60	**7.6**	**27000**	**8.632**	**33120**
VGACI	6/12/2012	**1.2**	**8200**	**0.29**	**1600**	< 0.05	< 300	**0.35**	**1400**	**0.096**	**390**	< 0.05	< 200	< 0.05	< 100	**0.068**	**270**	< 0.063	< 290	< 0.05	< 200	**0.79**	**2500**	**19**	**67000**	**21.794**	**81360**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VGACI	7/20/2012	**0.68**	**4600**	**0.25**	**1300**	< 0.01	< 60	**0.1**	**400**	**0.078**	**320**	< 0.01	< 40	**0.043**	**110**	**0.12**	**480**	< 0.013	< 60	**0.0076 J**	**30 J**	**2**	**6000**	**7.4**	**26000**	**10.679**	**39240**
VGACI	8/7/2012	**0.36**	**2400**	**0.19**	**1000**	< 0.0067	< 40	**0.039**	**150**	**0.028**	**110**	< 0.0067	< 27	**0.026**	**67**	**0.031**	**120**	< 0.0084	< 39	**0.0034 J**	**13 J**	**0.84**	**2700**	**1.7 J**	**6000 J**	**3.2174**	**12560**
VGACI	9/7/2012	**0.68**	**4600**	**0.13**	**700**	< 0.022	< 130	**0.19**	**750**	**0.076**	**310**	< 0.022	< 89	< 0.022	< 56	**0.032**	**130**	< 0.028	< 130	< 0.022	< 87	**1.8**	**5800**	< 11	< 39000	**2.908**	**12290**
VGACI	10/16/2012	**0.66**	**4500**	**0.81**	**4400**	< 0.02	< 100	**0.13**	**520**	**0.04**	**200**	< 0.02	< 80	**0.044**	**110**	**0.021**	**83**	< 0.025	< 120	< 0.02	< 80	**0.92**	**2900**	< 10	< 40000	**2.625**	**12713**
VGACI	12/14/2012	**0.56**	**3800**	**0.52**	**2800**	< 0.049	< 300	**0.11**	**440**	< 0.049	< 200	< 0.049	< 200	< 0.049	< 130	< 0.049	< 190	< 0.12	< 560	< 0.049	< 190	**0.98**	**3100**	< 24	< 85000	**2.17**	**10140**
VGACI	4/2/2013	**0.41**	**2800**	**1.2**	**6500**	< 0.1	< 600	**0.19**	**750**	< 0.1	< 400	< 0.12	< 490	< 0.2	< 500	< 0.1	< 400	< 0.11	< 510	< 0.1	< 400	**0.84**	**2700**	NT	NT	**2.64**	**12750**
VGACI	4/23/2013	**0.47**	**3200**	**1.1**	**5900**	< 0.06	< 400	**0.18**	**710**	**0.064**	**260**	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	**0.14**	**450**	**13**	**46000**	**14.954**	**56520**
VGACI	5/21/2013	**0.49**	**3300**	**1**	**5000**	< 0.06	< 400	**0.24**	**950**	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	**0.098**	**310**	**23**	**81000**	**24.828**	**90560**
VGACI	6/26/2013	**0.5**	**3000**	**0.87**	**4700**	< 0.06	< 400	**0.23**	**910**	< 0.06	< 200	< 0.074	< 300	< 0.12	< 310	< 0.06	< 200	< 0.065	< 300	< 0.06	< 200	< 0.09	< 300	**3.8**	**13000**	**5.4**	**21610**
VGACI	7/30/2013	**0.57**	**3900**	**0.83**	**4500**	< 0.05	< 300	**0.22**	**870**	< 0.05	< 200	< 0.062	< 250	< 0.098	< 250	< 0.05	< 200	< 0.054	< 250	< 0.05	< 200	< 0.075	< 240	**11**	**39000**	**12.62**	**48270**
VGACI	9/12/2013	**0.33**	**2200**	**0.79**	**4300**	< 0.04	< 200	**0.22**	**870**	< 0.04	< 200	< 0.049	< 200	< 0.078	< 200	< 0.04	< 200	< 0.043	< 200	< 0.04	< 200	< 0.06	< 200	**1.6**	**5600**	**2.94**	**12970**
VGACI	9/24/2013	**0.58**	**3900**	**0.8**	**4000**	< 0.03	< 200	**0.25**	**990**	**0.035**	**140**	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**8.3**	**29000**	**9.965**	**38030**
VGACI	10/29/2013	**0.59**	**4000**	**2.1**	**11000**	< 0.04	< 200	**0.82**	**3300**	**0.064**	**260**	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**14**	**49000**	**17.574**	**67560**
VGACI	11/25/2013	**0.36**	**2400**	**1.7**	**9100**	< 0.04	< 200	**1**	**4000**	**0.07**	**300**	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**2.5**	**8800**	**5.63**	**24600**
VGACI	12/16/2013	**0.52**	**3500**	**2.1**	**11000**	< 0.08	< 500	**0.81**	**3200**	< 0.08	< 300	< 0.1	< 400	< 0.16	< 410	< 0.08	< 300	< 0.088	< 410	< 0.08	< 300	< 0.12	< 380	**9**	**30000**	**12.43**	**47700**
VGACI	1/27/2014	**0.22**	**1500**	**1.1**	**5900**	< 0.04	< 200	**0.46**	**1800**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**5.9**	**21000**	**7.68**	**30200**
VGACI	2/24/2014	**0.13**	**880**	**0.77**	**4100**	< 0.04	< 200	**0.29**	**1200**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**6**	**20000**	**7.19**	**26180**
VGACI	3/24/2014	**0.1**	**700**	**0.36**	**1900**	< 0.03	< 200	**0.13**	**520**	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	< 3.7	< 13000	**0.59**	**3120**
VGACI	4/29/2014	**0.06**	**400**	**0.15**	**810**	< 0.002	< 12	**0.092**	**370**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0024**	**9.5**	< 0.003	< 9.6	< 1.2	< 4200	**0.3144**	**1629.5**
VGACI	5/29/2014	**0.098**	**670**	**0.64**	**3400**	< 0.002	< 12	**0.3**	**1000**	**0.021**	**85**	< 0.0025	< 10	**0.0075**	**19**	**0.0045**	**18**	< 0.0022	< 10	**0.0077**	**31**	< 0.003	< 9.6	**1.7**	**6000**	**2.7787**	**11223**
VGACI	6/26/2014	**0.13**	**880**	**0.41**	**2200**	< 0.02	< 100	**0.21**	**830**	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	< 2.4	< 8500	**0.75**	**3910**
VGACI	7/29/2014	**0.12**	**820**	**0.1**	**500**	< 0.01	< 60	**0.049**	**190**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**2.8**	**9900**	**3.069**	**11410**
VGACI	9/22/2014	**0.064**	**430**	**0.2**	**1000**	< 0.005	< 30	**0.1**	**400**	**0.0083**	**34**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.3723**	**1864**
VGACI	10/23/2014	**0.12**	**820**	**0.25**	**1300**	< 0.01	< 60	**0.11**	**440**	**0.012**	**49**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.3**	**4600**	**1.792**	**7209**
VGACI	11/24/2014	**0.23**	**1600**	**0.54**	**2900**	< 0.002	< 12	**0.25**	**990**	**0.015**	**61**	< 0.0025	< 10	**0.0049**	**13**	**0.0026**	**10**	< 0.0022	< 10	**0.0051**	**20**	< 0.003	< 9.6	**1.3**	**4600**	**2.3476**	**10194**
VGACI	12/10/2014	**0.36**	**2400**	**1.9**	**10000**	< 0.008	< 48	**0.86**	**3400**	**0.052**	**210**	< 0.01	< 40	**0.023**	**59**	**0.013**	**52**	< 0.0088	< 41	**0.017**	**67**	< 0.012	< 38	**4.1**	**14000**	**7.325**	**30188**
VGACI	1/20/2015	**0.26**	**1800**	**0.73**	**3900**	< 0.06	< 400	**0.32**	**1300**	< 0.06	< 200	< 0.075	< 300	< 0.12	< 310	< 0.06	< 200	< 0.066	< 310	< 0.06	< 200	< 0.09	< 300	**2.2**	**7700**	**3.51**	**14700**
VGACI	2/17/2015	**0.2**	**1000**	**0.43**	**2300**	< 0.03	< 200	**0.25**	**990**	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.5**	**5300**	**2.38**	**9590**
VGACI	3/26/2015	**0.14**	**950**	**0.4**	**2000**	< 0.03	< 200	**0.2**	**800**	< 0.03	< 100	< 0.038	< 150	< 0.058	< 150	< 0.03	< 100	< 0.033	< 150	< 0.03	< 100	< 0.045	< 140	**1.9**	**6700**	**2.64**	**10450**
VGACI	4/30/2015	**0.17**	**1200**	**0.091**	**490**	< 0.01	< 60	**0.053**	**210**	< 0.01	< 40	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	< 1.2	< 4200	**0.314**	**1900**
VGACI	5/28/2015	**0.078**	**530**	**0.047**	**250**	< 0.002	< 12	**0.019**	**75**	**0.0026**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.1466**	**866**
VGACI	6/16/2015	**0.11**	**750**	**0.0079**	**43**	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.1179**	**793**
VGACI	7/7/2015	**0.038**	**260**	**0.0072**	**39**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0452**	**299**
VGACI	8/26/2015	**0.033**	**220**	**0.0097**	**52**	< 0.002	< 12	**0.0059**	**23**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0486**	**295**
VGACI	9/16/2015	**0.048**	**330**	**0.07**	**400**	< 0.002	< 12	**0.026**	**100**	**0.0039**	**16**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.1479**	**846**
VGACI	10/14/2015	**0.033**	**220**	**0.075**	**400**	< 0.002	< 12	**0.031**	**120**	**0.0039**	**16**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.1429**	**756**
VGACI	11/18/2015	**0.13**	**880**	**0.22**	**1200**	< 0.002	< 12	**0.08**	**300**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0031**	**12**	< 0.003	< 9.6	< 1.2	< 4200	**0.4431**	**2432**
VGACI	12/9/2015	**0.085**	**580**	**0.14**	**750**	< 0.002	< 12	**0.063**	**250**	**0.0079**	**32**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0027**	**11**	< 0.003	< 9.6	< 1.2	< 4200	**0.2986**	**1623**
VGACI	1/14/2016	**0.056**	**380**	**0.051**	**270**	< 0.005	< 30	**0.026**	**100**	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.133**	**750**
VGACI	2/17/2016	**0.11**	**750**	**0.2**	**1000**	< 0.005	< 30	**0.1**	**400**	**0.0099**	**40**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.4199**	**2190**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VGACI	3/23/2016	**0.11**	**750**	**0.03**	**200**	< 0.005	< 30	**0.0088**	**35**	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.1488**	**985**
VGACI	4/20/2016	**0.13**	**880**	**0.054**	**290**	< 0.005	< 30	**0.019**	**75**	< 0.005	< 20	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.203**	**1245**
VGACI	7/20/2016	**0.27**	**1800**	**0.066**	**360**	< 0.005	< 30	**0.034**	**130**	**0.013**	**53**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	**1.5**	**5300**	**1.883**	**7643**
VGACI	10/19/2016	**0.16**	**1100**	**0.11**	**590**	< 0.005	< 30	**0.068**	**270**	**0.01**	**40**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.348**	**2000**
VGACI	10/26/2016	**0.044**	**300**	**0.35**	**1900**	< 0.005	< 30	**0.17**	**670**	**0.02**	**80**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	**0.0071**	**28**	< 0.0075	< 24	< 1.2	< 4200	**0.5911**	**2978**
VGACI	11/2/2016	**1.3**	**8800**	**0.25**	**1300**	< 0.04	< 200	**0.089**	**350**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**4.5**	**16000**	**6.139**	**26450**
VGACI	11/16/2016	**0.96**	**6500**	**0.17**	**910**	< 0.02	< 100	**0.069**	**270**	< 0.02	< 80	< 0.025	< 100	< 0.039	< 100	< 0.02	< 80	< 0.022	< 100	< 0.02	< 80	< 0.03	< 100	**3**	**10000**	**4.199**	**17680**
VGACI	11/23/2016	**8.6**	**58000**	**1.2**	**6500**	< 0.04	< 200	**0.35**	**1400**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**6.2**	**22000**	**16.35**	**87900**
VGACI	12/7/2016	**0.064**	**430**	**0.41**	**2200**	< 0.002	< 12	**0.29**	**1200**	**0.031**	**130**	< 0.0025	< 10	**0.0083**	**21**	**0.0092**	**37**	< 0.0022	< 10	**0.011**	**44**	< 0.003	< 9.6	< 1.2	< 4200	**0.8235**	**4062**
VGACI	12/14/2016	**0.14**	**950**	**0.11**	**590**	< 0.004	< 24	**0.061**	**240**	**0.0085**	**34**	< 0.005	< 20	< 0.0078	< 20	**0.0052**	**21**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.3247**	**1835**
VGACI	12/21/2016	**0.054**	**370**	**0.35**	**1900**	< 0.005	< 30	**0.23**	**910**	**0.022**	**89**	< 0.0062	< 25	< 0.0098	< 25	**0.0062**	**25**	< 0.0055	< 25	**0.007**	**28**	< 0.0075	< 24	< 1.2	< 4200	**0.6692**	**3322**
VGACI	12/27/2016	**0.15**	**1000**	**0.11**	**590**	< 0.004	< 24	**0.06**	**200**	**0.0086**	**35**	< 0.005	< 20	< 0.0078	< 20	**0.0053**	**21**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.3339**	**1846**
VGACI	3/22/2017	**0.25**	**1700**	**0.046**	**250**	< 0.001	< 6.0	**0.012**	**48**	**0.0066**	**27**	< 0.0012	< 4.9	< 0.002	< 5.1	< 0.001	< 4.0	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	< 1.2	< 4200	**0.3146**	**2025**
VGACI	4/5/2017	**0.19**	**1300**	**0.11**	**590**	< 0.002	< 12	**0.057**	**230**	**0.0086**	**35**	< 0.0025	< 10	< 0.0039	< 10	**0.0029**	**12**	< 0.0022	< 10	**0.0033**	**13**	< 0.003	< 9.6	NT	NT	**0.3718**	**2180**
VGACI	4/5/2017	**0.03**	**200**	**0.8**	**4000**	< 0.005	< 30	**0.59**	**2300**	**0.04**	**200**	< 0.0062	< 25	< 0.0098	< 25	**0.0055**	**22**	< 0.0055	< 25	**0.016**	**64**	< 0.0075	< 24	NT	NT	**1.4815**	**6786**
VGACI	4/12/2017	**0.1**	**700**	**0.48**	**2600**	< 0.002	< 12	**0.31**	**1200**	**0.034**	**140**	< 0.0025	< 10	**0.015**	**38**	**0.0098**	**39**	< 0.0022	< 10	**0.012**	**48**	< 0.003	< 9.6	**1.3**	**4600**	**2.2608**	**9365**
VGACI	4/12/2017	**0.42**	**2900**	**0.05**	**300**	< 0.002	< 12	**0.023**	**91**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.503**	**3331**
VGACI	4/19/2017	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	ND	ND
VGACI	4/19/2017	**0.12**	**820**	**0.031**	**170**	< 0.002	< 12	**0.0069**	**27**	**0.002**	**8.1**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.1599**	**1025.1**
VGACI	4/26/2017	**0.065**	**440**	**0.043**	**230**	< 0.004	< 24	**0.029**	**120**	**0.0043**	**17**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	NT	NT	**0.1413**	**807**
VGACI	4/26/2017	**0.024**	**160**	**0.65**	**3500**	< 0.01	< 60	**0.58**	**2300**	**0.053**	**210**	< 0.012	< 49	**0.021**	**54**	**0.011**	**44**	< 0.011	< 51	**0.022**	**87**	< 0.015	< 48	NT	NT	**1.361**	**6355**
VGACI	5/3/2017	**0.056**	**380**	**0.26**	**1400**	< 0.01	< 60	**0.21**	**830**	**0.024**	**97**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	**0.011**	**44**	< 0.015	< 48	NT	NT	**0.561**	**2751**
VGACI	5/3/2017	**0.13**	**880**	**0.0081**	**44**	< 0.002	< 12	**0.0052**	**21**	**0.0028**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.1461**	**956**
VGACI	5/10/2017	**0.12**	**820**	**0.008**	**43**	< 0.002	< 12	**0.0036**	**14**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.1316**	**877**
VGACI	5/10/2017	**0.15**	**1000**	**0.051**	**270**	< 0.002	< 12	**0.0097**	**39**	**0.0028**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.2135**	**1320**
VGACI	5/17/2017	**0.13**	**880**	**0.072**	**390**	< 0.002	< 12	**0.038**	**150**	**0.0062**	**25**	< 0.0025	< 10	< 0.0039	< 10	**0.0022**	**8.7**	< 0.0022	< 10	**0.0023**	**9.1**	< 0.003	< 9.6	< 1.2	< 4200	**0.2507**	**1462.8**
VGACI	5/17/2017	**0.018**	**120**	**0.5**	**3000**	< 0.004	< 24	**0.34**	**1300**	**0.037**	**150**	< 0.005	< 20	**0.015**	**38**	**0.012**	**48**	< 0.0044	< 20	**0.016**	**64**	< 0.006	< 19	NT	NT	**0.938**	**4720**
VGACI	5/24/2017	**0.058**	**390**	**0.28**	**1500**	< 0.0005	< 3.0	**0.2**	**800**	**0.014**	**57**	< 0.00062	< 2.5	**0.0051**	**13**	**0.0036**	**14**	< 0.00055	< 2.5	**0.0052**	**21**	**0.001**	**3.2**	NT	NT	**0.5669**	**2798.2**
VGACI	5/24/2017	**0.14**	**950**	**0.0081**	**44**	< 0.0005	< 3.0	**0.0033**	**13**	**0.0022**	**8.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	NT	NT	**0.1536**	**1015.9**
VGACI	10/4/2017	**0.19**	**1300**	**0.15**	**810**	< 0.002	< 12	**0.076**	**300**	**0.019**	**77**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0067**	**27**	< 0.003	< 9.6	NT	NT	**0.4417**	**2514**
VGACI	10/11/2017	**0.13**	**880**	**0.18**	**970**	< 0.004	< 24	**0.15**	**600**	**0.026**	**110**	< 0.005	< 20	**0.008**	**20**	**0.0099**	**39**	< 0.0044	< 20	**0.011**	**44**	< 0.006	< 19	< 1.2	< 4200	**0.5149**	**2663**
VGACI	10/25/2017	**0.13**	**880**	**0.19**	**1000**	< 0.002	< 12	**0.11**	**440**	**0.022**	**89**	< 0.0025	< 10	< 0.0039	< 10	**0.0084**	**33**	< 0.0022	< 10	**0.009**	**36**	< 0.003	< 9.6	NT	NT	**0.4694**	**2478**
VGACI	11/8/2017	**0.12**	**820**	**0.18**	**970**	< 0.01	< 60	**0.11**	**440**	**0.019**	**77**	< 0.012	< 49	< 0.02	< 50	< 0.01	< 40	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	NT	NT	**0.429**	**2307**
VGACI	11/29/2017	**0.12**	**820**	**0.13**	**700**	< 0.004	< 24	**0.078**	**310**	**0.013**	**53**	< 0.005	< 20	< 0.0078	< 20	**0.0065**	**26**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.3475**	**1909**
VGACI	12/13/2017	**0.13**	**880**	**0.14**	**750**	< 0.004	< 24	**0.08**	**300**	**0.018**	**73**	< 0.005	< 20	< 0.0078	< 20	**0.0058**	**23**	< 0.0044	< 20	**0.0061**	**24**	< 0.006	< 19	**1.4**	**4900**	**1.7799**	**6950**
VGACI	12/27/2017	< 0.004	< 27	**0.021**	**110**	< 0.004	< 24	**0.065**	**260**	**0.018 J**	**73 J**	< 0.005	< 20	< 0.0078	< 20	**0.0081**	**32**	< 0.0044	< 20	**0.0047**	**19**	< 0.006	< 19	NT	NT	**0.1168**	**494**
VGACI	1/31/2018	**0.11**	**750**	**0.096**	**520**	< 0.004	< 24	**0.06**	**200**	**0.014**	**57**	< 0.005	< 20	< 0.0078	< 20	**0.0044**	**17**	< 0.0044	< 20	**0.0049**	**19**	< 0.006	< 19	**1.7**	**6000**	**1.9893**	**7563**
VGACI	5/2/2018	**0.15**	**1000**	**0.071**	**380**	< 0.004	< 24	**0.025**	**99**	**0.0091**	**37**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.2551**	**1516**
VGACI	5/16/2018	**0.095**	**650**	**0.082**	**440**	< 0.0005	< 3.0 J	**0.034**	**130**	**0.011**	**45**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0025**	**9.9**	**0.00056**	**2.6**	**0.0031**	**12**	**0.00088**	**2.8**	NT	NT	**0.229**	**1292.3**
VGACI	6/20/2018	**0.11**	**750**	**0.12**	**650**	< 0.004	< 24	**0.072**	**290**	**0.018**	**73**	< 0.005	< 20	< 0.0078	< 20	**0.007**	**28**	< 0.0044	< 20	**0.0061**	**24**	< 0.006	< 19	**1.3**	**4600**	**1.6331**	**6415**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VGACI	7/18/2018	**0.14**	**950**	**0.12**	**650**	< 0.004	< 24	**0.066**	**260**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	**0.0055**	**22**	< 0.0044	< 20	**0.0044**	**17**	< 0.006	< 19	**1.2**	**4200**	**1.5479**	**6148**
VGACI	8/15/2018	**0.17**	**1200**	**0.15**	**810**	< 0.004	< 24	**0.069**	**270**	**0.016**	**65**	< 0.005	< 20	< 0.0078	< 20	**0.0077**	**31**	< 0.0044	< 20	**0.0059**	**23**	< 0.006	< 19	**1.6**	**5600**	**2.0186**	**7999**
VGACI	9/19/2018	**0.17**	**1200**	**0.099**	**530**	< 0.004	< 24	**0.054**	**210**	**0.014**	**57**	< 0.005	< 20	< 0.0078	< 20 J	**0.0082**	**33**	< 0.0044	< 20	**0.0058**	**23**	< 0.006	< 19	< 1.2	< 4200	**0.351**	**2053**
VGACI	10/3/2018	**0.19**	**1300**	**0.087**	**470**	< 0.004	< 24	**0.051**	**200**	**0.017**	**69**	< 0.005	< 20	< 0.0078	< 20	**0.0085**	**34**	< 0.0044	< 20	**0.0065**	**26**	< 0.006	< 19	NT	NT	**0.36**	**2099**
VGACI	10/3/2018	**0.015**	**100**	**0.0085**	**46**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	NT	NT	**0.0235**	**146**
VGACI	10/10/2018	**0.15**	**1000**	**0.009**	**48**	< 0.004	< 24	**0.0072**	**29**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	NT	NT	**0.1662**	**1077**
VGACI	10/24/2018	**0.11**	**750**	**0.0068**	**37**	< 0.004	< 24	**0.0054**	**21**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 2.4	< 8500	**0.1222**	**808**
VGACI	11/14/2018	**0.13**	**880**	**0.0074**	**40**	< 0.004	< 24	**0.0066**	**26**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.144**	**946**
VGACI	12/27/2018	**0.11**	**750**	**0.068**	**370**	< 0.004	< 24	**0.031**	**120**	**0.0099**	**40**	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	NT	NT	**0.2189**	**1280**
VGACI	1/9/2019	**0.13**	**880**	**0.069**	**370**	< 0.004	< 24	**0.041**	**160**	**0.011**	**45**	< 0.005	< 20	< 0.0078	< 20	**0.0054**	**21**	< 0.0044	< 20	**0.0041**	**16**	< 0.006	< 19	< 1.2	< 4200	**0.2605**	**1492**
VGACI	2/20/2019	**0.098**	**670**	**0.021**	**110**	< 0.0005	< 3.0	**0.012**	**48**	**0.0055**	**22**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.00066**	**2.6**	< 0.00055	< 2.5	**0.0014**	**5.6**	< 0.00075	< 2.4	NT	NT	**0.1386**	**858.2**
VGACI	3/6/2019	**0.061**	**410**	**0.03**	**200**	< 0.002	< 12	**0.016**	**64**	**0.0042**	**17**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.1112**	**691**
VGACI	5/1/2019	**0.12**	**820**	**0.058**	**310**	< 0.004	< 24	**0.031**	**120**	**0.0089**	**36**	< 0.005	< 20	< 0.0078	< 20	**0.0042**	**17**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.2221**	**1303**
VGACI	6/12/2019	**0.12**	**820**	**0.041**	**220**	< 0.002	< 12	**0.018**	**71**	**0.0072**	**29**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0025**	**9.9**	< 0.003	< 9.6	NT	NT	**0.1887**	**1149.9**
VGACI	6/26/2019	**0.13**	**880**	**0.075**	**400**	< 0.004	< 24	**0.052**	**210**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	**0.0053**	**21**	< 0.0044	< 20	**0.005**	**20**	< 0.006	< 19	< 1.2	< 4200	**0.2793**	**1580**
VGACM	3/22/2011	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	ND	ND
VGACM	4/12/2011	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.003	< 12	**0.17**	**440**	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.17**	**440**
VGACM	4/27/2011	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	**0.0041**	**17**	**0.12**	**310**	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	< 0.49	< 1700	**0.1241**	**327**
VGACM	5/17/2011	< 0.0021	< 14	< 0.0021	< 11	< 0.0021	< 13	< 0.0021	< 8.3	< 0.0021	< 8.5	< 0.0031	< 13	**0.053**	**140**	< 0.0021	< 8.3	< 0.0031	< 14	< 0.0021	< 8.3	**0.0016 J**	**5.1 J**	< 0.28	< 990	**0.0546**	**145.1**
VGACM	6/7/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.037 J**	**95 J**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.4 J**	**1000 J**	**0.437**	**1095**
VGACM	7/19/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	**0.0034 J**	**14 J**	**0.038**	**97**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.58**	**2000**	**0.6214**	**2111**
VGACM	8/23/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.023**	**59**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.8**	**3000**	**0.823**	**3059**
VGACM	9/20/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.011**	**28**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.5**	**2000**	**0.511**	**2028**
VGACM	10/11/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.0025 J**	**6.4 J**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.74**	**2600**	**0.7425**	**2606.4**
VGACM	1/13/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 0.5	< 2000	ND	ND
VGACM	2/21/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 0.5	< 2000	ND	ND
VGACM	3/27/2012	**0.0095**	**65**	**0.044**	**240**	< 0.004	< 24	**0.21**	**830**	**0.058**	**240**	< 0.004	< 16	< 0.004	< 10	**0.02**	**80**	< 0.005	< 23	**0.013**	**52**	< 0.004	< 13	**0.49 J**	**1700 J**	**0.8445**	**3207**
VGACM	4/24/2012	**0.0036 J**	**24 J**	**0.028**	**150**	< 0.004	< 24	**0.11**	**440**	**0.033**	**130**	< 0.004	< 16	< 0.004	< 10	**0.0081**	**32**	< 0.005	< 23	**0.0094**	**37**	< 0.004	< 13	**0.27 J**	**950 J**	**0.4621**	**1763**
VGACM	5/22/2012	**0.0068 J**	**46 J**	**0.051 J**	**270 J**	< 0.004	< 24	**0.62**	**2500**	**0.5**	**2000**	< 0.004	< 16	**0.025 J**	**64 J**	**0.028 J**	**110 J**	< 0.005	< 23	**0.04 J**	**200 J**	**0.0024 J**	**7.7 J**	**3.1 J**	**11000 J**	**4.3732**	**16198**
VGACM	6/12/2012	< 0.008	< 54	< 0.008	< 43	< 0.008	< 48	**0.54**	**2100**	**0.23**	**930**	< 0.008	< 32	**0.028**	**72**	**0.045**	**180**	< 0.01	< 50	**0.041**	**160**	< 0.008	< 26	**2.1**	**7400**	**2.984**	**10842**
VGACM	7/20/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	**0.0081**	**33**	< 0.004	< 16	**0.01**	**30**	**0.0037 J**	**15 J**	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**1 J**	**4000 J**	**1.0218**	**4078**
VGACM	8/7/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	**0.0065**	**26**	< 0.004	< 16	**0.046**	**120**	**0.0053**	**21**	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.0578**	**167**
VGACM	9/7/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.016**	**41**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**1.9 J**	**6700 J**	**1.916**	**6741**
VGACM	10/16/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.023**	**59**	**0.0029 J**	**12 J**	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.0259**	**71**
VGACM	12/14/2012	**0.0092**	**63**	< 0.0064	< 34	< 0.0064	< 39	< 0.0064	< 25	< 0.0064	< 26	< 0.0064	< 26	**0.0083**	**21**	< 0.0064	< 25	< 0.016	< 74	< 0.0064	< 25	**0.0067**	**21**	< 3.2	< 11000	**0.0242**	**105**
VGACM	4/2/2013	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	< 0.005	< 20	< 0.005	< 20	< 0.0062	< 25	**0.032**	**82**	< 0.005	< 20	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	NT	NT	**0.032**	**82**
VGACM	4/23/2013	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	< 0.005	< 20	**0.044**	**180**	< 0.0062	< 25	**0.031**	**79**	**0.015**	**60**	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.4	< 4900	**0.09**	**319**
VGACM	5/21/2013	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	**0.027**	**110**	**0.034**	**140**	< 0.0062	< 25	**0.054**	**140**	**0.017**	**67**	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	**2.5**	**8800**	**2.632**	**9257**
VGACM	6/26/2013	< 0.008	< 54	< 0.0082	< 44	< 0.008	< 48	< 0.008	< 32	**0.15**	**610**	< 0.0099	< 40	**0.038**	**97**	**0.042**	**170**	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	< 1.4	< 4900	**0.23**	**877**
VGACM	7/30/2013	< 0.008	< 54	< 0.0082	< 44	< 0.008	< 48	**0.13**	**520**	**0.082**	**330**	< 0.0099	< 40	**0.04**	**100**	**0.029**	**120**	< 0.0087	< 40	**0.0097**	**39**	< 0.012	< 38	**2.7**	**9500**	**2.9907**	**10609**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VGACM	9/12/2013	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	**0.15**	**600**	**0.11**	**450**	< 0.0062	< 25	**0.055**	**140**	**0.039**	**150**	< 0.0054	< 25	**0.011**	**44**	< 0.0075	< 24	< 1.4	< 4900	**0.365**	**1384**
VGACM	9/24/2013	**0.0088**	**60**	**0.0074**	**40**	< 0.004	< 24	**0.66**	**2600**	**0.082**	**330**	< 0.005	< 20	**0.018**	**46**	**0.039**	**150**	< 0.0044	< 20	**0.028**	**110**	< 0.006	< 19	**3.9**	**14000**	**4.7432**	**17336**
VGACM	10/29/2013	**0.072**	**490**	**0.78**	**4200**	< 0.04	< 200	**0.79**	**3100**	**0.067**	**270**	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**6.8**	**24000**	**8.509**	**32060**
VGACM	11/25/2013	< 0.04	< 300	**0.06**	**300**	< 0.04	< 200	**0.62**	**2500**	**0.072**	**290**	< 0.05	< 200	< 0.078	< 200	**0.04**	**200**	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	< 1.2	< 4200	**0.792**	**3290**
VGACM	12/16/2013	< 0.04	< 300	< 0.04	< 200	< 0.04	< 200	**0.76**	**3000**	**0.059**	**240**	< 0.05	< 200	**0.081**	**210**	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**1.7**	**6000**	**2.6**	**9450**
VGACM	1/27/2014	**0.22**	**1500**	**1**	**5000**	< 0.04	< 200	**0.41**	**1600**	< 0.04	< 200	< 0.05	< 200	< 0.078	< 200	< 0.04	< 200	< 0.044	< 200	< 0.04	< 200	< 0.06	< 200	**5.9**	**21000**	**7.53**	**29100**
VGACM	2/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0048**	**12**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0048**	**12**
VGACM	3/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACM	4/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACM	5/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.006**	**15**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.006**	**15**
VGACM	6/26/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.092**	**370**	**0.034**	**140**	< 0.0025	< 10	**0.006**	**15**	**0.013**	**52**	< 0.0022	< 10	**0.0037**	**15**	< 0.003	< 9.6	< 1.2	< 4200	**0.1487**	**592**
VGACM	7/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0049**	**13**	**0.0037**	**15**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0086**	**28**
VGACM	9/22/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.01**	**40**	**0.0065**	**26**	< 0.0025	< 10	< 0.0039	< 10	**0.0049**	**19**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0214**	**85**
VGACM	10/23/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.054**	**210**	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	**0.0042**	**17**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0722**	**284**
VGACM	11/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.077**	**310**	**0.017**	**69**	< 0.0025	< 10	**0.0058**	**15**	**0.0037**	**15**	< 0.0022	< 10	**0.003**	**12**	< 0.003	< 9.6	< 1.2	< 4200	**0.1065**	**421**
VGACM	12/10/2014	< 0.008	< 54	< 0.008	< 43	< 0.008	< 48	**0.15**	**600**	**0.029**	**120**	< 0.01	< 40	< 0.016	< 41	< 0.008	< 32	< 0.0088	< 41	< 0.008	< 32	< 0.012	< 38	< 1.2	< 4200	**0.179**	**720**
VGACM	1/20/2015	< 0.008	< 54	< 0.008	< 43	< 0.008	< 48	**0.38**	**1500**	**0.048**	**190**	< 0.01	< 40	< 0.016	< 41	**0.0081**	**32**	< 0.0088	< 41	**0.0091**	**36**	< 0.012	< 38	< 1.2	< 4200	**0.4452**	**1758**
VGACM	2/17/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.011**	**44**	**0.017**	**69**	< 0.0025	< 10	**0.0064**	**16**	**0.006**	**24**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0404**	**153**
VGACM	3/26/2015	**0.0024**	**16**	**0.0039**	**21**	< 0.002	< 12	**0.03**	**100**	**0.018**	**73**	< 0.0025	< 10	< 0.0039	< 10	**0.0078 J**	**31 J**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0621**	**241**
VGACM	4/30/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.03**	**100**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	**0.0049**	**19**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0459**	**164**
VGACM	5/28/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.23**	**910**	**0.082**	**330**	< 0.0025	< 10	< 0.0039	< 10	**0.024**	**95**	< 0.0022	< 10	**0.0069**	**27**	< 0.003	< 9.6	< 1.2	< 4200	**0.3429**	**1362**
VGACM	6/16/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.056**	**220**	**0.01**	**40**	< 0.0025	< 10	< 0.0039	< 10	**0.0044**	**17**	< 0.0022	< 10	**0.0031**	**12**	< 0.003	< 9.6	< 1.2	< 4200	**0.0735**	**289**
VGACM	7/7/2015	< 0.005	< 34	< 0.005	< 27	< 0.005	< 30	**0.044**	**170**	**0.006**	**24**	< 0.0062	< 25	< 0.0098	< 25	< 0.005	< 20	< 0.0055	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.2	< 4200	**0.05**	**194**
VGACM	8/26/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.12**	**480**	**0.0098**	**40**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0042**	**17**	< 0.003	< 9.6	< 1.2	< 4200	**0.134**	**537**
VGACM	9/16/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.088**	**350**	**0.0058**	**24**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0029**	**12**	< 0.003	< 9.6	< 1.2	< 4200	**0.0967**	**386**
VGACM	10/14/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.065**	**260**	**0.0034**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0024**	**9.5**	< 0.003	< 9.6	< 1.2	< 4200	**0.0708**	**283.5**
VGACM	11/18/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.043**	**170**	**0.0026**	**11**	< 0.0025	< 10	**0.0039**	**10**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0495**	**191**
VGACM	12/9/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.042**	**170**	**0.0026**	**11**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0446**	**181**
VGACM	1/14/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.018**	**71**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.018**	**71**
VGACM	2/17/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.054**	**210**	**0.0061**	**25**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.002**	**7.9**	< 0.003	< 9.6	< 1.2	< 4200	**0.0621**	**242.9**
VGACM	3/23/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.069**	**270**	**0.0071**	**29**	< 0.0025	< 10	< 0.0039	< 10	**0.002**	**7.9**	< 0.0022	< 10	**0.003**	**12**	< 0.003	< 9.6	< 1.2	< 4200	**0.0811**	**318.9**
VGACM	4/20/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.061**	**240**	**0.0054**	**22**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0024**	**9.5**	< 0.003	< 9.6	< 1.2	< 4200	**0.0688**	**271.5**
VGACM	7/20/2016	< 0.002	< 10	< 0.002	< 10	< 0.002	< 10	**0.12**	**480**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 8	< 0.0022	< 10	**0.0048**	**19**	< 0.003	< 10	< 1.2	< 4200	**0.1358**	**544**
VGACM	10/19/2016	< 0.002	< 14	**0.0027**	**15**	< 0.002	< 12	**0.28**	**1100**	**0.035**	**140**	< 0.0025	< 10	< 0.0039	< 10	**0.0029**	**12**	< 0.0022	< 10	**0.0079**	**31**	< 0.003	< 9.6	< 1.2	< 4200	**0.3285**	**1298**
VGACM	11/16/2016	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	**0.094**	**370**	**0.013**	**53**	< 0.005	< 20	< 0.0078	< 20	**0.0048**	**19**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.1118**	**442**
VGACM	12/14/2016	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	**0.21**	**830**	**0.013**	**53**	< 0.005	< 20	< 0.0078	< 20	**0.0056**	**22**	< 0.0044	< 20	**0.0092**	**37**	< 0.006	< 19	< 1.2	< 4200	**0.2378**	**942**
VGACM	3/22/2017	< 0.0005	< 3.4	**0.0022**	**12**	< 0.0005	< 3.0	**0.27**	**1100**	**0.012**	**49**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0051**	**20**	< 0.00055	< 2.5	**0.0062**	**25**	< 0.00075	< 2.4	< 1.2	< 4200	**0.2955**	**1206**
VGACM	4/12/2017	< 0.002	< 14	**0.055**	**300**	< 0.002	< 12	**0.36**	**1400**	**0.028**	**110**	< 0.0025	< 10	**0.014**	**36**	**0.0067**	**27**	< 0.0022	< 10	**0.011**	**44**	< 0.003	< 9.6	**1.3**	**4600**	**1.7747**	**6517**
VGACM	5/17/2017	**0.021**	**140**	**0.069**	**370**	< 0.0005	< 3.0	**0.079**	**310**	**0.0068**	**28**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0025**	**9.9**	< 0.00055	< 2.5	**0.0032**	**13**	< 0.00075	< 2.4	< 1.2	< 4200	**0.1815**	**870.9**
VGACM	10/11/2017	**0.14**	**950**	**0.26**	**1400**	**0.0012**	**7.2**	**0.14**	**560**	**0.026**	**110**	< 0.00062	< 2.5	**0.0013**	**3.3**	**0.00096**	**3.8**	**0.0013**	**6.0**	**0.0025**	**9.9**	**0.0027**	**8.6**	< 1.2	< 4200	**0.576**	**3058.8**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
VGACM	11/29/2017	**0.016**	**110**	**0.15**	**810**	< 0.004	< 24	**0.13**	**520**	**0.018**	**73**	< 0.005	< 20	< 0.0078	< 20	**0.011**	**44**	< 0.0044	< 20	**0.0063**	**25**	< 0.006	< 19	< 1.2	< 4200	**0.3313**	**1582**
VGACM	12/13/2017	**0.011**	**75**	**0.1**	**500**	< 0.004	< 24	**0.093**	**370**	**0.022**	**89**	< 0.005	< 20	< 0.0078	< 20	**0.0074**	**29**	< 0.0044	< 20	**0.0066**	**26**	< 0.006	< 19	< 1.2	< 4200	**0.24**	**1089**
VGACM	1/31/2018	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	**1.5**	**5300**	**1.5**	**5300**
VGACM	5/2/2018	< 0.0005	< 3.4	**0.001**	**5.4**	< 0.0005	< 3.0	**0.00092**	**3.7**	< 0.0005	< 2.0	< 0.00062	< 2.5	**0.0069**	**18**	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0088**	**27.1**
VGACM	6/20/2018	< 0.0005	< 3.4	**0.005**	**27**	< 0.0005	< 3.0	**0.038**	**150**	**0.0069**	**28**	< 0.00062	< 2.5	**0.0027**	**6.9**	**0.0021**	**8.3**	< 0.00055	< 2.5	**0.0025**	**9.9**	< 0.00075	< 2.4	< 1.2	< 4200	**0.0572**	**230.1**
VGACM	7/18/2018	< 0.002	< 14	**0.033**	**180**	< 0.002	< 12	**0.068**	**270**	**0.017**	**69**	< 0.0025	< 10	< 0.0039	< 10	**0.0072**	**29**	< 0.0022	< 10	**0.0052**	**21**	< 0.003	< 9.6	< 1.2	< 4200	**0.1304**	**569**
VGACM	8/15/2018	< 0.004	< 27	**0.041**	**220**	< 0.004	< 24	**0.065**	**260**	**0.015**	**61**	< 0.005	< 20	< 0.0078	< 20	**0.0069**	**27**	< 0.0044	< 20	**0.0051**	**20**	< 0.006	< 19	< 1.2	< 4200	**0.133**	**588**
VGACM	9/19/2018	**0.0083**	**56**	**0.045**	**240**	< 0.004	< 24	**0.028**	**110**	**0.0067**	**27**	< 0.005	< 20	< 0.0078	< 20 J	**0.0045**	**18**	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.0925**	**451**
VGACM	10/24/2018	**0.017**	**120**	**0.027**	**150**	< 0.004	< 24	**0.012**	**48**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 2.4	< 8500	**0.056**	**318**
VGACM	11/14/2018	**0.015**	**100**	**0.018**	**97**	< 0.004	< 24	**0.0097**	**39**	< 0.004	< 16	< 0.005	< 20	< 0.0078	< 20	< 0.004	< 16	< 0.0044	< 20	< 0.004	< 16	< 0.006	< 19	< 1.2	< 4200	**0.0427**	**236**
VGACM	1/9/2019	**0.034**	**230**	**0.046**	**250**	< 0.004	< 24	**0.041**	**160**	**0.014**	**57**	< 0.005	< 20	< 0.0078	< 20	**0.0061**	**24**	< 0.0044	< 20	**0.0046**	**18**	< 0.006	< 19	< 1.2	< 4200	**0.1457**	**739**
VGACM	3/6/2019	**0.024**	**160**	**0.027**	**150**	< 0.002	< 12	**0.017**	**67**	**0.0048**	**19**	< 0.0025	< 10	< 0.0039	< 10	**0.002**	**7.9**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0748**	**403.9**
VGACM	5/1/2019	**0.032**	**220**	**0.037**	**200**	< 0.002	< 12	**0.023**	**91**	**0.0079**	**32**	< 0.0025	< 10	< 0.0039	< 10	**0.0039**	**15**	< 0.0022	< 10	**0.0028**	**11**	< 0.003	< 9.6	< 1.2	< 4200	**0.1066**	**569**
VGACM	6/26/2019	**0.063**	**430**	**0.071**	**380**	< 0.004	< 24	**0.053**	**210**	**0.013**	**53**	< 0.005	< 20	< 0.0078	< 20	**0.0055**	**22**	< 0.0044	< 20	**0.0056**	**22**	< 0.006	< 19	< 1.2	< 4200	**0.2111**	**1117**
VGACE	2/23/2011	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	ND	ND
VGACE	3/22/2011	< 0.74	< 5000	< 0.93	< 5000	< 0.83	< 5000	< 1.3	< 5200	< 1.2	< 4900	< 1.2	< 4900	< 2	< 5100	< 1.3	< 5200	< 1.1	< 5100	< 1.3	< 5200	< 1.6	< 5100	NT	NT	ND	ND
VGACE	4/12/2011	**0.0033**	**22**	**0.0013 J**	**7.0 J**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.003	< 12	**0.18**	**460**	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.1846**	**489**
VGACE	4/27/2011	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	**0.0033**	**13**	**0.31**	**790**	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	< 0.5	< 2000	**0.3133**	**803**
VGACE	5/17/2011	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.003	< 12	**0.094**	**240**	< 0.002	< 7.9	< 0.003	< 14	< 0.002	< 7.9	< 0.003	< 9.6	< 0.23	< 810	**0.094**	**240**
VGACE	6/7/2011	< 0.0058	< 39	< 0.0058	< 31	< 0.0058	< 35	< 0.0058	< 23	< 0.0058	< 24	< 0.0058	< 24	< 0.0058	< 15	< 0.0058	< 23	< 0.0072	< 33	< 0.0058	< 23	< 0.0058	< 19	**0.63 J**	**2200 J**	**0.63**	**2200**
VGACE	7/5/2011	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	< 0.001	< 4.0	< 0.001	< 4.1	**0.0059**	**24**	**0.083**	**210**	< 0.001	< 4.0	< 0.001	< 4.6	< 0.001	< 4.0	**0.00033 J**	**1.1 J**	**0.22**	**770**	**0.3092**	**1005.1**
VGACE	7/19/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.049**	**130**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.52**	**1800**	**0.569**	**1930**
VGACE	8/23/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.029**	**74**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.65**	**2300**	**0.679**	**2374**
VGACE	9/20/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.024**	**61**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.51**	**1800**	**0.534**	**1861**
VGACE	9/21/2011	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.019**	**49**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.019**	**49**
VGACE	10/11/2011	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.019**	**49**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.48 J**	**1700 J**	**0.499**	**1749**
VGACE	1/13/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.0067**	**17**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 0.5	< 2000	**0.0067**	**17**
VGACE	2/21/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	< 0.004	< 10	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 0.5	< 2000	ND	ND
VGACE	3/27/2012	**0.008**	**54**	< 0.004	< 22	< 0.004	< 24	**0.021**	**83**	**0.029**	**120**	< 0.004	< 16	< 0.004	< 10	**0.011**	**44**	< 0.005	< 23	**0.002 J**	**7.9 J**	< 0.004	< 13	**0.3 J**	**1000 J**	**0.371**	**1308.9**
VGACE	4/24/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	**0.019**	**75**	**0.016**	**65**	< 0.004	< 16	< 0.004	< 10	**0.013**	**52**	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 0.5	< 2000	**0.048**	**192**
VGACE	5/22/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	**0.058**	**230**	**0.078**	**320**	< 0.004	< 16	**0.0078**	**20**	**0.013**	**52**	< 0.005	< 23	**0.01**	**40**	< 0.004	< 13	**0.72**	**2500**	**0.8868**	**3162**
VGACE	6/12/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.028**	**72**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**0.26 J**	**920 J**	**0.288**	**992**
VGACE	6/28/2012	**0.0023 J**	**16 J**	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	**0.0045**	**18**	< 0.004	< 16	**0.068**	**170**	**0.0023 J**	**9.1 J**	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	**1.6**	**5600**	**1.6771**	**5813.1**
VGACE	7/20/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.039**	**100**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.039**	**100**
VGACE	8/7/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.026**	**67**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.026**	**67**
VGACE	8/13/2012	**0.2**	**1000**	**0.004**	**22**	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.029**	**74**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	NT	NT	**0.233**	**1096**
VGACE	9/7/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.024**	**61**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.024**	**61**
VGACE	10/16/2012	< 0.004	< 27	< 0.004	< 22	< 0.004	< 24	< 0.004	< 16	< 0.004	< 16	< 0.004	< 16	**0.03**	**80**	< 0.004	< 16	< 0.005	< 23	< 0.004	< 16	< 0.004	< 13	< 2	< 7000	**0.03**	**80**
VGACE	12/14/2012	< 0.0061	< 41	< 0.0061	< 33	< 0.0061	< 37	< 0.0061	< 24	< 0.0061	< 25	< 0.0061	< 25	< 0.0061	< 16	< 0.0061	< 24	< 0.015	< 69	< 0.0061	< 24	< 0.0061	< 20	< 3	< 10000	ND	ND
VGACE	4/2/2013	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.005**	**20**	**0.016**	**65**	< 0.0025	< 10	**0.027**	**69**	**0.016**	**64**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	NT	NT	**0.064**	**218**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3
VGACE	4/23/2013	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.049**	**130**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.4	< 4900	**0.049**	**130**
VGACE	5/21/2013	**0.022**	**150**	**0.016**	**86**	< 0.002	< 12	< 0.002	< 7.9	**0.0021**	**8.5**	< 0.0025	< 10	**0.055**	**140**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**1.7**	**6000**	**1.7951**	**6384.5**
VGACE	6/26/2013	< 0.008	< 54	< 0.0082	< 44	< 0.008	< 48	< 0.008	< 32	< 0.008	< 32	< 0.0099	< 40	**0.044**	**110**	< 0.008	< 32	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	< 1.4	< 4900	**0.044**	**110**
VGACE	7/30/2013	**0.018**	**120**	**0.013**	**70**	< 0.008	< 48	< 0.008	< 32	**0.12**	**490**	< 0.0099	< 40	**0.025**	**64**	**0.032**	**130**	< 0.0087	< 40	< 0.008	< 32	< 0.012	< 38	**2.2**	**7700**	**2.408**	**8574**
VGACE	9/12/2013	< 0.005	< 34	< 0.0051	< 27	< 0.005	< 30	< 0.005	< 20	**0.042**	**170**	< 0.0062	< 25	**0.055**	**140**	**0.0088**	**35**	< 0.0054	< 25	< 0.005	< 20	< 0.0075	< 24	< 1.4	< 4900	**0.1058**	**345**
VGACE	9/24/2013	**0.0053**	**36**	**0.0042**	**23**	< 0.002	< 12	**0.011**	**44**	**0.17**	**690**	< 0.0025	< 10	**0.068**	**170**	**0.054**	**210**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	**3.1**	**11000**	**3.4125**	**12173**
VGACE	10/29/2013	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.18**	**710**	**0.079**	**320**	< 0.0025	< 10	**0.07**	**200**	**0.043**	**170**	< 0.0022	< 10	**0.0081**	**32**	< 0.003	< 9.6	**2**	**7000**	**2.3801**	**8432**
VGACE	11/25/2013	< 0.01	< 70	< 0.01	< 50	< 0.01	< 60	**0.037**	**150**	**0.077**	**310**	< 0.012	< 49	**0.054**	**140**	**0.037**	**150**	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	< 1.2	< 4200	**0.205**	**750**
VGACE	12/16/2013	< 0.01	< 70	< 0.01	< 50	< 0.01	< 60	**0.29**	**1200**	**0.061**	**250**	< 0.012	< 49	**0.068**	**170**	**0.037**	**150**	< 0.011	< 51	< 0.01	< 40	< 0.015	< 48	**1.3**	**4600**	**1.756**	**6370**
VGACE	1/27/2014	**0.0042**	**29**	**0.013**	**70**	< 0.002	< 12	**0.0033**	**13**	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0205**	**112**
VGACE	2/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0066**	**17**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0066**	**17**
VGACE	3/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	4/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	5/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0089**	**23**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0089**	**23**
VGACE	6/26/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0066**	**17**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0066**	**17**
VGACE	7/29/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	9/22/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	10/23/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	11/24/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0046**	**12**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0046**	**12**
VGACE	12/10/2014	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0064**	**26**	< 0.0025	< 10	**0.0072**	**18**	**0.0063**	**25**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0199**	**69**
VGACE	1/20/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.011**	**44**	**0.064**	**260**	< 0.0025	< 10	**0.0082**	**21**	**0.015**	**60**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0982**	**385**
VGACE	2/17/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	3/26/2015	**0.0022**	**15**	**0.0034**	**18**	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	**0.0048**	**12**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0104**	**45**
VGACE	4/30/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	5/28/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.01**	**40**	< 0.0025	< 10	**0.0046**	**12**	**0.0045**	**18**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0191**	**70**
VGACE	6/16/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0055**	**22**	< 0.0025	< 10	< 0.0039	< 10	**0.0034**	**13**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0089**	**35**
VGACE	7/7/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0039**	**16**	< 0.0025	< 10	< 0.0039	< 10	**0.0026**	**10**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0065**	**26**
VGACE	8/26/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.0038**	**15**	**0.014**	**57**	< 0.0025	< 10	< 0.0039	< 10	**0.0046**	**18**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0224**	**90**
VGACE	9/16/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.0068**	**27**	**0.012**	**49**	< 0.0025	< 10	< 0.0039	< 10	**0.0025**	**9.9**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0213**	**85.9**
VGACE	10/14/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.017**	**67**	**0.011**	**45**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.028**	**112**
VGACE	11/18/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.024**	**95**	**0.0079**	**32**	< 0.0025	< 10	**0.004**	**10**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0359**	**137**
VGACE	12/9/2015	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.027**	**110**	**0.0072**	**29**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0342**	**139**
VGACE	1/14/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.015**	**60**	**0.0035**	**14**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0185**	**74**
VGACE	2/17/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.056**	**220**	**0.0091**	**37**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	**0.0032**	**13**	< 0.003	< 9.6	< 1.2	< 4200	**0.0683**	**270**
VGACE	3/23/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	4/20/2016	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	< 0.002	< 8.1	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	ND	ND
VGACE	7/20/2016	< 0.002	< 10	< 0.002	< 10	< 0.002	< 10	< 0.002	< 8	< 0.002	< 8	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 8	< 0.0022	< 10	< 0.002	< 8	< 0.003	< 10	< 1.2	< 4200	ND	ND
VGACE	10/19/2016	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	**0.0015**	**3.8**	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0015**	**3.8**
VGACE	11/16/2016	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	**0.0019**	**7.5**	**0.0047**	**19**	< 0.0012	< 4.9	< 0.002	< 5.1	**0.0016**	**6.4**	< 0.0011	< 5.1	< 0.001	< 4.0	< 0.0015	< 4.8	< 1.2	< 4200	**0.0082**	**32.9**
VGACE	12/14/2016	< 0.001	< 6.8	< 0.001	< 5.4	< 0.001	< 6.0	**0.043**	**170**	**0.018**	**73**	< 0.0012	< 4.9	< 0.002	< 5.1	**0.0049**	**19**	< 0.0011	< 5.1	**0.0022**	**8.7**	< 0.0015	< 4.8	< 1.2	< 4200	**0.0681**	**270.7**

TABLE 6
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN SOIL VAPOR TREATMENT SYSTEM SAMPLES
COOPER DRUM SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location	Sample Date	PCE		TCE		1,2,3-TCP		cis-1,2-DCE		1,1-DCA		1,2-DCA		VC		1,1-DCE		1,2-DCP		trans-1,2-DCE		Benzene		TNMOC as Hexane		Total COCs	
		ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3
VGACE	3/22/2017	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.055**	**220**	**0.016**	**65**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0033**	**13**	< 0.00055	< 2.5	**0.0022**	**8.7**	< 0.00075	< 2.4	< 1.2	< 4200	**0.0765**	**306.7**
VGACE	4/12/2017	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.31**	**1200**	**0.086**	**350**	< 0.0025	< 10	**0.011**	**28**	**0.015**	**60**	< 0.0022	< 10	**0.014**	**56**	< 0.003	< 9.6	**1.3**	**4600**	**1.736**	**6294**
VGACE	5/17/2017	< 0.0005	< 3.4	**0.00083**	**4.5**	< 0.0005	< 3.0	**0.11**	**440**	**0.0074**	**30**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.002**	**7.9**	< 0.00055	< 2.5	**0.0041**	**16**	< 0.00075	< 2.4	< 1.2	< 4200	**0.1243**	**498.4**
VGACE	10/11/2017	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	< 0.002	< 7.9	**0.0047**	**19**	< 0.0025	< 10	**0.013**	**33**	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0177**	**52**
VGACE	11/29/2017	< 0.004	< 27	**0.016**	**86**	< 0.004	< 24	**0.083**	**330**	**0.012**	**49**	< 0.005	< 20	< 0.0078	< 20	**0.0088**	**35**	< 0.0044	< 20	**0.0042**	**17**	< 0.006	< 19	< 1.2	< 4200	**0.124**	**517**
VGACE	12/13/2017	< 0.0005	< 3.4	**0.011**	**59**	< 0.0005	< 3.0	**0.071**	**280**	**0.015**	**61**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0012**	**4.8**	< 0.00055	< 2.5	**0.0016**	**6.4**	< 0.00075	< 2.4	< 1.2	< 4200	**0.0998**	**411.2**
VGACE	1/31/2018	< 0.0005	< 3.4	**0.0013**	**7.0**	< 0.0005	< 3.0	**0.013**	**52**	**0.0012**	**4.9**	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0155**	**63.9**
VGACE	5/2/2018	< 0.0005	< 3.4	**0.002**	**11**	< 0.0005	< 3.0	**0.028**	**110**	**0.0057**	**23**	< 0.00062	< 2.5	**0.0073**	**19**	**0.0035**	**14**	< 0.00055	< 2.5	**0.0022**	**8.7**	< 0.00075	< 2.4	< 1.2	< 4200	**0.0487**	**185.7**
VGACE	6/20/2018	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	< 0.00098	< 2.5	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	ND	ND
VGACE	7/18/2018	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	< 0.0005	< 2.0	< 0.0005	< 2.0	< 0.00062	< 2.5	**0.0021**	**5.4**	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0021**	**5.4**
VGACE	8/15/2018	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.00066**	**2.6**	**0.0046**	**19**	< 0.00062	< 2.5	**0.0022**	**5.6**	**0.002**	**7.9**	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0095**	**35.1**
VGACE	9/19/2018	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.0042**	**17**	**0.0044**	**18**	< 0.00062	< 2.5	0.00098	< 2.5 J	< 0.0005	< 2.0	< 0.00055	< 2.5	< 0.0005	< 2.0	< 0.00075	< 2.4	< 1.2	< 4200	**0.0086**	**35**
VGACE	10/24/2018	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.01**	**40**	**0.0079**	**32**	< 0.00062	< 2.5	< 0.00098	< 2.5	**0.0031**	**12**	< 0.00055	< 2.5	**0.00096**	**3.8**	< 0.00075	< 2.4	< 1.2	< 4200	**0.022**	**87.8**
VGACE	11/14/2018	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.012**	**48**	**0.005**	**20**	< 0.0025	< 10	< 0.0039	< 10	**0.0024**	**9.5**	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0194**	**77.5**
VGACE	1/9/2019	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.0083**	**33**	**0.0031**	**13**	**0.00093**	**3.8**	**0.0014**	**3.6**	**0.0014**	**5.6**	< 0.00055	< 2.5	**0.0009**	**3.6**	< 0.00075	< 2.4	< 1.2	< 4200	**0.016**	**62.6**
VGACE	3/6/2019	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.0096**	**38**	**0.003**	**12**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.0126**	**50**
VGACE	5/1/2019	< 0.002	< 14	< 0.002	< 11	< 0.002	< 12	**0.013**	**52**	**0.004**	**16**	< 0.0025	< 10	< 0.0039	< 10	< 0.002	< 7.9	< 0.0022	< 10	< 0.002	< 7.9	< 0.003	< 9.6	< 1.2	< 4200	**0.017**	**68**
VGACE	6/26/2019	< 0.0005	< 3.4	< 0.0005	< 2.7	< 0.0005	< 3.0	**0.023**	**91**	**0.0076**	**31**	< 0.00062	< 2.5	**0.0017**	**4.4**	**0.0025**	**9.9**	< 0.00055	< 2.5	**0.0025**	**9.9**	< 0.00075	< 2.4	< 1.2	< 4200	**0.0373**	**146.2**

Notes:

1. Results are reported in parts per million by volume (ppmv) and µg/m^3 unless otherwise noted.
2. Samples were analyzed for volatile organic compounds using EPA Method TO-15.
3. Detected concentrations are shown in **BOLD** font.
4. Results are reported in ppmv and converted to µg/m^3. The laboratory provides electronic data deliverables in units of ppbv only. Conversion from ppbv to µg/m^3 using the same temperature, gas constant and molecular weights provided by the laboratory. A slight discreprancy may occur between this table and the laboratory report due to rounding of significant figures.
5. VINF was sampled from the influent to the cryogenic compression and condensation (C3) vapor treatment unit between 23 February 2011 and 14 December 2012. After the C3 unit was removed, VGAC1 was collected from the vapor influent location.

Abbreviations:

< = not detected at or above the laboratory reporting limit shown
ASTM = American Society for Testing and Materials
COCs = chemicals of concern
EPA = Environmental Protection Agency
J = The J qualifier indicates that the associated result is quantitatively uncertain. J qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
VINF = vapor influent sample collected before the blower
VGACI = inlet to the primary vapor phase granular activated carbon vessel
VGACM = inlet to the secondary vapor phase granular activated carbon vessel
VGACE = treated vapor effluent

TABLE 7

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-1	Shallow/Intermediate Gaspur	11/4/1998	104.88	40.20	64.68
MW-1	Shallow/Intermediate Gaspur	4/7/1999	104.88	40.52	64.36
MW-1	Shallow/Intermediate Gaspur	8/5/1999	104.88	40.64	64.24
MW-1	Shallow/Intermediate Gaspur	10/10/2000	104.88	42.81	62.07
MW-1	Shallow/Intermediate Gaspur	12/14/2000	104.88	42.97	61.91
MW-1	Shallow/Intermediate Gaspur	2/8/2001	104.88	42.47	62.41
MW-1	Shallow/Intermediate Gaspur	5/1/2003	104.88	44.74	60.14
MW-1	Shallow/Intermediate Gaspur	12/18/2003	104.88	45.58	59.30
MW-1	Shallow/Intermediate Gaspur	4/16/2004	104.88	NM	NM
MW-1	Shallow/Intermediate Gaspur	8/27/2004	104.88	NM	NM
MW-1	Shallow/Intermediate Gaspur	12/22/2004	104.88	46.65	58.23
MW-1	Shallow/Intermediate Gaspur	4/20/2005	104.88	46.04	58.84
MW-1	Shallow/Intermediate Gaspur	6/6/2006	104.88	44.12	60.76
MW-1	Shallow/Intermediate Gaspur	8/28/2006	104.88	44.23	60.65
MW-1	Shallow/Intermediate Gaspur	3/19/2008	104.88	45.12	59.76
MW-1	Shallow/Intermediate Gaspur	4/14/2008	104.88	45.10	59.78
MW-1	Shallow/Intermediate Gaspur	5/19/2009	104.88	46.82	58.06
MW-1	Shallow/Intermediate Gaspur	7/15/2010	104.88	48.89	55.99
MW-1	Shallow/Intermediate Gaspur	6/13/2011	104.88	49.25	55.63
MW-1	Shallow/Intermediate Gaspur	12/5/2011	104.88	49.05	55.83
MW-1	Shallow/Intermediate Gaspur	6/7/2012	104.88	49.16	55.72
MW-1	Shallow/Intermediate Gaspur	6/8/2012	104.88	49.16	55.72
MW-1	Shallow/Intermediate Gaspur	12/10/2012	104.88	44.54	60.34
MW-1	Shallow/Intermediate Gaspur	6/17/2013	104.88	46.09	58.79
MW-1	Shallow/Intermediate Gaspur	12/9/2013	104.88	51.24	53.64
MW-1	Shallow/Intermediate Gaspur	6/12/2014	104.88	52.00	52.88
MW-1	Shallow/Intermediate Gaspur	12/15/2014	104.88	53.40	51.48
MW-1	Shallow/Intermediate Gaspur	6/8/2015	104.88	54.00	50.88
MW-1	Shallow/Intermediate Gaspur	12/7/2015	104.88	55.59	49.29
MW-1	Shallow/Intermediate Gaspur	6/6/2016	104.88	56.36	48.52
MW-1	Shallow/Intermediate Gaspur	11/28/2016	104.88	57.62	47.26
MW-1	Shallow/Intermediate Gaspur	6/5/2017	104.88	58.70	46.18
MW-1	Shallow/Intermediate Gaspur	12/4/2017	104.88	59.10	45.78
MW-1	Shallow/Intermediate Gaspur	6/4/2018	104.88	60.13	44.75
MW-1	Shallow/Intermediate Gaspur	6/28/2018	104.88	60.11	44.77
MW-1	Shallow/Intermediate Gaspur	12/3/2018	104.88	60.81	44.07
MW-1	Shallow/Intermediate Gaspur	6/10/2019	104.88	61.64	43.24
MW-2A	Shallow Gaspur	6/13/2011	106.52	54.12	52.40
MW-2A	Shallow Gaspur	9/26/2011	106.52	54.70	51.82
MW-2A	Shallow Gaspur	12/5/2011	106.52	53.54	52.98
MW-2A	Shallow Gaspur	3/26/2012	106.52	53.11	53.41
MW-2A	Shallow Gaspur	6/7/2012	106.52	53.20	53.32
MW-2A	Shallow Gaspur	6/13/2012	106.52	53.20	53.32
MW-2A	Shallow Gaspur	12/10/2012	106.52	53.80	52.72
MW-2A	Shallow Gaspur	6/17/2013	106.52	55.92	50.60
MW-2A	Shallow Gaspur	12/9/2013	106.52	56.21	50.31

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-2A	Shallow Gaspur	6/12/2014	106.52	56.65	49.87
MW-2A	Shallow Gaspur	12/15/2014	106.52	58.28	48.24
MW-2A	Shallow Gaspur	6/8/2015	106.52	58.40	48.12
MW-2A	Shallow Gaspur	12/7/2015	106.52	60.10	46.42
MW-2A	Shallow Gaspur	6/6/2016	106.52	60.77	45.75
MW-2A	Shallow Gaspur	11/28/2016	106.52	61.90	44.62
MW-2A	Shallow Gaspur	6/5/2017	106.52	Dry	Dry
MW-2A	Shallow Gaspur	12/4/2017	106.52	Dry	Dry
MW-2A	Shallow Gaspur	6/4/2018	106.52	Dry	Dry
MW-2A	Shallow Gaspur	6/28/2018	106.52	Dry	Dry
MW-2A	Shallow Gaspur	12/3/2018	106.52	Dry	Dry
MW-2A	Shallow Gaspur	6/10/2019	106.52	Dry	Dry
MW-2B	Shallow Gaspur	6/13/2011	106.24	53.81	52.43
MW-2B	Shallow Gaspur	9/26/2011	106.24	54.50	51.74
MW-2B	Shallow Gaspur	12/5/2011	106.24	53.56	52.68
MW-2B	Shallow Gaspur	3/26/2012	106.24	53.27	52.97
MW-2B	Shallow Gaspur	6/7/2012	106.24	53.00	53.24
MW-2B	Shallow Gaspur	6/13/2012	106.24	53.00	53.24
MW-2B	Shallow Gaspur	12/10/2012	106.24	53.81	52.43
MW-2B	Shallow Gaspur	6/17/2013	106.24	55.94	50.30
MW-2B	Shallow Gaspur	12/9/2013	106.24	57.70	48.54
MW-2B	Shallow Gaspur	6/12/2014	106.24	56.41	49.83
MW-2B	Shallow Gaspur	12/15/2014	106.24	58.32	47.92
MW-2B	Shallow Gaspur	6/8/2015	106.24	58.22	48.02
MW-2B	Shallow Gaspur	12/7/2015	106.24	59.98	46.26
MW-2B	Shallow Gaspur	6/6/2016	106.24	60.64	45.60
MW-2B	Shallow Gaspur	11/28/2016	106.24	61.85	44.39
MW-2B	Shallow Gaspur	6/5/2017	106.24	62.40	43.84
MW-2B	Shallow Gaspur	12/4/2017	106.24	63.00	43.24
MW-2B	Shallow Gaspur	6/4/2018	106.24	63.75	42.49
MW-2B	Shallow Gaspur	6/28/2018	106.24	63.80	42.44
MW-2B	Shallow Gaspur	12/3/2018	106.24	64.30	41.94
MW-2B	Shallow Gaspur	6/10/2019	106.24	64.77	41.47
MW-2C	Intermediate Gaspur	6/13/2011	106.27	53.92	52.35
MW-2C	Intermediate Gaspur	9/26/2011	106.27	53.41	52.86
MW-2C	Intermediate Gaspur	12/5/2011	106.27	53.44	52.83
MW-2C	Intermediate Gaspur	3/26/2012	106.27	52.97	53.30
MW-2C	Intermediate Gaspur	6/7/2012	106.27	53.05	53.22
MW-2C	Intermediate Gaspur	6/13/2012	106.27	53.05	53.22
MW-2C	Intermediate Gaspur	12/10/2012	106.27	53.60	52.67
MW-2C	Intermediate Gaspur	6/17/2013	106.27	56.00	50.27
MW-2C	Intermediate Gaspur	12/9/2013	106.27	57.38	48.89
MW-2C	Intermediate Gaspur	6/12/2014	106.27	56.82	49.45
MW-2C	Intermediate Gaspur	12/15/2014	106.27	57.94	48.33
MW-2C	Intermediate Gaspur	6/8/2015	106.27	58.20	48.07
MW-2C	Intermediate Gaspur	12/7/2015	106.27	59.88	46.39

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-2C	Intermediate Gaspur	6/6/2016	106.27	60.53	45.74
MW-2C	Intermediate Gaspur	11/28/2016	106.27	61.93	44.34
MW-2C	Intermediate Gaspur	6/5/2017	106.27	62.65	43.62
MW-2C	Intermediate Gaspur	12/4/2017	106.27	63.21	43.06
MW-2C	Intermediate Gaspur	6/4/2018	106.27	63.70	42.57
MW-2C	Intermediate Gaspur	6/28/2018	106.27	64.19	42.08
MW-2C	Intermediate Gaspur	12/3/2018	106.27	64.30	41.97
MW-2C	Intermediate Gaspur	6/10/2019	106.27	64.60	41.67
MW-4	Shallow/Intermediate Gaspur	11/4/1998	104.93	42.06	62.87
MW-4	Shallow/Intermediate Gaspur	4/7/1999	104.93	42.60	62.33
MW-4	Shallow/Intermediate Gaspur	8/5/1999	104.93	42.88	62.05
MW-4	Shallow/Intermediate Gaspur	10/10/2000	104.93	45.40	59.53
MW-4	Shallow/Intermediate Gaspur	12/14/2000	104.93	45.32	59.61
MW-4	Shallow/Intermediate Gaspur	2/8/2001	104.93	44.70	60.23
MW-4	Shallow/Intermediate Gaspur	5/1/2003	104.93	47.38	57.55
MW-4	Shallow/Intermediate Gaspur	12/18/2003	104.93	48.17	56.76
MW-4	Shallow/Intermediate Gaspur	4/16/2004	104.93	48.45	56.48
MW-4	Shallow/Intermediate Gaspur	8/27/2004	104.93	48.97	55.96
MW-4	Shallow/Intermediate Gaspur	12/22/2004	104.93	49.44	55.49
MW-4	Shallow/Intermediate Gaspur	4/20/2005	104.93	48.88	56.05
MW-4	Shallow/Intermediate Gaspur	6/6/2006	104.93	NM	NM
MW-4	Shallow/Intermediate Gaspur	8/28/2006	104.93	47.08	57.85
MW-4	Shallow/Intermediate Gaspur	3/19/2008	104.93	47.62	57.31
MW-4	Shallow/Intermediate Gaspur	4/14/2008	104.93	47.72	57.21
MW-4	Shallow/Intermediate Gaspur	5/19/2009	104.93	49.56	55.37
MW-4	Shallow/Intermediate Gaspur	7/15/2010	104.93	51.61	53.32
MW-4	Shallow/Intermediate Gaspur	6/13/2011	104.93	52.29	52.64
MW-4	Shallow/Intermediate Gaspur	12/5/2011	104.93	51.89	53.04
MW-4	Shallow/Intermediate Gaspur	6/7/2012	104.93	51.31	53.62
MW-4	Shallow/Intermediate Gaspur	6/7/2012	104.93	51.31	53.62
MW-4	Shallow/Intermediate Gaspur	12/10/2012	104.93	51.91	53.02
MW-4	Shallow/Intermediate Gaspur	6/17/2013	104.93	53.83	51.10
MW-4	Shallow/Intermediate Gaspur	12/9/2013	104.93	54.75	50.18
MW-4	Shallow/Intermediate Gaspur	6/12/2014	104.93	55.18	49.75
MW-4	Shallow/Intermediate Gaspur	12/15/2014	104.93	56.64	48.29
MW-4	Shallow/Intermediate Gaspur	6/8/2015	104.93	56.62	48.31
MW-4	Shallow/Intermediate Gaspur	12/7/2015	104.93	58.92	46.01
MW-4	Shallow/Intermediate Gaspur	6/6/2016	104.93	59.58	45.35
MW-4	Shallow/Intermediate Gaspur	11/28/2016	104.93	60.76	44.17
MW-4	Shallow/Intermediate Gaspur	6/5/2017	104.93	61.72	43.21
MW-4	Shallow/Intermediate Gaspur	12/4/2017	104.93	62.02	42.91
MW-4	Shallow/Intermediate Gaspur	6/4/2018	104.93	63.17	41.76
MW-4	Shallow/Intermediate Gaspur	6/28/2018	104.93	62.81	42.12
MW-4	Shallow/Intermediate Gaspur	12/3/2018	104.93	63.19	41.74
MW-4	Shallow/Intermediate Gaspur	6/10/2019	104.93	63.75	41.18
MW-4B	Intermediate Gaspur	6/13/2011	105.06	52.88	52.18

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-4B	Intermediate Gaspur	9/26/2011	105.06	53.41	51.65
MW-4B	Intermediate Gaspur	12/5/2011	105.06	52.46	52.60
MW-4B	Intermediate Gaspur	3/26/2012	105.06	52.10	52.96
MW-4B	Intermediate Gaspur	6/7/2012	105.06	51.91	53.15
MW-4B	Intermediate Gaspur	6/7/2012	105.06	51.91	53.15
MW-4B	Intermediate Gaspur	12/10/2012	105.06	52.54	52.52
MW-4B	Intermediate Gaspur	6/17/2013	105.06	54.23	50.83
MW-4B	Intermediate Gaspur	12/9/2013	105.06	54.79	50.27
MW-4B	Intermediate Gaspur	6/12/2014	105.06	55.43	49.63
MW-4B	Intermediate Gaspur	12/15/2014	105.06	56.77	48.29
MW-4B	Intermediate Gaspur	6/8/2015	105.06	57.22	47.84
MW-4B	Intermediate Gaspur	12/7/2015	105.06	59.00	46.06
MW-4B	Intermediate Gaspur	6/6/2016	105.06	59.64	45.42
MW-4B	Intermediate Gaspur	11/28/2016	105.06	60.79	44.27
MW-4B	Intermediate Gaspur	6/5/2017	105.06	62.40	42.66
MW-4B	Intermediate Gaspur	12/4/2017	105.06	62.72	42.34
MW-4B	Intermediate Gaspur	6/4/2018	105.06	62.65	42.41
MW-4B	Intermediate Gaspur	6/28/2018	105.06	62.72	42.34
MW-4B	Intermediate Gaspur	12/3/2018	105.06	63.29	41.77
MW-4B	Intermediate Gaspur	6/10/2019	105.06	63.70	41.36
MW-15	Intermediate Gaspur	12/14/2000	104.82	45.60	59.22
MW-15	Intermediate Gaspur	2/8/2001	104.82	45.03	59.79
MW-15	Intermediate Gaspur	5/1/2003	104.82	47.66	57.16
MW-15	Intermediate Gaspur	12/18/2003	104.82	48.41	56.41
MW-15	Intermediate Gaspur	4/16/2004	104.82	48.69	56.13
MW-15	Intermediate Gaspur	8/27/2004	104.82	49.24	55.58
MW-15	Intermediate Gaspur	12/22/2004	104.82	49.79	55.03
MW-15	Intermediate Gaspur	4/20/2005	104.82	49.11	55.71
MW-15	Intermediate Gaspur	6/6/2006	104.82	47.34	57.48
MW-15	Intermediate Gaspur	8/28/2006	104.82	47.30	57.52
MW-15	Intermediate Gaspur	2/28/2007	104.82	47.06	57.76
MW-15	Intermediate Gaspur	3/19/2008	104.82	48.08	56.74
MW-15	Intermediate Gaspur	4/14/2008	104.82	48.03	56.79
MW-15	Intermediate Gaspur	5/4/2009	104.82	49.90	54.92
MW-15	Intermediate Gaspur	5/19/2009	104.82	49.92	54.90
MW-15	Intermediate Gaspur	7/15/2010	104.82	52.38	52.44
MW-15	Intermediate Gaspur	6/17/2013	104.82	54.14	50.68
MW-15	Intermediate Gaspur	12/9/2013	104.82	54.65	50.17
MW-15	Intermediate Gaspur	3/27/2014	104.82	54.60	50.22
MW-15	Intermediate Gaspur	6/11/2014	104.82	55.51	49.31
MW-15	Intermediate Gaspur	12/15/2014	104.82	56.63	48.19
MW-15	Intermediate Gaspur	6/8/2015	104.82	57.25	47.57
MW-15	Intermediate Gaspur	12/7/2015	104.82	58.91	45.91
MW-15	Intermediate Gaspur	6/6/2016	104.56	59.76	44.80
MW-15	Intermediate Gaspur	11/28/2016	104.56	60.94	43.62
MW-15	Intermediate Gaspur	6/5/2017	104.56	61.55	43.01

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-15	Intermediate Gaspur	12/5/2017	104.56	62.30	42.26
MW-15	Intermediate Gaspur	6/4/2018	104.56	62.28	42.28
MW-15	Intermediate Gaspur	6/28/2018	104.56	62.92	41.64
MW-15	Intermediate Gaspur	12/3/2018	104.56	63.40	41.16
MW-15	Intermediate Gaspur	6/10/2019	104.56	63.81	40.75
MW-15B	Lower Gaspur	5/4/2009	104.62	49.81	54.81
MW-15B	Lower Gaspur	5/19/2009	104.62	49.83	54.79
MW-15B	Lower Gaspur	7/15/2010	104.62	52.21	52.41
MW-15B	Lower Gaspur	6/13/2011	104.62	52.71	51.91
MW-15B	Lower Gaspur	12/5/2011	104.62	52.46	52.16
MW-15B	Lower Gaspur	6/7/2012	104.62	51.78	52.84
MW-15B	Lower Gaspur	6/8/2012	104.62	51.78	52.84
MW-15B	Lower Gaspur	12/10/2012	104.62	52.40	52.22
MW-15B	Lower Gaspur	6/17/2013	104.62	53.91	50.71
MW-15B	Lower Gaspur	12/9/2013	104.62	54.49	50.13
MW-15B	Lower Gaspur	3/27/2014	104.62	54.52	50.10
MW-15B	Lower Gaspur	6/11/2014	104.62	55.38	49.24
MW-15B	Lower Gaspur	12/15/2014	104.62	56.50	48.12
MW-15B	Lower Gaspur	6/8/2015	104.62	57.13	47.49
MW-15B	Lower Gaspur	12/7/2015	104.62	59.07	45.55
MW-15B	Lower Gaspur	6/6/2016	104.71	59.59	45.12
MW-15B	Lower Gaspur	11/28/2016	104.71	60.78	43.93
MW-15B	Lower Gaspur	6/5/2017	104.71	61.42	43.29
MW-15B	Lower Gaspur	12/5/2017	104.71	62.02	42.69
MW-15B	Lower Gaspur	6/4/2018	104.71	62.70	42.01
MW-15B	Lower Gaspur	6/28/2018	104.71	62.63	42.08
MW-15B	Lower Gaspur	12/3/2018	104.71	63.32	41.39
MW-15B	Lower Gaspur	6/10/2019	104.71	63.63	41.08
MW-16	Exposition	12/14/2000	105.01	48.49	56.52
MW-16	Exposition	2/8/2001	105.01	47.90	57.11
MW-16	Exposition	5/1/2003	105.01	50.95	54.06
MW-16	Exposition	12/18/2003	105.01	51.76	53.25
MW-16	Exposition	4/16/2004	105.01	52.13	52.88
MW-16	Exposition	8/27/2004	105.01	52.80	52.21
MW-16	Exposition	12/22/2004	105.01	53.33	51.68
MW-16	Exposition	4/20/2005	105.01	52.84	52.17
MW-16	Exposition	6/6/2006	105.01	50.81	54.20
MW-16	Exposition	8/28/2006	105.01	50.82	54.19
MW-16	Exposition	2/28/2007	105.01	50.33	54.68
MW-16	Exposition	3/19/2008	105.01	51.49	53.52
MW-16	Exposition	4/14/2008	105.01	51.52	53.49
MW-16	Exposition	5/19/2009	105.01	53.80	51.21
MW-16	Exposition	7/15/2010	105.01	56.41	48.60
MW-16	Exposition	6/13/2011	105.01	56.77	48.24
MW-16	Exposition	12/5/2011	105.01	56.21	48.80
MW-16	Exposition	6/7/2012	105.01	55.31	49.70

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-16	Exposition	6/7/2012	105.01	55.31	49.70
MW-16	Exposition	12/10/2012	105.01	55.92	49.09
MW-16	Exposition	6/17/2013	105.01	57.21	47.80
MW-16	Exposition	12/9/2013	105.01	58.00	47.01
MW-16	Exposition	6/9/2014	105.01	59.17	45.84
MW-16	Exposition	12/15/2014	105.01	59.96	45.05
MW-16	Exposition	6/8/2015	105.01	61.80	43.21
MW-16	Exposition	12/7/2015	105.01	59.73	45.28
MW-16	Exposition	6/6/2016	104.67	64.23	40.44
MW-16	Exposition	11/28/2016	104.67	65.38	39.29
MW-16	Exposition	6/5/2017	104.67	66.10	38.57
MW-16	Exposition	12/5/2017	104.67	66.52	38.15
MW-16	Exposition	6/4/2018	104.67	67.74	36.93
MW-16	Exposition	6/28/2018	104.67	67.07	37.60
MW-16	Exposition	12/3/2018	104.67	67.92	36.75
MW-16	Exposition	6/10/2019	104.67	68.16	36.51
MW-17	Shallow Gaspur	12/14/2000	105.41	45.74	59.67
MW-17	Shallow Gaspur	2/8/2001	105.41	45.19	60.22
MW-17	Shallow Gaspur	5/1/2003	105.41	47.89	57.52
MW-17	Shallow Gaspur	12/18/2003	105.41	48.61	56.80
MW-17	Shallow Gaspur	4/16/2004	105.41	48.85	56.56
MW-17	Shallow Gaspur	8/27/2004	105.41	49.46	55.95
MW-17	Shallow Gaspur	12/22/2004	105.41	50.02	55.39
MW-17	Shallow Gaspur	4/20/2005	105.41	49.40	56.01
MW-17	Shallow Gaspur	6/6/2006	105.41	47.61	57.80
MW-17	Shallow Gaspur	8/28/2006	105.41	47.60	57.81
MW-17	Shallow Gaspur	2/28/2007	105.41	47.26	58.15
MW-17	Shallow Gaspur	3/19/2008	105.41	48.31	57.10
MW-17	Shallow Gaspur	4/14/2008	105.41	48.26	57.15
MW-17	Shallow Gaspur	5/19/2009	105.41	50.15	55.26
MW-17	Shallow Gaspur	7/15/2010	105.41	52.52	52.89
MW-17	Shallow Gaspur	6/13/2011	105.41	53.17	52.24
MW-17	Shallow Gaspur	12/5/2011	105.41	52.96	52.45
MW-17	Shallow Gaspur	6/7/2012	105.41	52.22	53.19
MW-17	Shallow Gaspur	6/7/2012	105.41	52.22	53.19
MW-17	Shallow Gaspur	12/10/2012	105.41	52.85	52.56
MW-17	Shallow Gaspur	6/17/2013	105.41	54.84	50.57
MW-17	Shallow Gaspur	12/9/2013	105.41	55.09	50.32
MW-17	Shallow Gaspur	6/11/2014	105.41	55.94	49.47
MW-17	Shallow Gaspur	12/15/2014	105.41	57.00	48.41
MW-17	Shallow Gaspur	6/8/2015	105.41	57.50	47.91
MW-17	Shallow Gaspur	12/7/2015	105.41	59.93	45.48
MW-17	Shallow Gaspur	6/6/2016	105.32	59.87	45.45
MW-17	Shallow Gaspur	11/28/2016	105.32	61.01	44.31
MW-17	Shallow Gaspur	6/5/2017	105.32	61.67	43.65
MW-17	Shallow Gaspur	12/5/2017	105.32	61.20	44.12

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-17	Shallow Gaspur	6/4/2018	105.32	63.73	41.59
MW-17	Shallow Gaspur	6/28/2018	105.32	62.99	42.33
MW-17	Shallow Gaspur	12/3/2018	105.32	63.56	41.76
MW-17	Shallow Gaspur	6/10/2019	105.32	64.16	41.16
MW-18	Exposition	12/14/2000	105.47	50.36	55.11
MW-18	Exposition	2/8/2001	105.47	49.79	55.68
MW-18	Exposition	5/1/2003	105.47	52.97	52.50
MW-18	Exposition	12/18/2003	105.47	53.83	51.64
MW-18	Exposition	4/16/2004	105.47	54.24	51.23
MW-18	Exposition	8/27/2004	105.47	55.00	50.47
MW-18	Exposition	12/22/2004	105.47	55.56	49.91
MW-18	Exposition	4/20/2005	105.47	55.23	50.24
MW-18	Exposition	6/6/2006	105.47	NM	NM
MW-18	Exposition	8/28/2006	105.47	52.86	52.61
MW-18	Exposition	2/28/2007	105.47	52.28	53.19
MW-18	Exposition	3/19/2008	105.47	53.53	51.94
MW-18	Exposition	4/14/2008	105.47	53.63	51.84
MW-18	Exposition	5/19/2009	105.47	56.01	49.46
MW-18	Exposition	7/15/2010	105.47	58.66	46.81
MW-18	Exposition	6/13/2011	105.47	59.02	46.45
MW-18	Exposition	12/5/2011	105.47	58.31	47.16
MW-18	Exposition	6/7/2012	105.47	57.38	48.09
MW-18	Exposition	6/7/2012	105.47	57.38	48.09
MW-18	Exposition	12/10/2012	105.47	57.89	47.58
MW-18	Exposition	6/17/2013	105.47	59.00	46.47
MW-18	Exposition	12/9/2013	105.47	60.22	45.25
MW-18	Exposition	6/9/2014	105.47	61.43	44.04
MW-18	Exposition	12/15/2014	105.47	63.19	42.28
MW-18	Exposition	6/8/2015	105.47	63.53	41.94
MW-18	Exposition	12/7/2015	105.47	60.02	45.45
MW-18	Exposition	6/6/2016	105.21	66.90	38.31
MW-18	Exposition	11/28/2016	105.21	68.16	37.05
MW-18	Exposition	6/5/2017	105.21	68.61	36.60
MW-18	Exposition	12/5/2017	105.21	69.16	36.05
MW-18	Exposition	6/4/2018	105.21	69.19	36.02
MW-18	Exposition	6/28/2018	105.21	69.66	35.55
MW-18	Exposition	12/3/2018	105.21	70.42	34.79
MW-18	Exposition	6/10/2019	105.21	70.74	34.47
MW-19	Shallow Gaspur	12/14/2000	106.10	45.91	60.19
MW-19	Shallow Gaspur	2/8/2001	106.10	45.39	60.71
MW-19	Shallow Gaspur	5/1/2003	106.10	48.10	58.00
MW-19	Shallow Gaspur	12/18/2003	106.10	48.86	57.24
MW-19	Shallow Gaspur	4/16/2004	106.10	49.10	57.00
MW-19	Shallow Gaspur	8/27/2004	106.10	49.70	56.40
MW-19	Shallow Gaspur	12/22/2004	106.10	50.25	55.85
MW-19	Shallow Gaspur	4/20/2005	106.10	49.73	56.37

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-19	Shallow Gaspur	6/6/2006	106.10	48.03	58.07
MW-19	Shallow Gaspur	8/28/2006	106.10	47.94	58.16
MW-19	Shallow Gaspur	2/28/2007	106.10	47.66	58.44
MW-19	Shallow Gaspur	3/19/2008	106.10	48.69	57.41
MW-19	Shallow Gaspur	4/14/2008	106.10	48.64	57.46
MW-19	Shallow Gaspur	5/19/2009	106.10	50.49	55.61
MW-19	Shallow Gaspur	7/15/2010	106.10	52.88	53.22
MW-19	Shallow Gaspur	6/13/2011	106.10	53.52	52.58
MW-19	Shallow Gaspur	12/5/2011	106.10	53.31	52.79
MW-19	Shallow Gaspur	6/7/2012	106.10	52.64	53.46
MW-19	Shallow Gaspur	6/7/2012	106.10	52.64	53.46
MW-19	Shallow Gaspur	12/10/2012	106.10	53.19	52.91
MW-19	Shallow Gaspur	6/17/2013	106.10	54.73	51.37
MW-19	Shallow Gaspur	12/9/2013	106.10	55.06	51.04
MW-19	Shallow Gaspur	6/11/2014	106.10	55.87	50.23
MW-19	Shallow Gaspur	12/15/2014	106.10	57.17	48.93
MW-19	Shallow Gaspur	6/8/2015	106.10	57.80	48.30
MW-19	Shallow Gaspur	12/7/2015	106.10	59.20	46.90
MW-19	Shallow Gaspur	6/6/2016	106.03	60.05	45.98
MW-19	Shallow Gaspur	11/28/2016	106.03	61.21	44.82
MW-19	Shallow Gaspur	6/5/2017	106.03	61.94	44.09
MW-19	Shallow Gaspur	12/4/2017	106.03	62.40	43.63
MW-19	Shallow Gaspur	6/4/2018	106.03	62.12	43.91
MW-19	Shallow Gaspur	6/28/2018	106.03	63.21	42.82
MW-19	Shallow Gaspur	12/3/2018	106.03	63.83	42.20
MW-19	Shallow Gaspur	6/10/2019	106.03	64.35	41.68
MW-20	Shallow Gaspur	5/1/2003	104.84	47.47	57.37
MW-20	Shallow Gaspur	12/18/2003	104.84	48.20	56.64
MW-20	Shallow Gaspur	4/16/2004	104.84	48.51	56.33
MW-20	Shallow Gaspur	8/27/2004	104.84	49.09	55.75
MW-20	Shallow Gaspur	12/22/2004	104.84	49.64	55.20
MW-20	Shallow Gaspur	4/20/2005	104.84	48.96	55.88
MW-20	Shallow Gaspur	6/6/2006	104.84	46.95	57.89
MW-20	Shallow Gaspur	8/28/2006	104.84	47.20	57.64
MW-20	Shallow Gaspur	2/28/2007	104.84	46.92	57.92
MW-20	Shallow Gaspur	3/19/2008	104.84	48.03	56.81
MW-20	Shallow Gaspur	4/14/2008	104.84	47.89	56.95
MW-20	Shallow Gaspur	5/19/2009	104.84	49.80	55.04
MW-20	Shallow Gaspur	7/15/2010	104.84	52.06	52.78
MW-20	Shallow Gaspur	6/13/2011	104.84	52.71	52.13
MW-20	Shallow Gaspur	12/5/2011	104.84	52.38	52.46
MW-20	Shallow Gaspur	6/7/2012	104.84	51.83	53.01
MW-20	Shallow Gaspur	6/13/2012	104.84	51.83	53.01
MW-20	Shallow Gaspur	12/10/2012	104.84	52.45	52.39
MW-20	Shallow Gaspur	6/17/2013	104.84	54.44	50.40
MW-20	Shallow Gaspur	12/9/2013	104.84	54.88	49.96

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-20	Shallow Gaspur	6/10/2014	104.84	55.70	49.14
MW-20	Shallow Gaspur	12/15/2014	104.84	56.83	48.01
MW-20	Shallow Gaspur	6/8/2015	104.84	57.15	47.69
MW-20	Shallow Gaspur	12/7/2015	104.84	58.90	45.94
MW-20	Shallow Gaspur	6/6/2016	104.84	59.93	44.91
MW-20	Shallow Gaspur	11/28/2016	104.84	60.61	44.23
MW-20	Shallow Gaspur	6/5/2017	104.84	60.88	43.96
MW-20	Shallow Gaspur	12/4/2017	104.84	61.97	42.87
MW-20	Shallow Gaspur	6/4/2018	104.84	62.52	42.32
MW-20	Shallow Gaspur	6/28/2018	104.84	62.50	42.34
MW-20	Shallow Gaspur	12/3/2018	104.84	63.08	41.76
MW-20	Shallow Gaspur	6/10/2019	104.84	63.50	41.34
MW-20B	Intermediate Gaspur	6/6/2006	104.46	46.82	57.64
MW-20B	Intermediate Gaspur	8/28/2006	104.46	46.80	57.66
MW-20B	Intermediate Gaspur	3/19/2008	104.46	48.13	56.33
MW-20B	Intermediate Gaspur	4/14/2008	104.46	47.51	56.95
MW-20B	Intermediate Gaspur	5/19/2009	104.46	49.41	55.05
MW-20B	Intermediate Gaspur	7/15/2010	104.46	51.73	52.73
MW-20B	Intermediate Gaspur	6/13/2011	104.46	52.30	52.16
MW-20B	Intermediate Gaspur	12/5/2011	104.46	52.02	52.44
MW-20B	Intermediate Gaspur	6/7/2012	104.46	51.39	53.07
MW-20B	Intermediate Gaspur	6/12/2012	104.46	51.39	53.07
MW-20B	Intermediate Gaspur	12/10/2012	104.46	52.00	52.46
MW-20B	Intermediate Gaspur	6/17/2013	104.46	54.24	50.22
MW-20B	Intermediate Gaspur	12/9/2013	104.46	54.43	50.03
MW-20B	Intermediate Gaspur	6/10/2014	104.46	55.38	49.08
MW-20B	Intermediate Gaspur	12/15/2014	104.46	56.40	48.06
MW-20B	Intermediate Gaspur	6/8/2015	104.46	57.25	47.21
MW-20B	Intermediate Gaspur	12/7/2015	104.46	58.41	46.05
MW-20B	Intermediate Gaspur	6/6/2016	104.46	59.08	45.38
MW-20B	Intermediate Gaspur	11/28/2016	104.46	60.27	44.19
MW-20B	Intermediate Gaspur	6/5/2017	104.46	60.93	43.53
MW-20B	Intermediate Gaspur	12/4/2017	104.46	62.02	42.44
MW-20B	Intermediate Gaspur	6/4/2018	104.46	61.89	42.57
MW-20B	Intermediate Gaspur	6/28/2018	104.46	62.30	42.16
MW-20B	Intermediate Gaspur	12/3/2018	104.46	62.69	41.77
MW-20B	Intermediate Gaspur	6/10/2019	104.46	63.23	41.23
MW-21	Shallow Gaspur	12/18/2003	105.62	48.85	56.77
MW-21	Shallow Gaspur	4/16/2004	105.62	49.19	56.43
MW-21	Shallow Gaspur	8/27/2004	105.62	49.75	55.87
MW-21	Shallow Gaspur	12/22/2004	105.62	50.32	55.30
MW-21	Shallow Gaspur	4/20/2005	105.62	49.67	55.95
MW-21	Shallow Gaspur	6/6/2006	105.62	47.64	57.98
MW-21	Shallow Gaspur	8/28/2006	105.62	47.80	57.82
MW-21	Shallow Gaspur	2/28/2007	105.62	47.54	58.08
MW-21	Shallow Gaspur	3/19/2008	105.62	48.75	56.87

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-21	Shallow Gaspur	4/14/2008	105.62	48.61	57.01
MW-21	Shallow Gaspur	5/19/2009	105.62	50.46	55.16
MW-21	Shallow Gaspur	7/15/2010	105.62	52.83	52.79
MW-21	Shallow Gaspur	6/13/2011	105.62	53.44	52.18
MW-21	Shallow Gaspur	12/5/2011	105.62	53.01	52.61
MW-21	Shallow Gaspur	6/7/2012	105.62	51.39	54.23
MW-21	Shallow Gaspur	6/7/2012	105.62	52.46	53.16
MW-21	Shallow Gaspur	6/12/2012	105.62	52.46	53.16
MW-21	Shallow Gaspur	12/10/2012	105.62	53.13	52.49
MW-21	Shallow Gaspur	6/17/2013	105.62	55.80	49.82
MW-21	Shallow Gaspur	12/9/2013	105.62	54.84	50.78
MW-21	Shallow Gaspur	6/10/2014	105.62	56.52	49.10
MW-21	Shallow Gaspur	12/15/2014	105.62	56.03	49.59
MW-21	Shallow Gaspur	6/8/2015	105.62	57.75	47.87
MW-21	Shallow Gaspur	12/7/2015	105.62	59.56	46.06
MW-21	Shallow Gaspur	6/6/2016	105.62	60.02	45.60
MW-21	Shallow Gaspur	11/28/2016	105.62	61.30	44.32
MW-21	Shallow Gaspur	6/5/2017	105.62	62.10	43.52
MW-21	Shallow Gaspur	12/4/2017	105.62	62.70	42.92
MW-21	Shallow Gaspur	6/4/2018	105.62	63.17	42.45
MW-21	Shallow Gaspur	6/28/2018	105.62	63.25	42.37
MW-21	Shallow Gaspur	12/3/2018	105.62	63.70	41.92
MW-21	Shallow Gaspur	6/10/2019	105.62	64.22	41.40
MW-22	Shallow Gaspur	12/18/2003	105.44	48.85	56.59
MW-22	Shallow Gaspur	4/16/2004	105.44	49.17	56.27
MW-22	Shallow Gaspur	8/27/2004	105.44	49.73	55.71
MW-22	Shallow Gaspur	12/22/2004	105.44	50.20	55.24
MW-22	Shallow Gaspur	4/20/2005	105.44	49.63	55.81
MW-22	Shallow Gaspur	6/6/2006	105.44	47.85	57.59
MW-22	Shallow Gaspur	8/28/2006	105.44	47.84	57.60
MW-22	Shallow Gaspur	2/28/2007	105.44	47.58	57.86
MW-22	Shallow Gaspur	3/19/2008	105.44	48.57	56.87
MW-22	Shallow Gaspur	4/14/2008	105.44	48.57	56.87
MW-22	Shallow Gaspur	5/19/2009	105.44	50.41	55.03
MW-22	Shallow Gaspur	7/15/2010	105.44	52.79	52.65
MW-22	Shallow Gaspur	6/13/2011	105.44	NM	NM
MW-22	Shallow Gaspur	12/5/2011	105.44	53.16	52.28
MW-22	Shallow Gaspur	6/7/2012	105.44	52.40	53.04
MW-22	Shallow Gaspur	6/13/2012	105.44	52.40	53.04
MW-22	Shallow Gaspur	12/11/2012	105.44	53.00	52.44
MW-22	Shallow Gaspur	6/17/2013	105.44	54.46	50.98
MW-22	Shallow Gaspur	12/9/2013	105.44	55.09	50.35
MW-22	Shallow Gaspur	6/10/2014	105.44	55.74	49.70
MW-22	Shallow Gaspur	12/15/2014	105.44	57.20	48.24
MW-22	Shallow Gaspur	6/8/2015	105.44	57.66	47.78
MW-22	Shallow Gaspur	12/7/2015	105.44	59.45	45.99

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-22	Shallow Gaspur	6/6/2016	105.32	60.09	45.23
MW-22	Shallow Gaspur	11/28/2016	105.32	61.34	43.98
MW-22	Shallow Gaspur	6/5/2017	105.32	61.84	43.48
MW-22	Shallow Gaspur	12/4/2017	105.32	62.45	42.87
MW-22	Shallow Gaspur	6/4/2018	105.32	63.15	42.17
MW-22	Shallow Gaspur	6/28/2018	105.32	62.37	42.95
MW-22	Shallow Gaspur	12/3/2018	105.32	63.87	41.45
MW-22	Shallow Gaspur	6/10/2019	105.32	64.29	41.03
MW-23	Shallow Gaspur	12/18/2003	106.09	49.04	57.05
MW-23	Shallow Gaspur	4/16/2004	106.09	49.34	56.75
MW-23	Shallow Gaspur	8/27/2004	106.09	49.89	56.20
MW-23	Shallow Gaspur	12/22/2004	106.09	50.41	55.68
MW-23	Shallow Gaspur	4/20/2005	106.09	49.88	56.21
MW-23	Shallow Gaspur	6/6/2006	106.09	48.17	57.92
MW-23	Shallow Gaspur	8/28/2006	106.09	48.12	57.97
MW-23	Shallow Gaspur	2/28/2007	106.09	47.82	58.27
MW-23	Shallow Gaspur	3/19/2008	106.09	48.83	57.26
MW-23	Shallow Gaspur	4/14/2008	106.09	48.81	57.28
MW-23	Shallow Gaspur	5/19/2009	106.09	50.55	55.54
MW-23	Shallow Gaspur	7/15/2010	106.09	53.02	53.07
MW-23	Shallow Gaspur	6/13/2011	106.09	53.73	52.36
MW-23	Shallow Gaspur	12/5/2011	106.09	53.41	52.68
MW-23	Shallow Gaspur	6/8/2012	106.09	53.41	52.68
MW-23	Shallow Gaspur	12/11/2012	106.09	53.31	52.78
MW-23	Shallow Gaspur	6/17/2013	106.09	55.89	50.20
MW-23	Shallow Gaspur	12/9/2013	106.09	56.24	49.85
MW-23	Shallow Gaspur	6/9/2014	106.09	56.15	49.94
MW-23	Shallow Gaspur	12/15/2014	106.09	57.40	48.69
MW-23	Shallow Gaspur	6/8/2015	106.09	58.20	47.89
MW-23	Shallow Gaspur	12/7/2015	106.09	59.52	46.57
MW-23	Shallow Gaspur	6/6/2016	106.09	60.29	45.80
MW-23	Shallow Gaspur	11/28/2016	106.09	61.37	44.72
MW-23	Shallow Gaspur	6/5/2017	106.09	62.00	44.09
MW-23	Shallow Gaspur	12/4/2017	106.09	62.50	43.59
MW-23	Shallow Gaspur	6/4/2018	106.09	61.80	44.29
MW-23	Shallow Gaspur	6/28/2018	106.09	63.31	42.78
MW-23	Shallow Gaspur	12/3/2018	106.09	63.88	42.21
MW-23	Shallow Gaspur	6/10/2019	106.09	64.43	41.66
MW-23A	Shallow Gaspur	9/26/2011	105.51	53.62	51.89
MW-23A	Shallow Gaspur	12/5/2011	105.51	58.22	47.29
MW-23A	Shallow Gaspur	3/26/2012	105.51	52.51	53.00
MW-23A	Shallow Gaspur	6/7/2012	105.51	52.14	53.37
MW-23A	Shallow Gaspur	6/8/2012	105.51	52.14	53.37
MW-23A	Shallow Gaspur	12/12/2012	105.51	52.72	52.79
MW-23A	Shallow Gaspur	6/17/2013	105.51	54.18	51.33
MW-23A	Shallow Gaspur	12/9/2013	105.51	54.78	50.73

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-23A	Shallow Gaspur	6/10/2014	105.51	55.51	50.00
MW-23A	Shallow Gaspur	12/15/2014	105.51	56.72	48.79
MW-23A	Shallow Gaspur	6/8/2015	105.51	57.37	48.14
MW-23A	Shallow Gaspur	12/7/2015	105.51	58.85	46.66
MW-23A	Shallow Gaspur	6/6/2016	105.51	59.54	45.97
MW-23A	Shallow Gaspur	11/28/2016	105.51	60.72	44.79
MW-23A	Shallow Gaspur	6/9/2017	105.51	61.40	44.11
MW-23A	Shallow Gaspur	12/4/2017	105.51	61.94	43.57
MW-23A	Shallow Gaspur	6/4/2018	105.51	61.36	44.15
MW-23A	Shallow Gaspur	6/28/2018	105.51	62.61	42.90
MW-23A	Shallow Gaspur	12/3/2018	105.51	63.22	42.29
MW-23A	Shallow Gaspur	6/10/2019	105.51	63.75	41.76
MW-23B	Lower Gaspur	5/19/2009	106.06	52.44	53.62
MW-23B	Lower Gaspur	7/15/2010	106.06	54.80	51.26
MW-23B	Lower Gaspur	6/13/2011	106.06	53.34	52.72
MW-23B	Lower Gaspur	12/5/2011	106.06	54.90	51.16
MW-23B	Lower Gaspur	6/7/2012	106.06	54.20	51.86
MW-23B	Lower Gaspur	6/12/2012	106.06	54.20	51.86
MW-23B	Lower Gaspur	12/10/2012	106.06	52.79	53.27
MW-23B	Lower Gaspur	6/17/2013	106.06	56.22	49.84
MW-23B	Lower Gaspur	12/9/2013	106.06	56.40	49.66
MW-23B	Lower Gaspur	6/9/2014	106.06	57.62	48.44
MW-23B	Lower Gaspur	12/15/2014	106.06	59.13	46.93
MW-23B	Lower Gaspur	6/8/2015	106.06	59.82	46.24
MW-23B	Lower Gaspur	12/7/2015	106.06	60.68	45.38
MW-23B	Lower Gaspur	6/6/2016	106.06	61.47	44.59
MW-23B	Lower Gaspur	11/28/2016	106.06	62.52	43.54
MW-23B	Lower Gaspur	6/5/2017	106.06	NM	NM
MW-23B	Lower Gaspur	12/4/2017	106.06	63.80	42.26
MW-23B	Lower Gaspur	6/4/2018	106.06	60.58	45.48
MW-23B	Lower Gaspur	6/28/2018	106.06	64.50	41.56
MW-23B	Lower Gaspur	12/3/2018	106.06	65.28	40.78
MW-23B	Lower Gaspur	6/10/2019	106.06	65.73	40.33
MW-24	Shallow Gaspur	12/18/2003	104.04	47.88	56.16
MW-24	Shallow Gaspur	4/16/2004	104.04	48.21	55.83
MW-24	Shallow Gaspur	8/27/2004	104.04	48.76	55.28
MW-24	Shallow Gaspur	12/22/2004	104.04	49.23	54.81
MW-24	Shallow Gaspur	4/20/2005	104.04	48.60	55.44
MW-24	Shallow Gaspur	6/6/2006	104.04	46.82	57.22
MW-24	Shallow Gaspur	8/28/2006	104.04	46.80	57.24
MW-24	Shallow Gaspur	2/28/2007	104.04	46.58	57.46
MW-24	Shallow Gaspur	3/19/2008	104.04	47.67	56.37
MW-24	Shallow Gaspur	4/14/2008	104.04	47.61	56.43
MW-24	Shallow Gaspur	5/4/2009	104.04	49.41	54.63
MW-24	Shallow Gaspur	5/19/2009	104.04	49.44	54.60
MW-24	Shallow Gaspur	7/15/2010	104.04	51.83	52.21

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-24	Shallow Gaspur	6/13/2011	104.04	52.30	51.74
MW-24	Shallow Gaspur	12/5/2011	104.04	52.09	51.95
MW-24	Shallow Gaspur	6/7/2012	104.04	51.34	52.70
MW-24	Shallow Gaspur	6/8/2012	104.04	51.34	52.70
MW-24	Shallow Gaspur	12/10/2012	104.04	52.21	51.83
MW-24	Shallow Gaspur	6/17/2013	104.04	53.18	50.86
MW-24	Shallow Gaspur	12/9/2013	104.04	53.86	50.18
MW-24	Shallow Gaspur	3/27/2014	104.04	54.08	49.96
MW-24	Shallow Gaspur	6/9/2014	104.04	54.75	49.29
MW-24	Shallow Gaspur	12/15/2014	104.04	56.10	47.94
MW-24	Shallow Gaspur	6/8/2015	104.04	56.79	47.25
MW-24	Shallow Gaspur	12/7/2015	104.04	58.48	45.56
MW-24	Shallow Gaspur	6/6/2016	103.96	59.25	44.71
MW-24	Shallow Gaspur	11/28/2016	103.96	60.34	43.62
MW-24	Shallow Gaspur	6/9/2017	103.96	61.00	42.96
MW-24	Shallow Gaspur	12/4/2017	103.96	61.56	42.40
MW-24	Shallow Gaspur	6/4/2018	103.96	NM	NM
MW-24	Shallow Gaspur	6/28/2018	103.96	62.24	41.72
MW-24	Shallow Gaspur	12/3/2018	103.96	62.94	41.02
MW-24	Shallow Gaspur	6/10/2019	103.96	63.28	40.68
MW-25	Intermediate Gaspur	12/18/2003	103.84	47.80	56.04
MW-25	Intermediate Gaspur	4/16/2004	103.84	48.12	55.72
MW-25	Intermediate Gaspur	8/27/2004	103.84	48.67	55.17
MW-25	Intermediate Gaspur	12/22/2004	103.84	49.24	54.60
MW-25	Intermediate Gaspur	4/20/2005	103.84	48.50	55.34
MW-25	Intermediate Gaspur	6/6/2006	103.84	46.74	57.10
MW-25	Intermediate Gaspur	8/28/2006	103.84	46.68	57.16
MW-25	Intermediate Gaspur	2/28/2007	103.84	46.45	57.39
MW-25	Intermediate Gaspur	3/19/2008	103.84	47.57	56.27
MW-25	Intermediate Gaspur	4/14/2008	103.84	47.50	56.34
MW-25	Intermediate Gaspur	5/4/2009	103.84	49.21	54.63
MW-25	Intermediate Gaspur	5/19/2009	103.84	49.35	54.49
MW-25	Intermediate Gaspur	7/15/2010	103.84	51.82	52.02
MW-25	Intermediate Gaspur	6/13/2011	103.84	52.23	51.61
MW-25	Intermediate Gaspur	12/5/2011	103.84	51.92	51.92
MW-25	Intermediate Gaspur	6/7/2012	103.84	51.32	52.52
MW-25	Intermediate Gaspur	6/12/2012	103.84	51.32	52.52
MW-25	Intermediate Gaspur	12/10/2012	103.84	51.86	51.98
MW-25	Intermediate Gaspur	6/17/2013	103.84	53.03	50.81
MW-25	Intermediate Gaspur	12/9/2013	103.84	53.79	50.05
MW-25	Intermediate Gaspur	3/27/2014	103.84	54.02	49.82
MW-25	Intermediate Gaspur	6/10/2014	103.84	54.62	49.22
MW-25	Intermediate Gaspur	12/15/2014	103.84	56.24	47.60
MW-25	Intermediate Gaspur	6/8/2015	103.84	56.70	47.14
MW-25	Intermediate Gaspur	12/7/2015	103.84	58.38	45.46
MW-25	Intermediate Gaspur	6/6/2016	103.74	59.22	44.52

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-25	Intermediate Gaspur	11/28/2016	103.74	60.30	43.44
MW-25	Intermediate Gaspur	6/9/2017	103.74	61.05	42.69
MW-25	Intermediate Gaspur	12/4/2017	103.74	61.52	42.22
MW-25	Intermediate Gaspur	6/4/2018	103.74	61.98	41.76
MW-25	Intermediate Gaspur	6/28/2018	103.74	62.23	41.51
MW-25	Intermediate Gaspur	12/3/2018	103.74	62.91	40.83
MW-25	Intermediate Gaspur	6/10/2019	103.74	63.34	40.40
MW-25B	Lower Gaspur	3/19/2008	103.58	47.42	56.16
MW-25B	Lower Gaspur	4/14/2008	103.58	47.43	56.15
MW-25B	Lower Gaspur	5/4/2009	103.58	49.31	54.27
MW-25B	Lower Gaspur	5/19/2009	103.58	49.27	54.31
MW-25B	Lower Gaspur	7/15/2010	103.58	51.63	51.95
MW-25B	Lower Gaspur	6/13/2011	103.58	52.17	51.41
MW-25B	Lower Gaspur	12/5/2011	103.58	51.84	51.74
MW-25B	Lower Gaspur	6/7/2012	103.58	51.23	52.35
MW-25B	Lower Gaspur	6/12/2012	103.58	51.23	52.35
MW-25B	Lower Gaspur	12/10/2012	103.58	51.53	52.05
MW-25B	Lower Gaspur	6/17/2013	103.58	52.90	50.68
MW-25B	Lower Gaspur	12/9/2013	103.58	53.60	49.98
MW-25B	Lower Gaspur	3/27/2014	103.58	53.98	49.60
MW-25B	Lower Gaspur	6/10/2014	103.58	54.54	49.04
MW-25B	Lower Gaspur	12/15/2014	103.58	55.90	47.68
MW-25B	Lower Gaspur	6/8/2015	103.58	56.62	46.96
MW-25B	Lower Gaspur	12/7/2015	103.58	58.35	45.23
MW-25B	Lower Gaspur	6/6/2016	103.54	59.24	44.30
MW-25B	Lower Gaspur	11/28/2016	103.54	60.40	43.14
MW-25B	Lower Gaspur	6/9/2017	103.54	61.06	42.48
MW-25B	Lower Gaspur	12/4/2017	103.54	61.62	41.92
MW-25B	Lower Gaspur	6/4/2018	103.54	62.64	40.90
MW-25B	Lower Gaspur	6/28/2018	103.54	62.26	41.28
MW-25B	Lower Gaspur	12/3/2018	103.54	63.06	40.48
MW-25B	Lower Gaspur	6/10/2019	103.54	63.35	40.19
MW-26	Exposition	12/18/2003	103.99	52.24	51.75
MW-26	Exposition	4/16/2004	103.99	52.76	51.23
MW-26	Exposition	8/27/2004	103.99	53.47	50.52
MW-26	Exposition	12/22/2004	103.99	54.00	49.99
MW-26	Exposition	4/20/2005	103.99	53.54	50.45
MW-26	Exposition	6/6/2006	103.99	51.35	52.64
MW-26	Exposition	8/28/2006	103.99	51.35	52.64
MW-26	Exposition	2/28/2007	103.99	50.88	53.11
MW-26	Exposition	3/19/2008	103.99	52.11	51.88
MW-26	Exposition	4/14/2008	103.99	52.18	51.81
MW-26	Exposition	5/19/2009	103.99	54.53	49.46
MW-26	Exposition	7/15/2010	103.99	57.17	46.82
MW-26	Exposition	6/13/2011	103.99	57.50	46.49
MW-26	Exposition	12/5/2011	103.99	51.92	52.07

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-26	Exposition	3/26/2012	103.99	56.26	47.73
MW-26	Exposition	6/7/2012	103.99	55.99	48.00
MW-26	Exposition	12/10/2012	103.99	56.52	47.47
MW-26	Exposition	6/17/2013	103.99	57.38	46.61
MW-26	Exposition	12/9/2013	103.99	58.61	45.38
MW-26	Exposition	3/27/2014	103.99	59.30	44.69
MW-26	Exposition	6/10/2014	103.99	59.91	44.08
MW-26	Exposition	12/15/2014	103.99	60.87	43.12
MW-26	Exposition	6/8/2015	103.99	62.86	41.13
MW-26	Exposition	12/7/2015	103.99	64.45	39.54
MW-26	Exposition	6/6/2016	103.86	65.42	38.44
MW-26	Exposition	11/28/2016	103.86	66.62	37.24
MW-26	Exposition	6/9/2017	103.86	67.27	36.59
MW-26	Exposition	12/4/2017	103.86	67.58	36.28
MW-26	Exposition	6/4/2018	103.86	68.23	35.63
MW-26	Exposition	6/28/2018	103.86	68.30	35.56
MW-26	Exposition	12/3/2018	103.86	68.98	34.88
MW-26	Exposition	6/10/2019	103.86	69.34	34.52
MW-27	Intermediate Gaspur	12/18/2003	103.67	47.86	55.81
MW-27	Intermediate Gaspur	4/16/2004	103.67	48.16	55.51
MW-27	Intermediate Gaspur	8/27/2004	103.67	48.66	55.01
MW-27	Intermediate Gaspur	12/22/2004	103.67	49.16	54.51
MW-27	Intermediate Gaspur	4/20/2005	103.67	48.57	55.10
MW-27	Intermediate Gaspur	6/6/2006	103.67	46.77	56.90
MW-27	Intermediate Gaspur	8/28/2006	103.67	46.74	56.93
MW-27	Intermediate Gaspur	2/28/2007	103.67	46.52	57.15
MW-27	Intermediate Gaspur	3/19/2008	103.67	47.51	56.16
MW-27	Intermediate Gaspur	4/14/2008	103.67	47.53	56.14
MW-27	Intermediate Gaspur	5/4/2009	103.67	49.39	54.28
MW-27	Intermediate Gaspur	5/19/2009	103.67	49.44	54.23
MW-27	Intermediate Gaspur	7/15/2010	103.67	51.80	51.87
MW-27	Intermediate Gaspur	6/13/2011	103.67	52.38	51.29
MW-27	Intermediate Gaspur	12/5/2011	103.67	51.86	51.81
MW-27	Intermediate Gaspur	6/7/2012	103.67	51.36	52.31
MW-27	Intermediate Gaspur	6/8/2012	103.67	51.36	52.31
MW-27	Intermediate Gaspur	12/10/2012	103.67	51.92	51.75
MW-27	Intermediate Gaspur	6/17/2013	103.67	53.02	50.65
MW-27	Intermediate Gaspur	12/9/2013	103.67	53.77	49.90
MW-27	Intermediate Gaspur	3/27/2014	103.67	54.07	49.60
MW-27	Intermediate Gaspur	6/10/2014	103.67	54.65	49.02
MW-27	Intermediate Gaspur	12/15/2014	103.67	56.08	47.59
MW-27	Intermediate Gaspur	6/8/2015	103.67	56.84	46.83
MW-27	Intermediate Gaspur	12/7/2015	103.67	58.41	45.26
MW-27	Intermediate Gaspur	6/6/2016	103.60	59.25	44.35
MW-27	Intermediate Gaspur	11/28/2016	103.60	60.35	43.25
MW-27	Intermediate Gaspur	6/9/2017	103.60	61.23	42.37

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-27	Intermediate Gaspur	12/4/2017	103.60	61.54	42.06
MW-27	Intermediate Gaspur	6/4/2018	103.60	NM	NM
MW-27	Intermediate Gaspur	6/28/2018	103.60	62.20	41.40
MW-27	Intermediate Gaspur	12/3/2018	103.60	62.82	40.78
MW-27	Intermediate Gaspur	6/10/2019	103.60	63.28	40.32
MW-28	Lower Gaspur	12/18/2003	103.58	48.25	55.33
MW-28	Lower Gaspur	4/16/2004	103.58	48.59	54.99
MW-28	Lower Gaspur	8/27/2004	103.58	49.09	54.49
MW-28	Lower Gaspur	12/22/2004	103.58	49.57	54.01
MW-28	Lower Gaspur	4/20/2005	103.58	48.94	54.64
MW-28	Lower Gaspur	6/6/2006	103.58	46.90	56.68
MW-28	Lower Gaspur	8/28/2006	103.58	46.91	56.67
MW-28	Lower Gaspur	2/28/2007	103.58	46.73	56.85
MW-28	Lower Gaspur	3/19/2008	103.58	47.79	55.79
MW-28	Lower Gaspur	4/14/2008	103.58	47.78	55.80
MW-28	Lower Gaspur	5/4/2009	103.58	49.65	53.93
MW-28	Lower Gaspur	5/19/2009	103.58	49.71	53.87
MW-28	Lower Gaspur	7/15/2010	103.58	52.10	51.48
MW-28	Lower Gaspur	6/13/2011	103.58	52.51	51.07
MW-28	Lower Gaspur	6/7/2012	103.58	51.43	52.15
MW-28	Lower Gaspur	6/12/2012	103.58	51.43	52.15
MW-28	Lower Gaspur	12/10/2012	103.58	52.01	51.57
MW-28	Lower Gaspur	6/17/2013	103.58	53.01	50.57
MW-28	Lower Gaspur	12/9/2013	103.58	53.84	49.74
MW-28	Lower Gaspur	3/27/2014	103.58	54.17	49.41
MW-28	Lower Gaspur	6/10/2014	103.58	54.75	48.83
MW-28	Lower Gaspur	12/15/2014	103.58	56.17	47.41
MW-28	Lower Gaspur	6/8/2015	103.58	57.01	46.57
MW-28	Lower Gaspur	12/7/2015	103.58	58.59	44.99
MW-28	Lower Gaspur	6/6/2016	103.53	59.42	44.11
MW-28	Lower Gaspur	11/28/2016	103.53	60.69	42.84
MW-28	Lower Gaspur	6/9/2017	103.53	61.20	42.33
MW-28	Lower Gaspur	12/4/2017	103.53	61.76	41.77
MW-28	Lower Gaspur	6/4/2018	103.53	62.07	41.46
MW-28	Lower Gaspur	6/28/2018	103.53	62.43	41.10
MW-28	Lower Gaspur	12/3/2018	103.53	63.09	40.44
MW-28	Lower Gaspur	6/10/2019	103.53	63.46	40.07
MW-29	Intermediate Gaspur	12/18/2003	103.18	47.42	55.76
MW-29	Intermediate Gaspur	4/16/2004	103.18	47.71	55.47
MW-29	Intermediate Gaspur	8/27/2004	103.18	48.22	54.96
MW-29	Intermediate Gaspur	12/22/2004	103.18	48.74	54.44
MW-29	Intermediate Gaspur	4/20/2005	103.18	48.12	55.06
MW-29	Intermediate Gaspur	6/6/2006	103.18	46.33	56.85
MW-29	Intermediate Gaspur	8/28/2006	103.18	46.30	56.88
MW-29	Intermediate Gaspur	2/28/2007	103.18	46.01	57.17
MW-29	Intermediate Gaspur	3/19/2008	103.18	47.23	55.95

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-29	Intermediate Gaspur	4/14/2008	103.18	47.08	56.10
MW-29	Intermediate Gaspur	5/4/2009	103.18	48.95	54.23
MW-29	Intermediate Gaspur	5/19/2009	103.18	48.95	54.23
MW-29	Intermediate Gaspur	7/15/2010	103.18	51.34	51.84
MW-29	Intermediate Gaspur	6/13/2011	103.18	51.96	51.22
MW-29	Intermediate Gaspur	12/5/2011	103.18	51.41	51.77
MW-29	Intermediate Gaspur	6/7/2012	103.18	50.82	52.36
MW-29	Intermediate Gaspur	6/8/2012	103.18	50.82	52.36
MW-29	Intermediate Gaspur	12/10/2012	103.18	51.42	51.76
MW-29	Intermediate Gaspur	6/17/2013	103.18	52.52	50.66
MW-29	Intermediate Gaspur	12/9/2013	103.18	53.22	49.96
MW-29	Intermediate Gaspur	3/27/2014	103.18	53.52	49.66
MW-29	Intermediate Gaspur	6/10/2014	103.18	54.10	49.08
MW-29	Intermediate Gaspur	12/15/2014	103.18	55.61	47.57
MW-29	Intermediate Gaspur	6/8/2015	103.18	56.33	46.85
MW-29	Intermediate Gaspur	12/7/2015	103.18	57.84	45.34
MW-29	Intermediate Gaspur	6/6/2016	102.95	58.73	44.22
MW-29	Intermediate Gaspur	11/28/2016	102.95	59.90	43.05
MW-29	Intermediate Gaspur	6/9/2017	102.95	60.54	42.41
MW-29	Intermediate Gaspur	12/4/2017	102.95	61.04	41.91
MW-29	Intermediate Gaspur	6/4/2018	102.95	NM	NM
MW-29	Intermediate Gaspur	6/28/2018	102.95	61.79	41.16
MW-29	Intermediate Gaspur	12/3/2018	102.95	62.41	40.54
MW-29	Intermediate Gaspur	6/10/2019	102.95	62.81	40.14
MW-29A	Shallow Gaspur	3/19/2008	102.92	46.84	56.08
MW-29A	Shallow Gaspur	4/14/2008	102.92	46.80	56.12
MW-29A	Shallow Gaspur	5/4/2009	102.92	48.69	54.23
MW-29A	Shallow Gaspur	5/19/2009	102.92	48.68	54.24
MW-29A	Shallow Gaspur	7/15/2010	102.92	51.14	51.78
MW-29A	Shallow Gaspur	6/13/2011	102.92	51.63	51.29
MW-29A	Shallow Gaspur	12/5/2011	102.92	51.17	51.75
MW-29A	Shallow Gaspur	6/7/2012	102.92	50.62	52.30
MW-29A	Shallow Gaspur	6/7/2012	102.92	50.62	52.30
MW-29A	Shallow Gaspur	12/10/2012	102.92	51.12	51.80
MW-29A	Shallow Gaspur	6/17/2013	102.92	52.34	50.58
MW-29A	Shallow Gaspur	12/9/2013	102.92	52.97	49.95
MW-29A	Shallow Gaspur	3/27/2014	102.92	53.44	49.48
MW-29A	Shallow Gaspur	6/9/2014	102.92	54.92	48.00
MW-29A	Shallow Gaspur	12/15/2014	102.92	55.34	47.58
MW-29A	Shallow Gaspur	6/8/2015	102.92	56.09	46.83
MW-29A	Shallow Gaspur	12/7/2015	102.92	57.65	45.27
MW-29A	Shallow Gaspur	6/6/2016	102.95	58.43	44.52
MW-29A	Shallow Gaspur	11/28/2016	102.95	59.50	43.45
MW-29A	Shallow Gaspur	6/5/2017	102.95	60.54	42.41
MW-29A	Shallow Gaspur	12/4/2017	102.95	60.77	42.18
MW-29A	Shallow Gaspur	6/4/2018	102.95	NM	NM

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-29A	Shallow Gaspur	6/28/2018	102.95	61.52	41.43
MW-29A	Shallow Gaspur	12/3/2018	102.95	62.11	40.84
MW-29A	Shallow Gaspur	6/10/2019	102.95	62.51	40.44
MW-30	Lower Gaspur	12/18/2003	103.13	47.94	55.19
MW-30	Lower Gaspur	4/16/2004	103.13	47.33	55.80
MW-30	Lower Gaspur	8/27/2004	103.13	48.84	54.29
MW-30	Lower Gaspur	12/22/2004	103.13	49.35	53.78
MW-30	Lower Gaspur	4/20/2005	103.13	48.70	54.43
MW-30	Lower Gaspur	6/6/2006	103.13	46.90	56.23
MW-30	Lower Gaspur	8/28/2006	103.13	46.88	56.25
MW-30	Lower Gaspur	2/28/2007	103.13	46.60	56.53
MW-30	Lower Gaspur	3/19/2008	103.13	47.71	55.42
MW-30	Lower Gaspur	4/14/2008	103.13	47.70	55.43
MW-30	Lower Gaspur	5/4/2009	103.13	49.62	53.51
MW-30	Lower Gaspur	5/19/2009	103.13	49.63	53.50
MW-30	Lower Gaspur	7/15/2010	103.13	52.04	51.09
MW-30	Lower Gaspur	6/13/2011	103.13	52.58	50.55
MW-30	Lower Gaspur	12/5/2011	103.13	52.07	51.06
MW-30	Lower Gaspur	6/7/2012	103.13	51.48	51.65
MW-30	Lower Gaspur	6/12/2012	103.13	51.48	51.65
MW-30	Lower Gaspur	12/10/2012	103.13	52.12	51.01
MW-30	Lower Gaspur	6/17/2013	103.13	54.11	49.02
MW-30	Lower Gaspur	12/9/2013	103.13	53.87	49.26
MW-30	Lower Gaspur	3/27/2014	103.13	54.23	48.90
MW-30	Lower Gaspur	6/9/2014	103.13	54.88	48.25
MW-30	Lower Gaspur	12/15/2014	103.13	56.35	46.78
MW-30	Lower Gaspur	6/8/2015	103.13	57.21	45.92
MW-30	Lower Gaspur	12/7/2015	103.13	58.90	44.23
MW-30	Lower Gaspur	6/6/2016	103.09	59.41	43.68
MW-30	Lower Gaspur	11/28/2016	103.09	60.58	42.51
MW-30	Lower Gaspur	6/9/2017	103.09	61.31	41.78
MW-30	Lower Gaspur	12/4/2017	103.09	61.70	41.39
MW-30	Lower Gaspur	6/4/2018	103.09	62.29	40.80
MW-30	Lower Gaspur	6/28/2018	103.09	62.38	40.71
MW-30	Lower Gaspur	12/3/2018	103.09	63.10	39.99
MW-30	Lower Gaspur	6/10/2019	103.09	63.46	39.63
MW-31	Intermediate Gaspur	12/18/2003	103.36	47.43	55.93
MW-31	Intermediate Gaspur	4/16/2004	103.36	47.73	55.63
MW-31	Intermediate Gaspur	8/27/2004	103.36	48.27	55.09
MW-31	Intermediate Gaspur	12/22/2004	103.36	48.66	54.70
MW-31	Intermediate Gaspur	4/20/2005	103.36	48.20	55.16
MW-31	Intermediate Gaspur	6/6/2006	103.36	46.48	56.88
MW-31	Intermediate Gaspur	8/28/2006	103.36	46.28	57.08
MW-31	Intermediate Gaspur	2/28/2007	103.36	46.09	57.27
MW-31	Intermediate Gaspur	3/19/2008	103.36	47.26	56.10
MW-31	Intermediate Gaspur	4/14/2008	103.36	47.14	56.22

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-31	Intermediate Gaspur	5/4/2009	103.36	48.99	54.37
MW-31	Intermediate Gaspur	5/19/2009	103.36	49.00	54.36
MW-31	Intermediate Gaspur	7/15/2010	103.36	51.41	51.95
MW-31	Intermediate Gaspur	6/13/2011	103.36	52.04	51.32
MW-31	Intermediate Gaspur	12/5/2011	103.36	51.62	51.74
MW-31	Intermediate Gaspur	6/7/2012	103.36	51.03	52.33
MW-31	Intermediate Gaspur	6/7/2012	103.36	51.03	52.33
MW-31	Intermediate Gaspur	12/10/2012	103.36	51.62	51.74
MW-31	Intermediate Gaspur	6/17/2013	103.36	52.62	50.74
MW-31	Intermediate Gaspur	12/9/2013	103.36	53.31	50.05
MW-31	Intermediate Gaspur	3/27/2014	103.36	53.73	49.63
MW-31	Intermediate Gaspur	6/9/2014	103.36	54.23	49.13
MW-31	Intermediate Gaspur	12/15/2014	103.36	55.61	47.75
MW-31	Intermediate Gaspur	6/8/2015	103.36	56.44	46.92
MW-31	Intermediate Gaspur	12/7/2015	103.36	57.98	45.38
MW-31	Intermediate Gaspur	6/6/2016	103.30	58.85	44.45
MW-31	Intermediate Gaspur	11/28/2016	103.30	59.98	43.32
MW-31	Intermediate Gaspur	6/9/2017	103.30	60.65	42.65
MW-31	Intermediate Gaspur	12/4/2017	103.30	61.24	42.06
MW-31	Intermediate Gaspur	6/4/2018	103.30	61.60	41.70
MW-31	Intermediate Gaspur	6/28/2018	103.30	61.91	41.39
MW-31	Intermediate Gaspur	12/3/2018	103.30	62.55	40.75
MW-31	Intermediate Gaspur	6/10/2019	103.30	63.04	40.26
MW-31A	Shallow Gaspur	3/19/2008	103.08	46.78	56.30
MW-31A	Shallow Gaspur	4/14/2008	103.08	46.70	56.38
MW-31A	Shallow Gaspur	5/4/2009	103.08	48.55	54.53
MW-31A	Shallow Gaspur	5/19/2009	103.08	48.56	54.52
MW-31A	Shallow Gaspur	7/15/2010	103.08	50.92	52.16
MW-31A	Shallow Gaspur	6/13/2011	103.08	51.50	51.58
MW-31A	Shallow Gaspur	12/5/2011	103.08	51.22	51.86
MW-31A	Shallow Gaspur	6/7/2012	103.08	50.53	52.55
MW-31A	Shallow Gaspur	6/7/2012	103.08	50.53	52.55
MW-31A	Shallow Gaspur	12/10/2012	103.08	50.92	52.16
MW-31A	Shallow Gaspur	6/17/2013	103.08	52.14	50.94
MW-31A	Shallow Gaspur	12/9/2013	103.08	52.92	50.16
MW-31A	Shallow Gaspur	3/27/2014	103.08	53.23	49.85
MW-31A	Shallow Gaspur	6/9/2014	103.08	53.71	49.37
MW-31A	Shallow Gaspur	12/15/2014	103.08	55.00	48.08
MW-31A	Shallow Gaspur	6/8/2015	103.08	55.94	47.14
MW-31A	Shallow Gaspur	12/7/2015	103.08	57.48	45.60
MW-31A	Shallow Gaspur	6/6/2016	103.07	58.18	44.89
MW-31A	Shallow Gaspur	11/28/2016	103.07	59.29	43.78
MW-31A	Shallow Gaspur	6/9/2017	103.07	60.03	43.04
MW-31A	Shallow Gaspur	12/4/2017	103.07	60.64	42.43
MW-31A	Shallow Gaspur	6/4/2018	103.07	60.94	42.13
MW-31A	Shallow Gaspur	6/28/2018	103.07	61.29	41.78

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-31A	Shallow Gaspur	12/3/2018	103.07	62.07	41.00
MW-31A	Shallow Gaspur	6/10/2019	103.07	62.70	40.37
MW-31B	Lower Gaspur	3/19/2008	103.17	47.34	55.83
MW-31B	Lower Gaspur	4/14/2008	103.17	47.40	55.77
MW-31B	Lower Gaspur	5/4/2009	103.17	49.25	53.92
MW-31B	Lower Gaspur	5/19/2009	103.17	49.27	53.90
MW-31B	Lower Gaspur	7/15/2010	103.17	51.71	51.46
MW-31B	Lower Gaspur	6/13/2011	103.17	52.20	50.97
MW-31B	Lower Gaspur	12/5/2011	103.17	51.91	51.26
MW-31B	Lower Gaspur	6/7/2012	103.17	51.18	51.99
MW-31B	Lower Gaspur	6/8/2012	103.17	51.18	51.99
MW-31B	Lower Gaspur	12/10/2012	103.17	51.82	51.35
MW-31B	Lower Gaspur	6/17/2013	103.17	52.70	50.47
MW-31B	Lower Gaspur	12/9/2013	103.17	53.53	49.64
MW-31B	Lower Gaspur	3/27/2014	103.17	53.92	49.25
MW-31B	Lower Gaspur	6/9/2014	103.17	54.43	48.74
MW-31B	Lower Gaspur	12/15/2014	103.17	55.84	47.33
MW-31B	Lower Gaspur	6/8/2015	103.17	56.77	46.40
MW-31B	Lower Gaspur	12/7/2015	103.17	58.30	44.87
MW-31B	Lower Gaspur	6/6/2016	103.15	59.07	44.08
MW-31B	Lower Gaspur	11/28/2016	103.15	60.13	43.02
MW-31B	Lower Gaspur	6/9/2017	103.15	60.90	42.25
MW-31B	Lower Gaspur	12/4/2017	103.15	61.45	41.70
MW-31B	Lower Gaspur	6/4/2018	103.15	61.88	41.27
MW-31B	Lower Gaspur	6/28/2018	103.15	62.01	41.14
MW-31B	Lower Gaspur	12/3/2018	103.15	62.74	40.41
MW-31B	Lower Gaspur	6/10/2019	103.15	63.01	40.14
MW-32	Exposition	12/18/2003	103.33	51.74	51.59
MW-32	Exposition	4/16/2004	103.33	52.26	51.07
MW-32	Exposition	8/27/2004	103.33	52.97	50.36
MW-32	Exposition	12/22/2004	103.33	53.50	49.83
MW-32	Exposition	4/20/2005	103.33	53.07	50.26
MW-32	Exposition	6/6/2006	103.33	50.87	52.46
MW-32	Exposition	8/28/2006	103.33	50.90	52.43
MW-32	Exposition	2/28/2007	103.33	50.37	52.96
MW-32	Exposition	3/19/2008	103.33	51.54	51.79
MW-32	Exposition	4/14/2008	103.33	51.71	51.62
MW-32	Exposition	5/19/2009	103.33	54.07	49.26
MW-32	Exposition	7/15/2010	103.33	56.68	46.65
MW-32	Exposition	6/13/2011	103.33	57.12	46.21
MW-32	Exposition	12/5/2011	103.33	56.32	47.01
MW-32	Exposition	6/7/2012	103.33	55.52	47.81
MW-32	Exposition	6/7/2012	103.33	55.52	47.81
MW-32	Exposition	12/10/2012	103.33	55.92	47.41
MW-32	Exposition	6/17/2013	103.33	56.92	46.41
MW-32	Exposition	3/27/2014	103.33	58.70	44.63

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-32	Exposition	6/11/2014	103.33	59.41	43.92
MW-32	Exposition	12/15/2014	103.33	61.31	42.02
MW-32	Exposition	6/8/2015	103.33	62.50	40.83
MW-32	Exposition	12/7/2015	103.33	64.04	39.29
MW-32	Exposition	6/6/2016	103.27	65.02	38.25
MW-32	Exposition	11/28/2016	103.27	66.19	37.08
MW-32	Exposition	6/9/2017	103.27	66.73	36.54
MW-32	Exposition	12/4/2017	103.27	67.17	36.10
MW-32	Exposition	6/4/2018	103.27	67.67	35.60
MW-32	Exposition	6/28/2018	103.27	67.70	35.57
MW-32	Exposition	12/3/2018	103.27	68.50	34.77
MW-32	Exposition	6/10/2019	103.27	68.85	34.42
MW-33A	Shallow Gaspur	6/6/2006	104.96	46.73	58.23
MW-33A	Shallow Gaspur	8/28/2006	104.96	47.20	57.76
MW-33A	Shallow Gaspur	3/19/2008	104.96	47.82	57.14
MW-33A	Shallow Gaspur	4/14/2008	104.96	47.92	57.04
MW-33A	Shallow Gaspur	5/19/2009	104.96	49.84	55.12
MW-33A	Shallow Gaspur	7/15/2010	104.96	52.14	52.82
MW-33A	Shallow Gaspur	6/13/2011	104.96	52.78	52.18
MW-33A	Shallow Gaspur	12/5/2011	104.96	52.49	52.47
MW-33A	Shallow Gaspur	6/7/2012	104.96	51.84	53.12
MW-33A	Shallow Gaspur	6/8/2012	104.96	51.84	53.12
MW-33A	Shallow Gaspur	12/10/2012	104.96	52.51	52.45
MW-33A	Shallow Gaspur	6/17/2013	104.96	54.54	50.42
MW-33A	Shallow Gaspur	12/9/2013	104.96	55.10	49.86
MW-33A	Shallow Gaspur	6/9/2014	104.96	55.64	49.32
MW-33A	Shallow Gaspur	12/15/2014	104.96	56.88	48.08
MW-33A	Shallow Gaspur	6/8/2015	104.96	57.05	47.91
MW-33A	Shallow Gaspur	12/7/2015	104.96	58.84	46.12
MW-33A	Shallow Gaspur	6/6/2016	104.96	59.60	45.36
MW-33A	Shallow Gaspur	11/28/2016	104.96	60.72	44.24
MW-33A	Shallow Gaspur	6/9/2017	104.96	61.12	43.84
MW-33A	Shallow Gaspur	12/4/2017	104.96	61.81	43.15
MW-33A	Shallow Gaspur	6/4/2018	104.96	Dry	Dry
MW-33A	Shallow Gaspur	6/28/2018	104.96	62.66	42.30
MW-33A	Shallow Gaspur	12/3/2018	104.96	Dry	Dry
MW-33A	Shallow Gaspur	6/10/2019	104.96	Dry	Dry
MW-33B	Intermediate Gaspur	6/6/2006	104.72	47.02	57.70
MW-33B	Intermediate Gaspur	8/28/2006	104.72	47.03	57.69
MW-33B	Intermediate Gaspur	3/19/2008	104.72	47.53	57.19
MW-33B	Intermediate Gaspur	4/14/2008	104.72	47.78	56.94
MW-33B	Intermediate Gaspur	5/19/2009	104.72	49.67	55.05
MW-33B	Intermediate Gaspur	7/15/2010	104.72	51.93	52.79
MW-33B	Intermediate Gaspur	6/13/2011	104.72	52.51	52.21
MW-33B	Intermediate Gaspur	12/5/2011	104.72	52.25	52.47
MW-33B	Intermediate Gaspur	6/7/2012	104.72	51.59	53.13

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-33B	Intermediate Gaspur	6/8/2012	104.72	51.59	53.13
MW-33B	Intermediate Gaspur	12/10/2012	104.72	52.30	52.42
MW-33B	Intermediate Gaspur	6/17/2013	104.72	54.44	50.28
MW-33B	Intermediate Gaspur	12/9/2013	104.72	54.92	49.80
MW-33B	Intermediate Gaspur	6/9/2014	104.72	55.55	49.17
MW-33B	Intermediate Gaspur	12/15/2014	104.72	56.70	48.02
MW-33B	Intermediate Gaspur	6/8/2015	104.72	57.00	47.72
MW-33B	Intermediate Gaspur	12/7/2015	104.72	58.79	45.93
MW-33B	Intermediate Gaspur	6/6/2016	104.72	59.46	45.26
MW-33B	Intermediate Gaspur	11/28/2016	104.72	60.60	44.12
MW-33B	Intermediate Gaspur	6/9/2017	104.72	61.16	43.56
MW-33B	Intermediate Gaspur	12/4/2017	104.72	61.61	43.11
MW-33B	Intermediate Gaspur	6/4/2018	104.72	62.67	42.05
MW-33B	Intermediate Gaspur	6/28/2018	104.72	62.42	42.30
MW-33B	Intermediate Gaspur	12/3/2018	104.72	62.97	41.75
MW-33B	Intermediate Gaspur	6/10/2019	104.72	63.51	41.21
MW-34	Shallow Gaspur	3/19/2008	103.24	46.95	56.29
MW-34	Shallow Gaspur	4/14/2008	103.24	46.97	56.27
MW-34	Shallow Gaspur	5/4/2009	103.24	48.86	54.38
MW-34	Shallow Gaspur	5/19/2009	103.24	48.90	54.34
MW-34	Shallow Gaspur	7/15/2010	103.24	51.32	51.92
MW-34	Shallow Gaspur	6/13/2011	103.24	51.88	51.36
MW-34	Shallow Gaspur	12/5/2011	103.24	51.58	51.66
MW-34	Shallow Gaspur	6/7/2012	103.24	50.86	52.38
MW-34	Shallow Gaspur	6/12/2012	103.24	50.86	52.38
MW-34	Shallow Gaspur	12/10/2012	103.24	51.38	51.86
MW-34	Shallow Gaspur	6/17/2013	103.24	52.48	50.76
MW-34	Shallow Gaspur	12/9/2013	103.24	53.27	49.97
MW-34	Shallow Gaspur	3/27/2014	103.24	53.55	49.69
MW-34	Shallow Gaspur	6/9/2014	103.24	54.08	49.16
MW-34	Shallow Gaspur	12/15/2014	103.24	55.40	47.84
MW-34	Shallow Gaspur	6/8/2015	103.24	56.21	47.03
MW-34	Shallow Gaspur	12/7/2015	103.24	57.82	45.42
MW-34	Shallow Gaspur	6/6/2016	103.24	58.35	44.89
MW-34	Shallow Gaspur	11/28/2016	103.24	59.47	43.77
MW-34	Shallow Gaspur	6/9/2017	103.24	60.46	42.78
MW-34	Shallow Gaspur	12/4/2017	103.24	60.83	42.41
MW-34	Shallow Gaspur	6/4/2018	103.24	61.10	42.14
MW-34	Shallow Gaspur	6/28/2018	103.24	61.80	41.44
MW-34	Shallow Gaspur	12/3/2018	103.24	62.37	40.87
MW-34	Shallow Gaspur	6/10/2019	103.24	62.90	40.34
MW-35	Lower Gaspur	3/19/2008	103.27	47.11	56.16
MW-35	Lower Gaspur	4/14/2008	103.27	47.53	55.74
MW-35	Lower Gaspur	5/4/2009	103.27	49.02	54.25
MW-35	Lower Gaspur	5/19/2009	103.27	49.08	54.19
MW-35	Lower Gaspur	7/15/2010	103.27	51.54	51.73

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-35	Lower Gaspur	6/13/2011	103.27	52.03	51.24
MW-35	Lower Gaspur	12/5/2011	103.27	51.71	51.56
MW-35	Lower Gaspur	6/7/2012	103.27	51.09	52.18
MW-35	Lower Gaspur	6/8/2012	103.27	51.09	52.18
MW-35	Lower Gaspur	12/10/2012	103.27	51.62	51.65
MW-35	Lower Gaspur	6/17/2013	103.27	52.64	50.63
MW-35	Lower Gaspur	12/9/2013	103.27	53.49	49.78
MW-35	Lower Gaspur	3/27/2014	103.27	53.81	49.46
MW-35	Lower Gaspur	6/9/2014	103.27	54.36	48.91
MW-35	Lower Gaspur	12/15/2014	103.27	55.73	47.54
MW-35	Lower Gaspur	6/8/2015	103.27	56.44	46.83
MW-35	Lower Gaspur	12/7/2015	103.27	58.07	45.20
MW-35	Lower Gaspur	6/6/2016	103.25	67.02	36.23
MW-35	Lower Gaspur	11/28/2016	103.25	60.05	43.20
MW-35	Lower Gaspur	6/9/2017	103.25	60.75	42.50
MW-35	Lower Gaspur	12/4/2017	103.25	61.21	42.04
MW-35	Lower Gaspur	6/4/2018	103.25	61.62	41.63
MW-35	Lower Gaspur	6/28/2018	103.25	61.93	41.32
MW-35	Lower Gaspur	12/3/2018	103.25	62.78	40.47
MW-35	Lower Gaspur	6/10/2019	103.25	62.99	40.26
MW-36	Intermediate Gaspur	3/19/2008	102.77	46.76	56.01
MW-36	Intermediate Gaspur	4/14/2008	102.77	46.86	55.91
MW-36	Intermediate Gaspur	5/4/2009	102.77	48.73	54.04
MW-36	Intermediate Gaspur	5/19/2009	102.77	48.72	54.05
MW-36	Intermediate Gaspur	7/15/2010	102.77	51.12	51.65
MW-36	Intermediate Gaspur	6/13/2011	102.77	51.67	51.10
MW-36	Intermediate Gaspur	12/5/2011	102.77	50.95	51.82
MW-36	Intermediate Gaspur	6/7/2012	102.77	50.53	52.24
MW-36	Intermediate Gaspur	6/8/2012	102.77	50.53	52.24
MW-36	Intermediate Gaspur	12/10/2012	102.77	50.98	51.79
MW-36	Intermediate Gaspur	6/17/2013	102.77	52.12	50.65
MW-36	Intermediate Gaspur	12/9/2013	102.77	52.83	49.94
MW-36	Intermediate Gaspur	3/27/2014	102.77	53.30	49.47
MW-36	Intermediate Gaspur	6/10/2014	102.77	53.98	48.79
MW-36	Intermediate Gaspur	12/15/2014	102.77	55.29	47.48
MW-36	Intermediate Gaspur	6/8/2015	102.77	56.23	46.54
MW-36	Intermediate Gaspur	12/7/2015	102.77	57.72	45.05
MW-36	Intermediate Gaspur	6/6/2016	102.73	58.49	44.24
MW-36	Intermediate Gaspur	11/28/2016	102.73	59.59	43.14
MW-36	Intermediate Gaspur	6/7/2017	102.73	60.35	42.38
MW-36	Intermediate Gaspur	12/4/2017	102.73	60.76	41.97
MW-36	Intermediate Gaspur	6/4/2018	102.73	NM	NM
MW-36	Intermediate Gaspur	6/28/2018	102.73	61.52	41.21
MW-36	Intermediate Gaspur	12/3/2018	102.73	62.18	40.55
MW-36	Intermediate Gaspur	6/10/2019	102.73	62.51	40.22
MW-37	Lower Gaspur	3/19/2008	102.54	46.88	55.66

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-37	Lower Gaspur	4/14/2008	102.54	47.00	55.54
MW-37	Lower Gaspur	5/4/2009	102.54	48.83	53.71
MW-37	Lower Gaspur	5/19/2009	102.54	48.84	53.70
MW-37	Lower Gaspur	7/15/2010	102.54	51.18	51.36
MW-37	Lower Gaspur	6/13/2011	102.54	51.78	50.76
MW-37	Lower Gaspur	12/5/2011	102.54	51.17	51.37
MW-37	Lower Gaspur	6/7/2012	102.54	50.62	51.92
MW-37	Lower Gaspur	6/12/2012	102.54	50.62	51.92
MW-37	Lower Gaspur	12/10/2012	102.54	51.25	51.29
MW-37	Lower Gaspur	6/17/2013	102.54	52.49	50.05
MW-37	Lower Gaspur	12/9/2013	102.54	52.91	49.63
MW-37	Lower Gaspur	3/27/2014	102.54	53.40	49.14
MW-37	Lower Gaspur	6/10/2014	102.54	53.93	48.61
MW-37	Lower Gaspur	12/15/2014	102.54	55.32	47.22
MW-37	Lower Gaspur	6/8/2015	102.54	56.20	46.34
MW-37	Lower Gaspur	12/7/2015	102.54	57.80	44.74
MW-37	Lower Gaspur	6/6/2016	102.50	58.53	43.97
MW-37	Lower Gaspur	11/28/2016	102.50	59.66	42.84
MW-37	Lower Gaspur	6/7/2017	102.50	60.42	42.08
MW-37	Lower Gaspur	12/4/2017	102.50	60.80	41.70
MW-37	Lower Gaspur	6/4/2018	102.50	61.40	41.10
MW-37	Lower Gaspur	6/28/2018	102.50	61.58	40.92
MW-37	Lower Gaspur	12/3/2018	102.50	62.22	40.28
MW-37	Lower Gaspur	6/10/2019	102.50	62.51	39.99
MW-38	Shallow Gaspur	3/19/2008	102.30	46.34	55.96
MW-38	Shallow Gaspur	4/14/2008	102.30	46.37	55.93
MW-38	Shallow Gaspur	5/4/2009	102.30	48.20	54.10
MW-38	Shallow Gaspur	5/19/2009	102.30	48.27	54.03
MW-38	Shallow Gaspur	7/15/2010	102.30	50.68	51.62
MW-38	Shallow Gaspur	6/13/2011	102.30	51.25	51.05
MW-38	Shallow Gaspur	12/5/2011	102.30	50.78	51.52
MW-38	Shallow Gaspur	6/7/2012	102.30	50.22	52.08
MW-38	Shallow Gaspur	6/8/2012	102.30	50.22	52.08
MW-38	Shallow Gaspur	12/10/2012	102.30	50.79	51.51
MW-38	Shallow Gaspur	6/17/2013	102.30	51.80	50.50
MW-38	Shallow Gaspur	12/9/2013	102.30	52.29	50.01
MW-38	Shallow Gaspur	3/27/2014	102.30	52.89	49.41
MW-38	Shallow Gaspur	6/9/2014	102.30	53.46	48.84
MW-38	Shallow Gaspur	12/15/2014	102.30	54.78	47.52
MW-38	Shallow Gaspur	6/8/2015	102.30	55.66	46.64
MW-38	Shallow Gaspur	12/7/2015	102.30	57.01	45.29
MW-38	Shallow Gaspur	6/6/2016	102.28	57.80	44.48
MW-38	Shallow Gaspur	11/28/2016	102.28	58.85	43.43
MW-38	Shallow Gaspur	6/7/2017	102.28	59.70	42.58
MW-38	Shallow Gaspur	12/4/2017	102.28	60.26	42.02
MW-38	Shallow Gaspur	6/4/2018	102.28	60.69	41.59

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-38	Shallow Gaspur	6/28/2018	102.28	60.85	41.43
MW-38	Shallow Gaspur	12/3/2018	102.28	61.60	40.68
MW-38	Shallow Gaspur	6/10/2019	102.28	61.88	40.40
MW-39	Intermediate Gaspur	3/19/2008	102.37	NM	NM
MW-39	Intermediate Gaspur	4/14/2008	102.37	49.47	52.90
MW-39	Intermediate Gaspur	5/4/2009	102.37	48.39	53.98
MW-39	Intermediate Gaspur	5/19/2009	102.37	48.40	53.97
MW-39	Intermediate Gaspur	7/15/2010	102.37	50.77	51.60
MW-39	Intermediate Gaspur	6/13/2011	102.37	51.39	50.98
MW-39	Intermediate Gaspur	12/5/2011	102.37	50.92	51.45
MW-39	Intermediate Gaspur	6/7/2012	102.37	50.23	52.14
MW-39	Intermediate Gaspur	6/12/2012	102.37	50.23	52.14
MW-39	Intermediate Gaspur	12/10/2012	102.37	50.88	51.49
MW-39	Intermediate Gaspur	6/17/2013	102.37	51.96	50.41
MW-39	Intermediate Gaspur	12/9/2013	102.37	52.66	49.71
MW-39	Intermediate Gaspur	3/27/2014	102.37	52.99	49.38
MW-39	Intermediate Gaspur	6/9/2014	102.37	53.64	48.73
MW-39	Intermediate Gaspur	12/15/2014	102.37	54.99	47.38
MW-39	Intermediate Gaspur	6/8/2015	102.37	55.84	46.53
MW-39	Intermediate Gaspur	12/7/2015	102.37	57.38	44.99
MW-39	Intermediate Gaspur	6/6/2016	102.34	58.20	44.14
MW-39	Intermediate Gaspur	11/28/2016	102.34	59.32	43.02
MW-39	Intermediate Gaspur	6/7/2017	102.34	60.03	42.31
MW-39	Intermediate Gaspur	12/4/2017	102.34	60.53	41.81
MW-39	Intermediate Gaspur	6/4/2018	102.34	61.00	41.34
MW-39	Intermediate Gaspur	6/28/2018	102.34	61.24	41.10
MW-39	Intermediate Gaspur	12/3/2018	102.34	61.85	40.49
MW-39	Intermediate Gaspur	6/10/2019	102.34	62.26	40.08
MW-40	Lower Gaspur	3/19/2008	102.10	46.26	55.84
MW-40	Lower Gaspur	4/14/2008	102.10	46.42	55.68
MW-40	Lower Gaspur	5/4/2009	102.10	48.26	53.84
MW-40	Lower Gaspur	5/19/2009	102.10	48.28	53.82
MW-40	Lower Gaspur	7/15/2010	102.10	50.64	51.46
MW-40	Lower Gaspur	6/13/2011	102.10	51.30	50.80
MW-40	Lower Gaspur	12/5/2011	102.10	50.72	51.38
MW-40	Lower Gaspur	6/7/2012	102.10	50.25	51.85
MW-40	Lower Gaspur	6/8/2012	102.10	50.25	51.85
MW-40	Lower Gaspur	12/10/2012	102.10	50.58	51.52
MW-40	Lower Gaspur	6/17/2013	102.10	51.42	50.68
MW-40	Lower Gaspur	12/9/2013	102.10	52.49	49.61
MW-40	Lower Gaspur	3/27/2014	102.10	52.81	49.29
MW-40	Lower Gaspur	6/9/2014	102.10	53.52	48.58
MW-40	Lower Gaspur	12/15/2014	102.10	54.91	47.19
MW-40	Lower Gaspur	6/8/2015	102.10	55.75	46.35
MW-40	Lower Gaspur	12/7/2015	102.10	57.14	44.96
MW-40	Lower Gaspur	6/6/2016	102.06	58.44	43.62

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-40	Lower Gaspur	11/28/2016	102.06	59.15	42.91
MW-40	Lower Gaspur	6/7/2017	102.06	59.75	42.31
MW-40	Lower Gaspur	12/4/2017	102.06	60.32	41.74
MW-40	Lower Gaspur	6/4/2018	102.06	60.73	41.33
MW-40	Lower Gaspur	6/28/2018	102.06	61.08	40.98
MW-40	Lower Gaspur	12/3/2018	102.06	61.77	40.29
MW-40	Lower Gaspur	6/10/2019	102.06	62.18	39.88
MW-41	Lower Gaspur	3/19/2008	104.37	48.01	56.36
MW-41	Lower Gaspur	4/14/2008	104.37	48.08	56.29
MW-41	Lower Gaspur	5/4/2009	104.37	49.92	54.45
MW-41	Lower Gaspur	5/19/2009	104.37	49.97	54.40
MW-41	Lower Gaspur	7/15/2010	104.37	52.37	52.00
MW-41	Lower Gaspur	6/13/2011	104.37	52.93	51.44
MW-41	Lower Gaspur	12/5/2011	104.37	52.63	51.74
MW-41	Lower Gaspur	6/7/2012	104.37	51.85	52.52
MW-41	Lower Gaspur	6/13/2012	104.37	51.85	52.52
MW-41	Lower Gaspur	12/10/2012	104.37	52.42	51.95
MW-41	Lower Gaspur	6/17/2013	104.37	53.53	50.84
MW-41	Lower Gaspur	12/9/2013	104.37	54.40	49.97
MW-41	Lower Gaspur	3/27/2014	104.37	54.67	49.70
MW-41	Lower Gaspur	6/11/2014	104.37	55.30	49.07
MW-41	Lower Gaspur	12/15/2014	104.37	56.55	47.82
MW-41	Lower Gaspur	6/8/2015	104.37	57.50	46.87
MW-41	Lower Gaspur	12/7/2015	104.37	59.15	45.22
MW-41	Lower Gaspur	6/6/2016	104.34	59.78	44.56
MW-41	Lower Gaspur	12/1/2016	104.34	60.93	43.41
MW-41	Lower Gaspur	6/7/2017	104.34	61.67	42.67
MW-41	Lower Gaspur	12/4/2017	104.34	62.14	42.20
MW-41	Lower Gaspur	6/4/2018	104.34	62.73	41.61
MW-41	Lower Gaspur	6/28/2018	104.34	62.85	41.49
MW-41	Lower Gaspur	12/3/2018	104.34	63.34	41.00
MW-41	Lower Gaspur	6/10/2019	104.34	63.94	40.40
MW-42	Shallow Gaspur	5/4/2009	104.40	49.78	54.62
MW-42	Shallow Gaspur	5/19/2009	104.40	49.97	54.43
MW-42	Shallow Gaspur	7/15/2010	104.40	52.34	52.06
MW-42	Shallow Gaspur	6/13/2011	104.40	52.80	51.60
MW-42	Shallow Gaspur	12/5/2011	104.40	52.46	51.94
MW-42	Shallow Gaspur	6/7/2012	104.40	51.71	52.69
MW-42	Shallow Gaspur	12/10/2012	104.40	52.32	52.08
MW-42	Shallow Gaspur	6/17/2013	104.40	53.54	50.86
MW-42	Shallow Gaspur	12/9/2013	104.40	53.74	50.66
MW-42	Shallow Gaspur	3/27/2014	104.40	54.40	50.00
MW-42	Shallow Gaspur	6/9/2014	104.40	55.08	49.32
MW-42	Shallow Gaspur	12/15/2014	104.40	56.40	48.00
MW-42	Shallow Gaspur	6/8/2015	104.40	57.14	47.26
MW-42	Shallow Gaspur	12/7/2015	104.40	58.58	45.82

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-42	Shallow Gaspur	6/6/2016	104.36	59.62	44.74
MW-42	Shallow Gaspur	11/28/2016	104.36	60.67	43.69
MW-42	Shallow Gaspur	6/5/2017	104.36	61.50	42.86
MW-42	Shallow Gaspur	12/4/2017	104.36	61.95	42.41
MW-42	Shallow Gaspur	6/4/2018	104.36	NM	NM
MW-42	Shallow Gaspur	6/28/2018	104.36	62.70	41.66
MW-42	Shallow Gaspur	12/3/2018	104.36	62.23	42.13
MW-42	Shallow Gaspur	6/10/2019	104.36	63.78	40.58
MW-43	Intermediate Gaspur	5/4/2009	104.27	49.73	54.54
MW-43	Intermediate Gaspur	5/19/2009	104.27	49.72	54.55
MW-43	Intermediate Gaspur	7/15/2010	104.27	52.08	52.19
MW-43	Intermediate Gaspur	6/13/2011	104.27	52.71	51.56
MW-43	Intermediate Gaspur	12/5/2011	104.27	52.47	51.80
MW-43	Intermediate Gaspur	6/7/2012	104.27	51.64	52.63
MW-43	Intermediate Gaspur	12/10/2012	104.27	52.22	52.05
MW-43	Intermediate Gaspur	6/17/2013	104.27	53.35	50.92
MW-43	Intermediate Gaspur	12/9/2013	104.27	53.66	50.61
MW-43	Intermediate Gaspur	3/27/2014	104.27	54.30	49.97
MW-43	Intermediate Gaspur	6/9/2014	104.27	54.95	49.32
MW-43	Intermediate Gaspur	12/15/2014	104.27	56.28	47.99
MW-43	Intermediate Gaspur	6/8/2015	104.27	57.02	47.25
MW-43	Intermediate Gaspur	12/7/2015	104.27	58.60	45.67
MW-43	Intermediate Gaspur	6/6/2016	104.25	59.46	44.79
MW-43	Intermediate Gaspur	11/28/2016	104.25	60.57	43.68
MW-43	Intermediate Gaspur	6/5/2017	104.25	61.32	42.93
MW-43	Intermediate Gaspur	12/4/2017	104.25	61.84	42.41
MW-43	Intermediate Gaspur	6/4/2018	104.25	NM	NM
MW-43	Intermediate Gaspur	6/28/2018	104.25	62.53	41.72
MW-43	Intermediate Gaspur	12/3/2018	104.25	63.08	41.17
MW-43	Intermediate Gaspur	6/10/2019	104.25	63.61	40.64
MW-44	Lower Gaspur	5/4/2009	104.22	49.74	54.48
MW-44	Lower Gaspur	5/19/2009	104.22	49.75	54.47
MW-44	Lower Gaspur	7/15/2010	104.22	52.10	52.12
MW-44	Lower Gaspur	6/13/2011	104.22	52.73	51.49
MW-44	Lower Gaspur	12/5/2011	104.22	52.44	51.78
MW-44	Lower Gaspur	6/7/2012	104.22	51.71	52.51
MW-44	Lower Gaspur	12/10/2012	104.22	52.28	51.94
MW-44	Lower Gaspur	6/17/2013	104.22	53.51	50.71
MW-44	Lower Gaspur	12/9/2013	104.22	53.78	50.44
MW-44	Lower Gaspur	3/27/2014	104.22	54.30	49.92
MW-44	Lower Gaspur	6/9/2014	104.22	55.00	49.22
MW-44	Lower Gaspur	12/15/2014	104.22	56.30	47.92
MW-44	Lower Gaspur	6/8/2015	104.22	57.28	46.94
MW-44	Lower Gaspur	12/7/2015	104.22	58.62	45.60
MW-44	Lower Gaspur	6/6/2016	104.17	59.45	44.72
MW-44	Lower Gaspur	11/28/2016	104.17	60.52	43.65

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-44	Lower Gaspur	6/5/2017	104.17	61.37	42.80
MW-44	Lower Gaspur	12/4/2017	104.17	61.69	42.48
MW-44	Lower Gaspur	6/4/2018	104.17	61.69	42.48
MW-44	Lower Gaspur	6/28/2018	104.17	62.41	41.76
MW-44	Lower Gaspur	12/3/2018	104.17	62.92	41.25
MW-44	Lower Gaspur	6/10/2019	104.17	63.44	40.73
MW-45	Intermediate Gaspur	5/4/2009	102.49	48.33	54.16
MW-45	Intermediate Gaspur	5/19/2009	102.49	48.32	54.17
MW-45	Intermediate Gaspur	7/15/2010	102.49	50.74	51.75
MW-45	Intermediate Gaspur	6/13/2011	102.49	51.40	51.09
MW-45	Intermediate Gaspur	12/5/2011	102.49	50.88	51.61
MW-45	Intermediate Gaspur	6/7/2012	102.49	50.24	52.25
MW-45	Intermediate Gaspur	12/10/2012	102.49	50.85	51.64
MW-45	Intermediate Gaspur	6/17/2013	102.49	51.84	50.65
MW-45	Intermediate Gaspur	12/9/2013	102.49	52.63	49.86
MW-45	Intermediate Gaspur	3/27/2014	102.49	53.00	49.49
MW-45	Intermediate Gaspur	6/9/2014	102.49	53.45	49.04
MW-45	Intermediate Gaspur	12/15/2014	102.49	54.94	47.55
MW-45	Intermediate Gaspur	6/8/2015	102.49	55.79	46.70
MW-45	Intermediate Gaspur	12/7/2015	102.49	57.30	45.19
MW-45	Intermediate Gaspur	6/6/2016	102.47	58.16	44.31
MW-45	Intermediate Gaspur	11/28/2016	102.47	59.32	43.15
MW-45	Intermediate Gaspur	6/5/2017	102.47	NM	NM
MW-45	Intermediate Gaspur	12/4/2017	102.47	NM	NM
MW-45	Intermediate Gaspur	6/4/2018	102.47	NM	NM
MW-45	Intermediate Gaspur	6/28/2018	102.47	61.23	41.24
MW-45	Intermediate Gaspur	12/3/2018	102.47	61.85	40.62
MW-45	Intermediate Gaspur	6/10/2019	102.47	62.26	40.21
MW-46	Shallow Gaspur	5/4/2009	101.88	47.90	53.98
MW-46	Shallow Gaspur	5/19/2009	101.88	47.90	53.98
MW-46	Shallow Gaspur	7/15/2010	101.88	50.33	51.55
MW-46	Shallow Gaspur	6/13/2011	101.88	50.92	50.96
MW-46	Shallow Gaspur	12/5/2011	101.88	50.40	51.48
MW-46	Shallow Gaspur	6/7/2012	101.88	49.82	52.06
MW-46	Shallow Gaspur	12/10/2012	101.88	50.38	51.50
MW-46	Shallow Gaspur	6/17/2013	101.88	51.50	50.38
MW-46	Shallow Gaspur	12/9/2013	101.88	52.69	49.19
MW-46	Shallow Gaspur	3/27/2014	101.88	52.50	49.38
MW-46	Shallow Gaspur	6/9/2014	101.88	53.07	48.81
MW-46	Shallow Gaspur	12/15/2014	101.88	54.54	47.34
MW-46	Shallow Gaspur	6/8/2015	101.88	55.41	46.47
MW-46	Shallow Gaspur	12/7/2015	101.88	56.86	45.02
MW-46	Shallow Gaspur	6/6/2016	101.87	57.63	44.24
MW-46	Shallow Gaspur	11/28/2016	101.87	58.85	43.02
MW-46	Shallow Gaspur	6/5/2017	101.87	59.85	42.02
MW-46	Shallow Gaspur	12/4/2017	101.87	59.12	42.75

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-46	Shallow Gaspur	6/4/2018	101.87	NM	NM
MW-46	Shallow Gaspur	6/28/2018	101.87	60.64	41.23
MW-46	Shallow Gaspur	12/3/2018	101.87	61.42	40.45
MW-46	Shallow Gaspur	6/10/2019	101.87	61.87	40.00
MW-47	Intermediate Gaspur	5/4/2009	101.78	47.80	53.98
MW-47	Intermediate Gaspur	5/19/2009	101.78	47.80	53.98
MW-47	Intermediate Gaspur	7/15/2010	101.78	50.22	51.56
MW-47	Intermediate Gaspur	6/13/2011	101.78	50.81	50.97
MW-47	Intermediate Gaspur	12/5/2011	101.78	50.31	51.47
MW-47	Intermediate Gaspur	6/7/2012	101.78	49.62	52.16
MW-47	Intermediate Gaspur	12/10/2012	101.78	50.32	51.46
MW-47	Intermediate Gaspur	6/17/2013	101.78	51.35	50.43
MW-47	Intermediate Gaspur	12/9/2013	101.78	52.82	48.96
MW-47	Intermediate Gaspur	3/27/2014	101.78	52.36	49.42
MW-47	Intermediate Gaspur	6/9/2014	101.78	53.01	48.77
MW-47	Intermediate Gaspur	12/15/2014	101.78	54.40	47.38
MW-47	Intermediate Gaspur	6/8/2015	101.78	55.30	46.48
MW-47	Intermediate Gaspur	12/7/2015	101.78	56.77	45.01
MW-47	Intermediate Gaspur	6/6/2016	101.74	57.63	44.11
MW-47	Intermediate Gaspur	11/28/2016	101.74	58.73	43.01
MW-47	Intermediate Gaspur	6/5/2017	101.74	59.60	42.14
MW-47	Intermediate Gaspur	12/4/2017	101.74	60.02	41.72
MW-47	Intermediate Gaspur	6/4/2018	101.74	NM	NM
MW-47	Intermediate Gaspur	6/28/2018	101.74	60.60	41.14
MW-47	Intermediate Gaspur	12/3/2018	101.74	61.30	40.44
MW-47	Intermediate Gaspur	6/10/2019	101.74	61.77	39.97
MW-48	Lower Gaspur	5/4/2009	101.72	47.75	53.97
MW-48	Lower Gaspur	5/19/2009	101.72	47.75	53.97
MW-48	Lower Gaspur	7/15/2010	101.72	50.19	51.53
MW-48	Lower Gaspur	6/13/2011	101.72	50.71	51.01
MW-48	Lower Gaspur	12/5/2011	101.72	50.32	51.40
MW-48	Lower Gaspur	6/7/2012	101.72	49.62	52.10
MW-48	Lower Gaspur	12/10/2012	101.72	50.18	51.54
MW-48	Lower Gaspur	6/17/2013	101.72	51.54	50.18
MW-48	Lower Gaspur	12/9/2013	101.72	52.64	49.08
MW-48	Lower Gaspur	3/27/2014	101.72	52.35	49.37
MW-48	Lower Gaspur	6/9/2014	101.72	53.09	48.63
MW-48	Lower Gaspur	12/15/2014	101.72	54.38	47.34
MW-48	Lower Gaspur	6/8/2015	101.72	55.24	46.48
MW-48	Lower Gaspur	12/7/2015	101.72	56.72	45.00
MW-48	Lower Gaspur	6/6/2016	101.68	57.53	44.15
MW-48	Lower Gaspur	11/28/2016	101.68	58.66	43.02
MW-48	Lower Gaspur	6/5/2017	101.68	59.60	42.08
MW-48	Lower Gaspur	12/4/2017	101.68	60.08	41.60
MW-48	Lower Gaspur	6/4/2018	101.68	NM	NM
MW-48	Lower Gaspur	6/28/2018	101.68	60.50	41.18

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-48	Lower Gaspur	12/3/2018	101.68	61.22	40.46
MW-48	Lower Gaspur	6/10/2019	101.68	61.63	40.05
MW-49	Shallow Gaspur	5/4/2009	100.68	47.06	53.62
MW-49	Shallow Gaspur	5/19/2009	100.68	47.09	53.59
MW-49	Shallow Gaspur	7/15/2010	100.68	49.50	51.18
MW-49	Shallow Gaspur	6/13/2011	100.68	50.04	50.64
MW-49	Shallow Gaspur	12/5/2011	100.68	49.64	51.04
MW-49	Shallow Gaspur	6/7/2012	100.68	48.99	51.69
MW-49	Shallow Gaspur	12/10/2012	100.68	49.49	51.19
MW-49	Shallow Gaspur	6/17/2013	100.68	50.38	50.30
MW-49	Shallow Gaspur	12/9/2013	100.68	50.78	49.90
MW-49	Shallow Gaspur	3/27/2014	100.68	51.65	49.03
MW-49	Shallow Gaspur	6/9/2014	100.68	52.20	48.48
MW-49	Shallow Gaspur	12/15/2014	100.68	53.68	47.00
MW-49	Shallow Gaspur	6/8/2015	100.68	54.57	46.11
MW-49	Shallow Gaspur	12/7/2015	100.68	56.10	44.58
MW-49	Shallow Gaspur	6/6/2016	100.53	56.87	43.66
MW-49	Shallow Gaspur	11/28/2016	100.53	58.04	42.49
MW-49	Shallow Gaspur	6/5/2017	100.53	58.60	41.93
MW-49	Shallow Gaspur	12/4/2017	100.53	59.06	41.47
MW-49	Shallow Gaspur	6/4/2018	100.53	NM	NM
MW-49	Shallow Gaspur	6/28/2018	100.53	59.81	40.72
MW-49	Shallow Gaspur	12/3/2018	100.53	60.57	39.96
MW-49	Shallow Gaspur	6/10/2019	100.53	60.93	39.60
MW-50	Intermediate Gaspur	5/4/2009	100.68	47.20	53.48
MW-50	Intermediate Gaspur	5/19/2009	100.68	47.22	53.46
MW-50	Intermediate Gaspur	7/15/2010	100.68	49.64	51.04
MW-50	Intermediate Gaspur	6/13/2011	100.68	50.20	50.48
MW-50	Intermediate Gaspur	12/5/2011	100.68	49.75	50.93
MW-50	Intermediate Gaspur	6/7/2012	100.68	49.12	51.56
MW-50	Intermediate Gaspur	12/10/2012	100.68	49.58	51.10
MW-50	Intermediate Gaspur	6/17/2013	100.68	50.41	50.27
MW-50	Intermediate Gaspur	12/9/2013	100.68	50.92	49.76
MW-50	Intermediate Gaspur	3/27/2014	100.68	51.77	48.91
MW-50	Intermediate Gaspur	6/9/2014	100.68	52.39	48.29
MW-50	Intermediate Gaspur	12/15/2014	100.68	53.81	46.87
MW-50	Intermediate Gaspur	6/8/2015	100.68	54.70	45.98
MW-50	Intermediate Gaspur	12/7/2015	100.68	56.24	44.44
MW-50	Intermediate Gaspur	6/6/2016	100.65	57.01	43.64
MW-50	Intermediate Gaspur	11/28/2016	100.65	58.19	42.46
MW-50	Intermediate Gaspur	6/5/2017	100.65	58.75	41.90
MW-50	Intermediate Gaspur	12/4/2017	100.65	59.28	41.37
MW-50	Intermediate Gaspur	6/4/2018	100.65	NM	NM
MW-50	Intermediate Gaspur	6/28/2018	100.65	59.99	40.66
MW-50	Intermediate Gaspur	12/3/2018	100.65	60.72	39.93
MW-50	Intermediate Gaspur	6/10/2019	100.65	61.13	39.52

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-51	Lower Gaspur	5/4/2009	100.66	47.20	53.46
MW-51	Lower Gaspur	5/19/2009	100.66	47.21	53.45
MW-51	Lower Gaspur	7/15/2010	100.66	49.51	51.15
MW-51	Lower Gaspur	6/13/2011	100.66	50.14	50.52
MW-51	Lower Gaspur	12/5/2011	100.66	49.80	50.86
MW-51	Lower Gaspur	6/7/2012	100.66	49.06	51.60
MW-51	Lower Gaspur	12/10/2012	100.66	49.62	51.04
MW-51	Lower Gaspur	6/17/2013	100.66	50.51	50.15
MW-51	Lower Gaspur	12/9/2013	100.66	50.89	49.77
MW-51	Lower Gaspur	3/27/2014	100.66	51.82	48.84
MW-51	Lower Gaspur	6/9/2014	100.66	52.37	48.29
MW-51	Lower Gaspur	12/15/2014	100.66	53.83	46.83
MW-51	Lower Gaspur	6/8/2015	100.66	55.03	45.63
MW-51	Lower Gaspur	12/7/2015	100.66	56.26	44.40
MW-51	Lower Gaspur	6/6/2016	100.64	57.06	43.58
MW-51	Lower Gaspur	11/28/2016	100.64	58.19	42.45
MW-51	Lower Gaspur	6/5/2017	100.64	58.80	41.84
MW-51	Lower Gaspur	12/4/2017	100.64	59.18	41.46
MW-51	Lower Gaspur	6/4/2018	100.64	NM	NM
MW-51	Lower Gaspur	6/28/2018	100.64	60.04	40.60
MW-51	Lower Gaspur	12/3/2018	100.64	60.74	39.90
MW-51	Lower Gaspur	6/10/2019	100.64	61.11	39.53
MW-52	Shallow Gaspur	5/4/2009	100.80	47.18	53.62
MW-52	Shallow Gaspur	5/19/2009	100.80	47.24	53.56
MW-52	Shallow Gaspur	7/15/2010	100.80	49.64	51.16
MW-52	Shallow Gaspur	6/13/2011	100.80	50.10	50.70
MW-52	Shallow Gaspur	12/5/2011	100.80	49.73	51.07
MW-52	Shallow Gaspur	6/7/2012	100.80	49.32	51.48
MW-52	Shallow Gaspur	12/10/2012	100.80	49.72	51.08
MW-52	Shallow Gaspur	6/17/2013	100.80	50.53	50.27
MW-52	Shallow Gaspur	12/9/2013	100.80	50.98	49.82
MW-52	Shallow Gaspur	3/27/2014	100.80	51.78	49.02
MW-52	Shallow Gaspur	6/9/2014	100.80	52.33	48.47
MW-52	Shallow Gaspur	12/15/2014	100.80	53.82	46.98
MW-52	Shallow Gaspur	6/8/2015	100.80	54.67	46.13
MW-52	Shallow Gaspur	12/7/2015	100.80	56.20	44.60
MW-52	Shallow Gaspur	6/6/2016	100.77	56.98	43.79
MW-52	Shallow Gaspur	11/28/2016	100.77	58.15	42.62
MW-52	Shallow Gaspur	6/5/2017	100.77	58.83	41.94
MW-52	Shallow Gaspur	12/4/2017	100.77	59.40	41.37
MW-52	Shallow Gaspur	6/4/2018	100.77	NM	NM
MW-52	Shallow Gaspur	6/28/2018	100.77	60.02	40.75
MW-52	Shallow Gaspur	12/3/2018	100.77	60.66	40.11
MW-52	Shallow Gaspur	6/10/2019	100.77	61.12	39.65
MW-53	Lower Gaspur	5/4/2009	100.75	47.37	53.38
MW-53	Lower Gaspur	5/19/2009	100.75	47.46	53.29

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-53	Lower Gaspur	7/15/2010	100.75	49.88	50.87
MW-53	Lower Gaspur	6/13/2011	100.75	50.27	50.48
MW-53	Lower Gaspur	12/5/2011	100.75	49.86	50.89
MW-53	Lower Gaspur	6/7/2012	100.75	49.13	51.62
MW-53	Lower Gaspur	12/10/2012	100.75	49.71	51.04
MW-53	Lower Gaspur	6/17/2013	100.75	50.60	50.15
MW-53	Lower Gaspur	12/9/2013	100.75	51.36	49.39
MW-53	Lower Gaspur	3/27/2014	100.75	51.95	48.80
MW-53	Lower Gaspur	6/9/2014	100.75	52.50	48.25
MW-53	Lower Gaspur	12/15/2014	100.75	53.92	46.83
MW-53	Lower Gaspur	6/8/2015	100.75	54.73	46.02
MW-53	Lower Gaspur	12/7/2015	100.75	56.29	44.46
MW-53	Lower Gaspur	6/6/2016	100.73	57.14	43.59
MW-53	Lower Gaspur	11/28/2016	100.73	58.24	42.49
MW-53	Lower Gaspur	6/5/2017	100.73	59.30	41.43
MW-53	Lower Gaspur	12/4/2017	100.73	59.78	40.95
MW-53	Lower Gaspur	6/4/2018	100.73	NM	NM
MW-53	Lower Gaspur	6/28/2018	100.73	60.02	40.71
MW-53	Lower Gaspur	12/3/2018	100.73	60.78	39.95
MW-53	Lower Gaspur	6/10/2019	100.73	61.12	39.61
MW-54	Lower Gaspur	5/4/2009	100.91	47.80	53.11
MW-54	Lower Gaspur	5/19/2009	100.91	47.92	52.99
MW-54	Lower Gaspur	7/15/2010	100.91	50.25	50.66
MW-54	Lower Gaspur	6/13/2011	100.91	50.49	50.42
MW-54	Lower Gaspur	12/5/2011	100.91	50.17	50.74
MW-54	Lower Gaspur	6/7/2012	100.91	49.62	51.29
MW-54	Lower Gaspur	12/10/2012	100.91	50.18	50.73
MW-54	Lower Gaspur	6/17/2013	100.91	50.84	50.07
MW-54	Lower Gaspur	12/9/2013	100.91	51.61	49.30
MW-54	Lower Gaspur	3/27/2014	100.91	52.50	48.41
MW-54	Lower Gaspur	6/9/2014	100.91	52.95	47.96
MW-54	Lower Gaspur	12/15/2014	100.91	54.43	46.48
MW-54	Lower Gaspur	6/8/2015	100.91	55.28	45.63
MW-54	Lower Gaspur	12/7/2015	100.91	56.83	44.08
MW-54	Lower Gaspur	6/6/2016	100.88	57.52	43.36
MW-54	Lower Gaspur	11/28/2016	100.88	58.71	42.17
MW-54	Lower Gaspur	6/5/2017	100.88	59.45	41.43
MW-54	Lower Gaspur	12/4/2017	100.88	60.00	40.88
MW-54	Lower Gaspur	6/4/2018	100.88	NM	NM
MW-54	Lower Gaspur	6/28/2018	100.88	60.43	40.45
MW-54	Lower Gaspur	12/3/2018	100.88	61.18	39.70
MW-54	Lower Gaspur	6/10/2019	100.88	61.43	39.45
MW-55	Exposition	5/19/2009	102.62	53.15	49.47
MW-55	Exposition	7/15/2010	102.62	55.78	46.84
MW-55	Exposition	6/13/2011	102.62	56.10	46.52
MW-55	Exposition	12/5/2011	102.62	55.10	47.52

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-55	Exposition	6/7/2012	102.62	54.62	48.00
MW-55	Exposition	6/8/2012	102.62	54.62	48.00
MW-55	Exposition	12/10/2012	102.62	55.18	47.44
MW-55	Exposition	6/17/2013	102.62	56.11	46.51
MW-55	Exposition	12/9/2013	102.62	56.62	46.00
MW-55	Exposition	3/27/2014	102.62	57.75	44.87
MW-55	Exposition	6/10/2014	102.62	58.75	43.87
MW-55	Exposition	12/15/2014	102.62	60.32	42.30
MW-55	Exposition	6/8/2015	102.62	61.49	41.13
MW-55	Exposition	12/7/2015	102.62	63.06	39.56
MW-55	Exposition	6/6/2016	102.57	64.02	38.55
MW-55	Exposition	11/28/2016	102.57	65.34	37.23
MW-55	Exposition	6/7/2017	102.57	65.17	37.40
MW-55	Exposition	12/4/2017	102.57	66.10	36.47
MW-55	Exposition	6/4/2018	102.57	66.58	35.99
MW-55	Exposition	6/28/2018	102.57	66.73	35.84
MW-55	Exposition	12/3/2018	102.57	67.52	35.05
MW-55	Exposition	6/10/2019	102.57	67.95	34.62
MW-56	Shallow Gaspur	5/4/2009	101.76	48.00	53.76
MW-56	Shallow Gaspur	5/19/2009	101.76	48.02	53.74
MW-56	Shallow Gaspur	7/15/2010	101.76	50.40	51.36
MW-56	Shallow Gaspur	6/13/2011	101.76	50.97	50.79
MW-56	Shallow Gaspur	12/5/2011	101.76	50.53	51.23
MW-56	Shallow Gaspur	6/7/2012	101.76	49.82	51.94
MW-56	Shallow Gaspur	12/10/2012	101.76	50.34	51.42
MW-56	Shallow Gaspur	6/17/2013	101.76	51.53	50.23
MW-56	Shallow Gaspur	12/9/2013	101.76	51.89	49.87
MW-56	Shallow Gaspur	3/27/2014	101.76	52.60	49.16
MW-56	Shallow Gaspur	6/9/2014	101.76	53.10	48.66
MW-56	Shallow Gaspur	12/15/2014	101.76	54.58	47.18
MW-56	Shallow Gaspur	6/8/2015	101.76	55.42	46.34
MW-56	Shallow Gaspur	12/7/2015	101.76	56.94	44.82
MW-56	Shallow Gaspur	6/6/2016	101.73	57.73	44.00
MW-56	Shallow Gaspur	11/28/2016	101.73	58.86	42.87
MW-56	Shallow Gaspur	6/5/2017	101.73	59.20	42.53
MW-56	Shallow Gaspur	12/4/2017	101.73	59.97	41.76
MW-56	Shallow Gaspur	6/4/2018	101.73	NM	NM
MW-56	Shallow Gaspur	6/28/2018	101.73	60.68	41.05
MW-56	Shallow Gaspur	12/3/2018	101.73	61.38	40.35
MW-56	Shallow Gaspur	6/10/2019	101.73	61.76	39.97
MW-57A	Shallow Gaspur	9/26/2011	105.93	54.06	51.87
MW-57A	Shallow Gaspur	12/5/2011	105.93	52.93	53.00
MW-57A	Shallow Gaspur	3/26/2012	105.93	52.48	53.45
MW-57A	Shallow Gaspur	6/7/2012	105.93	52.22	53.71
MW-57A	Shallow Gaspur	6/13/2012	105.93	52.22	53.71
MW-57A	Shallow Gaspur	12/10/2012	105.93	52.91	53.02

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-57A	Shallow Gaspur	6/17/2013	105.93	55.11	50.82
MW-57A	Shallow Gaspur	12/9/2013	105.93	55.37	50.56
MW-57A	Shallow Gaspur	6/12/2014	105.93	56.07	49.86
MW-57A	Shallow Gaspur	12/15/2014	105.93	57.20	48.73
MW-57A	Shallow Gaspur	6/8/2015	105.93	57.47	48.46
MW-57A	Shallow Gaspur	12/7/2015	105.93	59.10	46.83
MW-57A	Shallow Gaspur	6/6/2016	105.93	59.74	46.19
MW-57A	Shallow Gaspur	11/28/2016	105.93	60.92	45.01
MW-57A	Shallow Gaspur	6/7/2017	105.93	61.50	44.43
MW-57A	Shallow Gaspur	12/4/2017	105.93	61.95	43.98
MW-57A	Shallow Gaspur	6/4/2018	105.93	62.90	43.03
MW-57A	Shallow Gaspur	6/28/2018	105.93	62.85	43.08
MW-57A	Shallow Gaspur	12/3/2018	105.93	63.46	42.47
MW-57A	Shallow Gaspur	6/10/2019	105.93	63.94	41.99
MW-57B	Intermediate Gaspur	9/26/2011	105.84	53.74	52.10
MW-57B	Intermediate Gaspur	12/5/2011	105.84	52.88	52.96
MW-57B	Intermediate Gaspur	3/26/2012	105.84	52.35	53.49
MW-57B	Intermediate Gaspur	6/7/2012	105.84	52.00	53.84
MW-57B	Intermediate Gaspur	6/13/2012	105.84	52.00	53.84
MW-57B	Intermediate Gaspur	12/10/2012	105.84	52.70	53.14
MW-57B	Intermediate Gaspur	6/17/2013	105.84	54.53	51.31
MW-57B	Intermediate Gaspur	12/9/2013	105.84	55.01	50.83
MW-57B	Intermediate Gaspur	6/12/2014	105.84	56.01	49.83
MW-57B	Intermediate Gaspur	12/15/2014	105.84	56.86	48.98
MW-57B	Intermediate Gaspur	6/8/2015	105.84	57.47	48.37
MW-57B	Intermediate Gaspur	12/7/2015	105.84	59.01	46.83
MW-57B	Intermediate Gaspur	6/6/2016	105.84	59.75	46.09
MW-57B	Intermediate Gaspur	11/28/2016	105.84	61.02	44.82
MW-57B	Intermediate Gaspur	6/7/2017	105.84	61.50	44.34
MW-57B	Intermediate Gaspur	12/4/2017	105.84	61.98	43.86
MW-57B	Intermediate Gaspur	6/4/2018	105.84	62.90	42.94
MW-57B	Intermediate Gaspur	6/28/2018	105.84	62.81	43.03
MW-57B	Intermediate Gaspur	12/3/2018	105.84	63.36	42.48
MW-57B	Intermediate Gaspur	6/10/2019	105.84	63.91	41.93
MW-58	Shallow Gaspur	9/26/2011	106.01	53.94	52.07
MW-58	Shallow Gaspur	12/5/2011	106.01	53.12	52.89
MW-58	Shallow Gaspur	3/26/2012	106.01	52.71	53.30
MW-58	Shallow Gaspur	6/7/2012	106.01	52.43	53.58
MW-58	Shallow Gaspur	6/13/2012	106.01	52.43	53.58
MW-58	Shallow Gaspur	12/10/2012	106.01	53.06	52.95
MW-58	Shallow Gaspur	6/17/2013	106.01	55.04	50.97
MW-58	Shallow Gaspur	12/9/2013	106.01	55.73	50.28
MW-58	Shallow Gaspur	6/12/2014	106.01	56.32	49.69
MW-58	Shallow Gaspur	12/15/2014	106.01	56.40	49.61
MW-58	Shallow Gaspur	6/8/2015	106.01	57.63	48.38
MW-58	Shallow Gaspur	12/7/2015	106.01	54.45	51.56

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-58	Shallow Gaspur	6/6/2016	106.01	59.98	46.03
MW-58	Shallow Gaspur	11/28/2016	106.01	61.13	44.88
MW-58	Shallow Gaspur	6/7/2017	106.01	61.65	44.36
MW-58	Shallow Gaspur	12/4/2017	106.01	62.15	43.86
MW-58	Shallow Gaspur	6/4/2018	106.01	Dry	Dry
MW-58	Shallow Gaspur	6/28/2018	106.01	63.11	42.90
MW-58	Shallow Gaspur	12/3/2018	106.01	63.52	42.49
MW-58	Shallow Gaspur	6/10/2019	106.01	64.14	41.87
MW-59A	Shallow Gaspur	6/13/2011	105.72	53.31	52.41
MW-59A	Shallow Gaspur	9/26/2011	105.72	54.00	51.72
MW-59A	Shallow Gaspur	12/5/2011	105.72	53.06	52.66
MW-59A	Shallow Gaspur	3/26/2012	105.72	52.29	53.43
MW-59A	Shallow Gaspur	6/7/2012	105.72	52.44	53.28
MW-59A	Shallow Gaspur	6/13/2012	105.72	52.44	53.28
MW-59A	Shallow Gaspur	12/10/2012	105.72	53.04	52.68
MW-59A	Shallow Gaspur	6/17/2013	105.72	55.20	50.52
MW-59A	Shallow Gaspur	12/9/2013	105.72	55.52	50.20
MW-59A	Shallow Gaspur	6/12/2014	105.72	56.08	49.64
MW-59A	Shallow Gaspur	12/15/2014	105.72	57.31	48.41
MW-59A	Shallow Gaspur	6/8/2015	105.72	57.75	47.97
MW-59A	Shallow Gaspur	12/7/2015	105.72	59.29	46.43
MW-59A	Shallow Gaspur	6/6/2016	105.72	59.92	45.80
MW-59A	Shallow Gaspur	11/28/2016	105.72	61.07	44.65
MW-59A	Shallow Gaspur	6/7/2017	105.72	62.70	43.02
MW-59A	Shallow Gaspur	12/4/2017	105.72	62.34	43.38
MW-59A	Shallow Gaspur	6/4/2018	105.72	Dry	Dry
MW-59A	Shallow Gaspur	6/28/2018	105.72	Dry	Dry
MW-59A	Shallow Gaspur	12/3/2018	105.72	Dry	Dry
MW-59A	Shallow Gaspur	6/10/2019	105.72	62.41	43.31
MW-59B	Intermediate Gaspur	6/13/2011	105.61	53.20	52.41
MW-59B	Intermediate Gaspur	9/26/2011	105.61	54.00	51.61
MW-59B	Intermediate Gaspur	12/5/2011	105.61	53.01	52.60
MW-59B	Intermediate Gaspur	3/26/2012	105.61	52.75	52.86
MW-59B	Intermediate Gaspur	6/7/2012	105.61	52.35	53.26
MW-59B	Intermediate Gaspur	6/13/2012	105.61	52.35	53.26
MW-59B	Intermediate Gaspur	12/10/2012	105.61	53.00	52.61
MW-59B	Intermediate Gaspur	6/17/2013	105.61	55.17	50.44
MW-59B	Intermediate Gaspur	12/9/2013	105.61	55.93	49.68
MW-59B	Intermediate Gaspur	6/12/2014	105.61	56.01	49.60
MW-59B	Intermediate Gaspur	12/15/2014	105.61	57.29	48.32
MW-59B	Intermediate Gaspur	6/8/2015	105.61	57.60	48.01
MW-59B	Intermediate Gaspur	12/7/2015	105.61	59.35	46.26
MW-59B	Intermediate Gaspur	6/6/2016	105.61	59.91	45.70
MW-59B	Intermediate Gaspur	11/28/2016	105.61	61.10	44.51
MW-59B	Intermediate Gaspur	6/7/2017	105.61	61.83	43.78
MW-59B	Intermediate Gaspur	12/4/2017	105.61	62.38	43.23

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-59B	Intermediate Gaspur	6/4/2018	105.61	62.94	42.67
MW-59B	Intermediate Gaspur	6/28/2018	105.61	63.06	42.55
MW-59B	Intermediate Gaspur	12/3/2018	105.61	63.61	42.00
MW-59B	Intermediate Gaspur	6/10/2019	105.61	64.08	41.53
MW-59C	Intermediate Gaspur	6/13/2011	105.76	53.34	52.42
MW-59C	Intermediate Gaspur	9/26/2011	105.76	54.03	51.73
MW-59C	Intermediate Gaspur	12/5/2011	105.76	53.09	52.67
MW-59C	Intermediate Gaspur	3/26/2012	105.76	57.70	48.06
MW-59C	Intermediate Gaspur	6/7/2012	105.76	52.55	53.21
MW-59C	Intermediate Gaspur	6/13/2012	105.76	52.55	53.21
MW-59C	Intermediate Gaspur	12/10/2012	105.76	52.99	52.77
MW-59C	Intermediate Gaspur	6/17/2013	105.76	55.16	50.60
MW-59C	Intermediate Gaspur	12/9/2013	105.76	55.40	50.36
MW-59C	Intermediate Gaspur	6/12/2014	105.76	56.10	49.66
MW-59C	Intermediate Gaspur	12/15/2014	105.76	57.55	48.21
MW-59C	Intermediate Gaspur	6/8/2015	105.76	57.88	47.88
MW-59C	Intermediate Gaspur	12/7/2015	105.76	59.52	46.24
MW-59C	Intermediate Gaspur	6/6/2016	105.76	60.21	45.55
MW-59C	Intermediate Gaspur	11/28/2016	105.76	61.40	44.36
MW-59C	Intermediate Gaspur	6/7/2017	105.76	62.00	43.76
MW-59C	Intermediate Gaspur	12/4/2017	105.76	62.62	43.14
MW-59C	Intermediate Gaspur	6/4/2018	105.76	63.20	42.56
MW-59C	Intermediate Gaspur	6/28/2018	105.76	63.33	42.43
MW-59C	Intermediate Gaspur	12/3/2018	105.76	63.85	41.91
MW-59C	Intermediate Gaspur	6/10/2019	105.76	64.32	41.44
MW-60A	Shallow Gaspur	9/26/2011	105.69	54.32	51.37
MW-60A	Shallow Gaspur	12/5/2011	105.69	53.53	52.16
MW-60A	Shallow Gaspur	3/26/2012	105.69	53.28	52.41
MW-60A	Shallow Gaspur	6/7/2012	105.69	52.79	52.90
MW-60A	Shallow Gaspur	6/12/2012	105.69	52.79	52.90
MW-60A	Shallow Gaspur	12/10/2012	105.69	53.35	52.34
MW-60A	Shallow Gaspur	6/17/2013	105.69	54.85	50.84
MW-60A	Shallow Gaspur	12/9/2013	105.69	55.41	50.28
MW-60A	Shallow Gaspur	6/11/2014	105.69	56.41	49.28
MW-60A	Shallow Gaspur	12/15/2014	105.69	57.30	48.39
MW-60A	Shallow Gaspur	6/8/2015	105.69	58.20	47.49
MW-60A	Shallow Gaspur	12/7/2015	105.69	59.89	45.80
MW-60A	Shallow Gaspur	6/6/2016	105.69	60.62	45.07
MW-60A	Shallow Gaspur	11/28/2016	105.69	61.74	43.95
MW-60A	Shallow Gaspur	6/7/2017	105.69	62.36	43.33
MW-60A	Shallow Gaspur	12/4/2017	105.69	63.10	42.59
MW-60A	Shallow Gaspur	6/4/2018	105.69	63.25	42.44
MW-60A	Shallow Gaspur	6/28/2018	105.69	63.65	42.04
MW-60A	Shallow Gaspur	12/3/2018	105.69	64.22	41.47
MW-60A	Shallow Gaspur	6/10/2019	105.69	64.71	40.98
MW-60B	Lower Gaspur	9/26/2011	105.64	54.48	51.16

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-60B	Lower Gaspur	12/5/2011	105.64	53.62	52.02
MW-60B	Lower Gaspur	3/26/2012	105.64	53.21	52.43
MW-60B	Lower Gaspur	6/7/2012	105.64	52.90	52.74
MW-60B	Lower Gaspur	6/12/2012	105.64	52.90	52.74
MW-60B	Lower Gaspur	12/10/2012	105.64	53.52	52.12
MW-60B	Lower Gaspur	6/17/2013	105.64	54.79	50.85
MW-60B	Lower Gaspur	12/9/2013	105.64	55.40	50.24
MW-60B	Lower Gaspur	6/11/2014	105.64	56.38	49.26
MW-60B	Lower Gaspur	12/15/2014	105.64	57.60	48.04
MW-60B	Lower Gaspur	6/8/2015	105.64	58.12	47.52
MW-60B	Lower Gaspur	12/7/2015	105.64	59.97	45.67
MW-60B	Lower Gaspur	6/6/2016	105.64	60.78	44.86
MW-60B	Lower Gaspur	11/28/2016	105.64	61.93	43.71
MW-60B	Lower Gaspur	6/7/2017	105.64	62.58	43.06
MW-60B	Lower Gaspur	12/4/2017	105.64	63.43	42.21
MW-60B	Lower Gaspur	6/4/2018	105.64	63.49	42.15
MW-60B	Lower Gaspur	6/28/2018	105.64	63.90	41.74
MW-60B	Lower Gaspur	12/3/2018	105.64	64.46	41.18
MW-60B	Lower Gaspur	6/10/2019	105.64	64.94	40.70
MW-61A	Shallow Gaspur	9/26/2011	104.84	53.34	51.50
MW-61A	Shallow Gaspur	12/5/2011	104.84	52.53	52.31
MW-61A	Shallow Gaspur	3/26/2012	104.84	52.18	52.66
MW-61A	Shallow Gaspur	6/7/2012	104.84	51.90	52.94
MW-61A	Shallow Gaspur	6/8/2012	104.84	51.90	52.94
MW-61A	Shallow Gaspur	12/10/2012	104.84	52.53	52.31
MW-61A	Shallow Gaspur	6/17/2013	104.84	54.41	50.43
MW-61A	Shallow Gaspur	12/9/2013	104.84	54.97	49.87
MW-61A	Shallow Gaspur	6/9/2014	104.84	55.80	49.04
MW-61A	Shallow Gaspur	12/15/2014	104.84	56.82	48.02
MW-61A	Shallow Gaspur	6/8/2015	104.84	57.25	47.59
MW-61A	Shallow Gaspur	12/7/2015	104.84	59.02	45.82
MW-61A	Shallow Gaspur	6/6/2016	104.84	59.75	45.09
MW-61A	Shallow Gaspur	11/28/2016	104.84	60.84	44.00
MW-61A	Shallow Gaspur	6/7/2017	104.84	61.50	43.34
MW-61A	Shallow Gaspur	12/4/2017	104.84	62.00	42.84
MW-61A	Shallow Gaspur	6/4/2018	104.84	62.14	42.70
MW-61A	Shallow Gaspur	6/28/2018	104.84	62.71	42.13
MW-61A	Shallow Gaspur	12/3/2018	104.84	63.29	41.55
MW-61A	Shallow Gaspur	6/10/2019	104.84	63.76	41.08
MW-61B	Intermediate Gaspur	9/26/2011	104.84	53.48	51.36
MW-61B	Intermediate Gaspur	12/5/2011	104.84	52.64	52.20
MW-61B	Intermediate Gaspur	3/26/2012	104.84	52.17	52.67
MW-61B	Intermediate Gaspur	6/7/2012	104.84	52.00	52.84
MW-61B	Intermediate Gaspur	6/8/2012	104.84	52.00	52.84
MW-61B	Intermediate Gaspur	12/10/2012	104.84	52.52	52.32
MW-61B	Intermediate Gaspur	6/17/2013	104.84	54.22	50.62

TABLE 7

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-61B	Intermediate Gaspur	12/9/2013	104.84	54.72	50.12
MW-61B	Intermediate Gaspur	6/9/2014	104.84	55.79	49.05
MW-61B	Intermediate Gaspur	12/15/2014	104.84	56.67	48.17
MW-61B	Intermediate Gaspur	6/8/2015	104.84	57.30	47.54
MW-61B	Intermediate Gaspur	12/7/2015	104.84	58.95	45.89
MW-61B	Intermediate Gaspur	6/6/2016	104.84	59.83	45.01
MW-61B	Intermediate Gaspur	11/28/2016	104.84	61.03	43.81
MW-61B	Intermediate Gaspur	6/7/2017	104.84	61.60	43.24
MW-61B	Intermediate Gaspur	12/4/2017	104.84	62.11	42.73
MW-61B	Intermediate Gaspur	6/4/2018	104.84	62.37	42.47
MW-61B	Intermediate Gaspur	6/28/2018	104.84	62.87	41.97
MW-61B	Intermediate Gaspur	12/3/2018	104.84	63.38	41.46
MW-61B	Intermediate Gaspur	6/10/2019	104.84	63.86	40.98
MW-62A	Shallow Gaspur	9/26/2011	105.22	54.04	51.18
MW-62A	Shallow Gaspur	12/5/2011	105.22	53.22	52.00
MW-62A	Shallow Gaspur	3/26/2012	105.22	52.83	52.39
MW-62A	Shallow Gaspur	6/7/2012	105.22	52.48	52.74
MW-62A	Shallow Gaspur	6/12/2012	105.22	52.48	52.74
MW-62A	Shallow Gaspur	12/10/2012	105.22	53.22	52.00
MW-62A	Shallow Gaspur	6/17/2013	105.22	54.39	50.83
MW-62A	Shallow Gaspur	12/9/2013	105.22	54.90	50.32
MW-62A	Shallow Gaspur	3/27/2014	105.22	55.13	50.09
MW-62A	Shallow Gaspur	6/11/2014	105.22	55.92	49.30
MW-62A	Shallow Gaspur	12/15/2014	105.22	57.20	48.02
MW-62A	Shallow Gaspur	6/8/2015	105.22	58.37	46.85
MW-62A	Shallow Gaspur	12/7/2015	105.22	59.67	45.55
MW-62A	Shallow Gaspur	6/6/2016	105.22	60.40	44.82
MW-62A	Shallow Gaspur	11/28/2016	105.22	61.53	43.69
MW-62A	Shallow Gaspur	6/5/2017	105.22	65.90	39.32
MW-62A	Shallow Gaspur	12/4/2017	105.22	62.70	42.52
MW-62A	Shallow Gaspur	6/4/2018	105.22	66.93	38.29
MW-62A	Shallow Gaspur	6/28/2018	105.22	63.39	41.83
MW-62A	Shallow Gaspur	12/3/2018	105.22	64.02	41.20
MW-62A	Shallow Gaspur	6/10/2019	105.22	64.47	40.75
MW-62B	Lower Gaspur	9/26/2011	105.22	54.08	51.14
MW-62B	Lower Gaspur	12/5/2011	105.22	53.17	52.05
MW-62B	Lower Gaspur	3/26/2012	105.22	52.80	52.42
MW-62B	Lower Gaspur	6/7/2012	105.22	52.42	52.80
MW-62B	Lower Gaspur	6/12/2012	105.22	52.42	52.80
MW-62B	Lower Gaspur	12/10/2012	105.22	53.01	52.21
MW-62B	Lower Gaspur	6/17/2013	105.22	54.53	50.69
MW-62B	Lower Gaspur	12/9/2013	105.22	54.88	50.34
MW-62B	Lower Gaspur	3/27/2014	105.22	55.22	50.00
MW-62B	Lower Gaspur	6/11/2014	105.22	55.94	49.28
MW-62B	Lower Gaspur	12/15/2014	105.22	57.22	48.00
MW-62B	Lower Gaspur	6/8/2015	105.22	58.26	46.96

TABLE 7

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
MW-62B	Lower Gaspur	12/7/2015	105.22	59.28	45.94
MW-62B	Lower Gaspur	6/6/2016	105.22	60.44	44.78
MW-62B	Lower Gaspur	11/28/2016	105.22	61.59	43.63
MW-62B	Lower Gaspur	6/5/2017	105.22	62.22	43.00
MW-62B	Lower Gaspur	12/4/2017	105.22	62.80	42.42
MW-62B	Lower Gaspur	6/4/2018	105.22	63.27	41.95
MW-62B	Lower Gaspur	6/28/2018	105.22	63.48	41.74
MW-62B	Lower Gaspur	12/3/2018	105.22	64.11	41.11
MW-62B	Lower Gaspur	6/10/2019	105.22	64.54	40.68
MW-63	Shallow Gaspur	6/4/2018	105.86	62.60	43.26
MW-63	Shallow Gaspur	6/28/2018	105.86	62.56	43.30
MW-63	Shallow Gaspur	12/3/2018	105.86	63.15	42.71
MW-63	Shallow Gaspur	6/11/2019	105.86	63.63	42.23
MW-64A	Intermediate Gaspur	6/4/2018	106.03	62.60	43.43
MW-64A	Intermediate Gaspur	6/28/2018	106.03	62.03	44.00
MW-64A	Intermediate Gaspur	12/3/2018	106.03	62.57	43.46
MW-64A	Intermediate Gaspur	6/11/2019	106.03	63.00	43.03
MW-64B	Lower Gaspur	6/4/2018	106.01	65.73	40.28
MW-64B	Lower Gaspur	6/28/2018	106.01	65.97	40.04
MW-64B	Lower Gaspur	12/3/2018	106.01	66.56	39.45
MW-64B	Lower Gaspur	6/11/2019	106.01	66.95	39.06
EW-8	Lower Gaspur	6/17/2013	104.42	53.90	50.52
EW-8	Lower Gaspur	12/9/2013	104.42	54.27	50.15
EW-8	Lower Gaspur	6/11/2014	104.42	55.14	49.28
EW-8	Lower Gaspur	12/17/2015	104.42	59.67	44.75
EW-8	Lower Gaspur	6/6/2016	104.42	59.46	44.96
EW-8	Lower Gaspur	11/28/2016	104.42	60.63	43.79
EW-8	Lower Gaspur	6/5/2017	104.42	61.22	43.20
EW-8	Lower Gaspur	12/5/2017	104.42	61.85	42.57
EW-8	Lower Gaspur	6/4/2018	104.42	NM	NM
EW-8	Lower Gaspur	6/28/2018	104.42	62.46	41.96
EW-8	Lower Gaspur	12/3/2018	104.42	63.08	41.34
EW-8	Lower Gaspur	6/10/2019	104.42	63.58	40.84
PZ-7A	Shallow Gaspur	9/26/2011	105.67	54.54	51.13
PZ-7A	Shallow Gaspur	12/5/2011	105.67	53.78	51.89
PZ-7A	Shallow Gaspur	3/26/2012	105.67	53.31	52.36
PZ-7A	Shallow Gaspur	6/7/2012	105.67	53.02	52.65
PZ-7A	Shallow Gaspur	6/12/2012	105.67	53.02	52.65
PZ-7A	Shallow Gaspur	12/10/2012	105.67	53.59	52.08
PZ-7A	Shallow Gaspur	6/17/2013	105.67	54.97	50.70
PZ-7A	Shallow Gaspur	12/9/2013	105.67	55.35	50.32
PZ-7A	Shallow Gaspur	3/27/2014	105.67	55.73	49.94
PZ-7A	Shallow Gaspur	6/11/2014	105.67	56.38	49.29
PZ-7A	Shallow Gaspur	12/15/2014	105.67	57.76	47.91
PZ-7A	Shallow Gaspur	6/8/2015	105.67	58.69	46.98
PZ-7A	Shallow Gaspur	12/7/2015	105.67	60.20	45.47

TABLE 7
OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
PZ-7A	Shallow Gaspur	6/6/2016	105.67	60.91	44.76
PZ-7A	Shallow Gaspur	11/28/2016	105.67	62.11	43.56
PZ-7A	Shallow Gaspur	6/5/2017	105.67	62.74	42.93
PZ-7A	Shallow Gaspur	12/4/2017	105.67	63.20	42.47
PZ-7A	Shallow Gaspur	6/4/2018	105.67	63.68	41.99
PZ-7A	Shallow Gaspur	6/28/2018	105.67	63.47	42.20
PZ-7A	Shallow Gaspur	12/3/2018	105.67	64.20	41.47
PZ-7A	Shallow Gaspur	6/10/2019	105.67	65.07	40.60
PZ-7B	Intermediate Gaspur	9/26/2011	105.66	54.54	51.12
PZ-7B	Intermediate Gaspur	12/5/2011	105.66	53.72	51.94
PZ-7B	Intermediate Gaspur	3/26/2012	105.66	53.46	52.20
PZ-7B	Intermediate Gaspur	6/7/2012	105.66	53.04	52.62
PZ-7B	Intermediate Gaspur	6/13/2012	105.66	53.04	52.62
PZ-7B	Intermediate Gaspur	12/10/2012	105.66	53.62	52.04
PZ-7B	Intermediate Gaspur	6/17/2013	105.66	54.75	50.91
PZ-7B	Intermediate Gaspur	12/9/2013	105.66	55.43	50.23
PZ-7B	Intermediate Gaspur	3/27/2014	105.66	55.71	49.95
PZ-7B	Intermediate Gaspur	6/11/2014	105.66	56.45	49.21
PZ-7B	Intermediate Gaspur	12/15/2014	105.66	57.84	47.82
PZ-7B	Intermediate Gaspur	6/8/2015	105.66	58.71	46.95
PZ-7B	Intermediate Gaspur	12/7/2015	105.66	60.23	45.43
PZ-7B	Intermediate Gaspur	6/6/2016	105.66	61.07	44.59
PZ-7B	Intermediate Gaspur	11/28/2016	105.66	62.18	43.48
PZ-7B	Intermediate Gaspur	6/5/2017	105.66	62.84	42.82
PZ-7B	Intermediate Gaspur	12/4/2017	105.66	63.80	41.86
PZ-7B	Intermediate Gaspur	6/4/2018	105.66	63.78	41.88
PZ-7B	Intermediate Gaspur	6/28/2018	105.66	64.01	41.65
PZ-7B	Intermediate Gaspur	12/3/2018	105.66	64.63	41.03
PZ-7B	Intermediate Gaspur	6/10/2019	105.66	65.19	40.47
SAIA-MW1A	Shallow Gaspur	3/27/2014	104.92	54.50	50.42
SAIA-MW1A	Shallow Gaspur	12/15/2014	104.92	56.56	48.36
SAIA-MW1B	Intermediate Gaspur	3/27/2014	104.76	54.60	50.16
SAIA-MW1B	Intermediate Gaspur	12/15/2014	104.76	56.41	48.35
SAIA-MW1C	Lower Gaspur	3/27/2014	104.71	54.60	50.11
SAIA-MW1C	Lower Gaspur	12/15/2014	104.71	56.45	48.26
SAIA-MW2A	Shallow Gaspur	3/27/2014	104.76	54.50	50.26
SAIA-MW2A	Shallow Gaspur	12/15/2014	104.76	56.45	48.31
SAIA-MW2B	Intermediate Gaspur	3/27/2014	104.75	54.40	50.35
SAIA-MW2B	Intermediate Gaspur	12/15/2014	104.75	56.48	48.27
SAIA-MW2C	Lower Gaspur	3/27/2014	104.76	54.60	50.16
SAIA-MW2C	Lower Gaspur	12/15/2014	104.76	56.62	48.14
SAIA-MW3A	Shallow Gaspur	3/27/2014	102.12	52.31	49.81
SAIA-MW3A	Shallow Gaspur	12/15/2014	102.12	54.46	47.66
SAIA-MW3B	Intermediate Gaspur	3/27/2014	102.10	52.29	49.81
SAIA-MW3B	Intermediate Gaspur	12/15/2014	102.10	54.20	47.90
SAIA-MW3C	Lower Gaspur	3/27/2014	102.12	53.09	49.03

TABLE 7

OU1 GROUNDWATER ELEVATION 1998 - 2019
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Aquifer Zone	Date Measured	TOC Elevation (NAVD 88)	Depth to Groundwater (ft bTOC)	Groundwater Elevation (NAVD 88)
SAIA-MW3C	Lower Gaspur	12/15/2014	102.12	54.10	48.02
SAIA-MW4A	Shallow Gaspur	3/27/2014	100.89	51.58	49.31
SAIA-MW4A	Shallow Gaspur	12/15/2014	100.89	54.10	46.79
SAIA-MW4B	Intermediate Gaspur	3/27/2014	101.04	51.54	49.50
SAIA-MW4B	Intermediate Gaspur	12/15/2014	101.04	53.57	47.47
SAIA-MW4C	Lower Gaspur	3/27/2014	100.86	51.43	49.43
SAIA-MW4C	Lower Gaspur	12/15/2014	100.86	53.39	47.47
SAIA-MW5A	Shallow Gaspur	3/27/2014	99.84	50.91	48.93
SAIA-MW5A	Shallow Gaspur	12/15/2014	99.84	52.96	46.88
SAIA-MW5B	Intermediate Gaspur	3/27/2014	99.91	50.98	48.93
SAIA-MW5B	Intermediate Gaspur	12/15/2014	99.91	52.98	46.93
SAIA-MW5C	Lower Gaspur	3/27/2014	99.84	51.06	48.78
SAIA-MW5C	Lower Gaspur	12/15/2014	99.84	53.04	46.80
SAIA-MW6A	Shallow Gaspur	3/27/2014	100.34	51.26	49.08
SAIA-MW6A	Shallow Gaspur	12/15/2014	100.34	53.21	47.13
SAIA-MW6B	Intermediate Gaspur	3/27/2014	100.10	51.18	48.92
SAIA-MW6B	Intermediate Gaspur	12/15/2014	100.10	53.17	46.93
SAIA-MW6C	Lower Gaspur	3/27/2014	100.19	51.21	48.98
SAIA-MW6C	Lower Gaspur	12/15/2014	100.19	53.28	46.91
SAIA-MW7	Exposition	3/27/2014	104.64	59.70	44.94
SAIA-MW7	Exposition	12/15/2014	104.64	62.26	42.38
SAIA-MW8	Exposition	3/27/2014	100.15	55.16	44.99
SAIA-MW8	Exposition	12/15/2014	100.15	NM	NM

Notes:

1. Monitoring wells installed before 2010 added a conversion factor of 2.05 feet to adjust the top-of-casing (TOC) elevation to the North American Vertical Datum of 1988 (NAVD88). These wells were re-surveyed by Calvada Surveying, Inc. on 6 June 2016.
2. NM = not measured: well was unable to be accessed.

TABLE 8

SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-1	06/08/2012	1.31	-71.3	3.080	7.31	6	21.8
MW-1	12/12/2012	1.54	198.1	2.978	7.09	8	20
MW-1	06/18/2013	0.47	-31.4	3.008	6.98	7	21.4
MW-1	12/12/2013	0.37	-199.6	2.980	7.18	10	21.52
MW-1	06/12/2014	0.24	-24.2	2.924	7.15	9	23.8
MW-1	12/16/2014	0.32	-33.4	2.990	7.1	5	21.2
MW-1	06/10/2015	0.76	83.7	2.988	7.2	2	22.5
MW-1	12/10/2015	0.43	-27.2	2.887	7.01	4	21.2
MW-1	06/07/2016	0.48	-81.8	3.014	7.06	3	22.6
MW-1	12/02/2016	0.54	-144.2	2.876	7.19	4	17.42
MW-1	06/06/2017	0.46	-109	3.138	7.38	7	20.1
MW-1	12/07/2017	0.61	-120	3.150	7.24	4	23
MW-1	06/04/2018	0.53	-105	3.097	7.38	7	20.6
MW-1	12/07/2018	0.53	-82.9	3.011	7.47	7	21.5
MW-1	06/14/2019	0.41	-119.5	2.865	7.36	8	22.7
MW-2A	06/13/2012	0.12	-114.4	6.840	6.94	329	24.9
MW-2A	12/14/2012	0.24	-82.6	6.278	7	46	22.7
MW-2A	06/20/2013	0.22	-91.4	4.014	6.91	52	23.9
MW-2A	12/13/2013	0.38	-347.8	4.156	6.94	147	21.2
MW-2A	06/12/2014	0.17	-104.4	3.370	6.86	35	26
MW-2A	12/18/2014	0.17	-107.1	3.234	7.08	7	23.6
MW-2A	06/08/2015	0.15	-398	3.172	6.98	138	26.93
MW-2A	12/11/2015	0.66	-83	2.541	7.03	1000	21.1
MW-2A	06/08/2016	0.28	-60.3	2.834	7.18	12	24.1
MW-2B	06/13/2012	0.2	-99.9	3.510	6.94	4	24.2
MW-2B	12/14/2012	0.29	-91.3	2.894	7.08	15	21.7
MW-2B	06/20/2013	0.27	-146.3	2.253	7.02	10	23.8
MW-2B	12/13/2013	0.37	-350.2	2.786	6.9	9	23.9
MW-2B	06/12/2014	0.55	-113.5	2.363	6.85	15	24.1
MW-2B	12/18/2014	0.16	-136.7	1.997	7.25	5	22.4
MW-2B	06/09/2015	0.53	-306	3.148	6.99	9	26.96
MW-2B	12/11/2015	1.14	-97.8	2.537	6.93	31	21.8
MW-2B	06/09/2016	0.37	-92.4	2.490	7.03	16	23.9
MW-2B	12/01/2016	0.6	-116.4	2.421	7.01	8	22.9
MW-2B	06/06/2017	0.61	-133.9	2.430	7.13	7	22.5
MW-2B	12/07/2017	0.62	-115	2.663	7.12	6	22.6
MW-2B	06/06/2018	0.35	-137	2.301	7	7	22.3
MW-2B	12/06/2018	0.27	49.5	2.489	7.47	3	24
MW-2B	06/14/2019	0.63	-112.2	2.296	7.13	3	23.3

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-2C	06/13/2012	0.18	-110.2	2.070	7.06	6	22.1
MW-2C	12/13/2012	2.95	-184.8	1.668	7.25	13	20.9
MW-2C	06/20/2013	0.29	-134.1	1.889	7	10	22.8
MW-2C	12/13/2013	1.08	-310.6	1.898	7.06	8	22.5
MW-2C	06/12/2014	0.45	-129.3	2.222	7	49	23.3
MW-2C	12/18/2014	0.36	-140.8	2.640	7.17	8	22.4
MW-2C	06/09/2015	0.2	-321	2.410	7.03	12	24.93
MW-2C	12/11/2015	0.23	-124.8	1.949	7	7	21.6
MW-2C	06/09/2016	0.3	-96	2.135	7.07	12	23.9
MW-2C	12/01/2016	0.36	-120.4	2.155	7.06	11	22.7
MW-2C	06/06/2017	0.3	-91.4	4.721	7.39	18	23.4
MW-2C	12/07/2017	0.5	-117	4.752	7.23	10	22.7
MW-2C	06/06/2018	0.8	-76	3.013	6.94	32	23.8
MW-2C	12/06/2018	1.42	247.7	1.895	7.63	36	15.6
MW-2C	06/14/2019	0.44	-97.1	4.572	7.2	24	23.7
MW-4	06/07/2012	1.14	-104.2	10.560	6.97	2	22.6
MW-4	12/11/2012	2.88	-145.7	10.670	7.3	6	21.57
MW-4	06/17/2013	2.8	-188.3	1.168	7.04	5	22.5
MW-4	12/12/2013	4.56	-191.8	10.591	7.44	7	20.6
MW-4	06/12/2014	7.32	72.4	10.289	7.41	7	22.8
MW-4	12/19/2014	5.41	-7.2	11.009	7.31	5	21.89
MW-4	06/11/2015	7.25	64.2	9.951	7.25	8	22.6
MW-4	12/07/2015	0.5	137.6	6.432	6.89	14	20.7
MW-4	06/10/2016	0.55	-15.6	10.290	7.12	20	22.4
MW-4	12/02/2016	0.73	-99.5	10.591	7.17	19	20.26
MW-4	06/06/2017	0.14	-77.1	10.541	7.29	10	21.7
MW-4	12/08/2017	0.5	-39.4	9.650	7.41	19	21.9
MW-4	06/05/2018	0.27	-44	8.512	7.1	5	22.1
MW-4	12/07/2018	0.28	60	8.517	7.3	30	21.7
MW-4	06/13/2019	0.31	107	5.184	6.49	11	23.1
MW-4B	06/07/2012	0.66	34.1	2.440	7.05	7	22.6
MW-4B	12/12/2012	0.51	-158.9	2.233	7.05	8	20.5
MW-4B	06/20/2013	0.71	-148.1	1.923	7.07	9	22.7
MW-4B	12/12/2013	0.67	-315.1	2.438	6.91	7	21.5
MW-4B	06/12/2014	0.19	-132.9	2.596	6.93	25	22.9
MW-4B	12/19/2014	0.43	-139.7	2.960	7.01	20	21.1
MW-4B	06/11/2015	0.39	-49.6	2.789	6.94	7	22.2
MW-4B	12/07/2015	0.41	-129.8	2.683	6.69	5	21.4
MW-4B	06/10/2016	0.22	-92.1	2.528	6.88	4	22.8

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-4B	12/02/2016	0.28	-163.7	2.340	7	2	21.93
MW-4B	06/08/2017	0.76	-127.9	2.084	7.04	9	21.1
MW-4B	12/08/2017	0.42	-115.6	2.337	7.24	5	22.6
MW-4B	06/04/2018	0.27	-107	3.377	6.86	7	23.5
MW-4B	12/07/2018	0.42	-74	2.359	7.16	17	21.9
MW-4B	06/13/2019	0.11	-37	2.166	6.53	5	23.7
MW-15	06/17/2013	0.24	-134	3.594	7.02	4	24.02
MW-15	12/11/2013	0.36	-161.3	3.726	7.11	9	22.5
MW-15	06/11/2014	0.13	-160.3	3.651	6.99	22	22.7
MW-15	12/19/2014	0.73	-121.6	3.721	7.05	6	21.1
MW-15	06/08/2015	0.4	-78.4	3.246	7.03	4	22.6
MW-15	12/07/2015	0.57	-158.2	2.641	6.9	7	21.5
MW-15	06/07/2016	1.21	-95.4	4.430	6.98	5	23.3
MW-15	11/30/2016	0.6	-157.9	2.942	6.99	3	21.8
MW-15	06/07/2017	0.26	-110.4	2.962	7.35	4	21.1
MW-15	12/05/2017	0.52	-119	3.055	7.25	5	21.4
MW-15	06/07/2018	0.45	-133.8	3.015	7.57	2	21.9
MW-15	12/04/2018	0.41	-112	3.266	7.19	21	20
MW-15	06/13/2019	0.53	-95.2	3.051	7.39	7	22.8
MW-15B	06/08/2012	0.56	-133	4.690	7.06	128	22.6
MW-15B	12/12/2012	0.49	-113.5	4.698	6.92	84	21.1
MW-15B	06/18/2013	0.77	-94.2	4.759	6.84	6	22.2
MW-15B	12/12/2013	0.26	-246.8	4.593	6.98	20	20.9
MW-15B	06/11/2014	0.23	-139.7	4.366	6.91	63	22.9
MW-15B	12/18/2014	0.46	-139.7	4.014	7.1	4	21.2
MW-15B	06/09/2015	0.63	-57.6	3.526	6.93	5	21.6
MW-15B	12/08/2015	0.87	-111.5	2.417	6.96	22	20.8
MW-15B	06/07/2016	0.21	-126.6	3.526	7.09	5	23.8
MW-15B	11/30/2016	0.33	-123.1	3.670	7	13	22.2
MW-15B	06/06/2017	0.52	-134.2	3.138	7.04	8	22.5
MW-15B	12/05/2017	0.55	-150	3.003	7.06	7	22
MW-15B	06/07/2018	0.82	-174.2	3.301	7.23	5	22.4
MW-15B	12/06/2018	0.71	-88.9	2.917	7.54	23	20.8
MW-15B	06/13/2019	0.6	-127.5	2.981	7.31	12	22.2
MW-16	12/13/2012	0.31	-126.1	3.451	7.03	132	30.3
MW-16	12/11/2013	0.29	-149.3	3.814	7.14	22	22.45
MW-16	12/19/2014	0.44	-103.9	4.047	7.03	51	21.2
MW-16	12/07/2015	0.14	-173.6	2.097	6.86	5	22.91
MW-16	06/07/2016	0.57	-47.3	4.197	7.01	14	23

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-16	11/30/2016	0.6	-73.9	3.758	6.83	46	20.9
MW-16	06/06/2017	0.41	-80.9	3.677	7.01	50	21.6
MW-16	12/05/2017	0.57	-124	3.011	7.16	7	21.8
MW-16	06/07/2018	0.71	-151.8	3.914	7.2	29	22.2
MW-16	12/06/2018	0.78	3.7	2.187	7.54	74	19.3
MW-16	06/13/2019	0.39	-62.4	3.445	7.17	31	22.6
MW-17	06/07/2012	1.46	-145.2	7.020	6.99	20	23.6
MW-17	12/12/2012	0.87	-116.6	7.747	6.94	53	20.7
MW-17	06/18/2013	0.54	-82.6	6.806	6.86	4	22.5
MW-17	12/12/2013	0.18	-217.1	7.004	7	10	22.33
MW-17	06/11/2014	0.18	-113.2	6.869	6.95	4	23.1
MW-17	12/16/2014	0.15	-131.1	7.313	6.97	6	21.4
MW-17	06/09/2015	1.1	-256	6.868	6.79	7	21.4
MW-17	12/09/2015	0.54	-172	6.593	6.96	49	23.1
MW-17	06/09/2016	0.56	-107.2	5.966	6.91	7	22.1
MW-17	12/01/2016	0.72	-114.4	6.503	6.91	6	21.9
MW-17	06/06/2017	0.5	-121.3	6.503	7.1	3	21.6
MW-17	12/08/2017	0.5	-136	6.321	7.14	5	20.7
MW-17	06/07/2018	0.33	-88	5.950	6.88	10	23.5
MW-17	12/06/2018	0.3	-61	6.342	7.03	5	21.7
MW-17	06/13/2019	0.37	-12	5.984	6.45	14	23.1
MW-18	12/11/2012	0.48	-192.4	4.911	7.07	23	20.97
MW-18	12/12/2013	0.21	-223	5.198	7.03	-	20.61
MW-18	12/16/2014	0.4	-124.3	5.628	7.23	129	20.1
MW-18	12/09/2015	0.35	-212	5.363	7.03	81	22.9
MW-18	12/01/2016	0.65	-49.8	5.471	6.71	13	21.3
MW-18	06/07/2017	0.75	-108.4	5.226	7.18	20	21.2
MW-18	12/08/2017	0.66	-134	5.023	7.15	14	21.8
MW-18	12/06/2018	0.29	-50	5.382	7.11	49	20.7
MW-18	06/13/2019	0.34	-121.3	4.607	7.15	24	22.4
MW-19	06/07/2012	1.79	-155.2	5.660	6.93	30	23.1
MW-19	12/12/2012	0.32	-119.2	6.265	6.91	52	21.8
MW-19	06/18/2013	0.36	-112.2	5.566	6.81	13	22.16
MW-19	12/11/2013	0.63	-155.1	5.565	6.88	8	22.5
MW-19	06/11/2014	0.55	-136.6	4.750	6.89	45	23.4
MW-19	12/15/2014	0.84	-101.3	5.122	7.3	12	21.3
MW-19	06/09/2015	0.62	-251	5.234	6.94	6	22.83
MW-19	12/09/2015	0.89	-97.4	4.746	6.94	7	21.06
MW-19	06/07/2016	0.32	-185.2	4.650	7.14	21	23.6

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-19	12/01/2016	0.18	-123.5	4.988	7.23	19	22.86
MW-19	06/08/2017	0.36	-133.6	5.082	7.25	16	23.3
MW-19	12/07/2017	0.38	-146	5.040	7.15	10	21.2
MW-19	06/07/2018	0.31	-95	6.111	6.87	7	24.3
MW-19	12/07/2018	0.88	-107	4.860	7.3	9	22.9
MW-19	06/12/2019	0.84	-51.9	4.750	7.19	3	23.1
MW-20	06/13/2012	0.53	-238.4	5.920	7.17	15	23.3
MW-20	12/14/2012	0.83	-71.1	5.401	6.95	68	20.9
MW-20	06/18/2013	0.27	-109.4	6.075	6.73	84	21.6
MW-20	12/13/2013	0.17	-299.4	5.452	6.97	21	22.61
MW-20	06/10/2014	0.14	-48.2	4.644	6.99	20	24
MW-20	12/19/2014	0.3	-31.3	2.991	7.11	12	22.6
MW-20	06/11/2015	0.45	-335	4.663	7.01	346	26.2
MW-20	12/09/2015	0.7	-48	4.804	6.8	9	22.06
MW-20	06/07/2016	0.43	-25.4	5.791	6.98	20	25.3
MW-20	12/02/2016	0.6	-16	5.682	6.81	45	21.29
MW-20	06/08/2017	1.94	127.3	5.017	7.05	57	20.8
MW-20	12/07/2017	1.23	134.4	5.164	7.14	51	21.9
MW-20	06/05/2018	1.16	-21	6.778	7.25	10	21.8
MW-20	12/04/2018	1.15	67	6.230	7.59	57	23.7
MW-20	06/11/2019	1.65	111.7	5.165	7.69	24	24.1
MW-20B	06/12/2012	1.95	-81.7	5.600	6.9	7	24.1
MW-20B	12/12/2012	0.29	-144.6	4.859	7.18	17	20.8
MW-20B	06/18/2013	0.17	-180.4	5.112	7.2	19	21.9
MW-20B	12/12/2013	0.25	-249.3	6.271	7	76	22.18
MW-20B	06/10/2014	0.07	-110.9	6.671	6.99	136	23.6
MW-20B	12/19/2014	0.33	-97.8	5.196	7.07	17	21.9
MW-20B	06/11/2015	0.27	-361	7.030	7.06	67	24.36
MW-20B	12/09/2015	0.28	-93.6	6.008	6.89	147	21.04
MW-20B	06/07/2016	0.17	-75.7	6.740	7.02	18	24.3
MW-20B	12/01/2016	0.18	-117	6.399	7.32	19	23.78
MW-20B	06/06/2017	0.42	-197.5	6.139	7.04	17	23.6
MW-20B	12/07/2017	0.39	-191.7	6.208	7.17	17	22.5
MW-20B	06/05/2018	0.21	-110	6.801	6.84	10	23.9
MW-20B	12/07/2018	0.46	-145.6	4.797	7.5	93	21.9
MW-20B	06/11/2019	0.94	-133.7	5.904	7.23	19	23
MW-21	06/12/2012	0.09	-80	7.170	6.96	9	23.2
MW-21	12/12/2012	0.18	-91.1	9.321	6.92	11	20.7
MW-21	06/18/2013	0.19	-99.9	7.949	6.8	17	22.13

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-21	12/13/2013	0.6	-365.6	5.181	6.84	28	19.8
MW-21	06/10/2014	0.07	-132.7	7.798	6.94	27	22.6
MW-21	12/18/2014	0.35	-105.7	7.818	6.97	7	21.2
MW-21	06/09/2015	0.35	23.8	8.065	6.95	8	22.8
MW-21	12/10/2015	0.94	-95	8.414	6.95	3	23.3
MW-21	06/08/2016	0.28	-74.9	8.896	7.08	4	23.6
MW-21	12/02/2016	1.98	-81.8	8.618	6.91	9	18.9
MW-21	06/08/2017	0.77	-88.4	8.471	6.92	17	20.8
MW-21	12/07/2017	0.53	-112	8.349	7.02	8	22.3
MW-21	06/07/2018	0.72	-91	8.713	6.94	14	20.5
MW-21	12/07/2018	1.6	-53.8	3.407	7.61	5	23.4
MW-21	06/11/2019	0.94	-32.8	5.428	7.3	8	23.6
MW-22	06/13/2012	0.98	-172.7	5.850	7.25	10	22.81
MW-22	12/11/2012	0.37	-171.9	5.720	7.26	5	22.53
MW-22	06/19/2013	0.56	-121.6	6.047	6.92	10	22.69
MW-22	12/11/2013	1.15	-126.5	5.508	6.99	6	21.5
MW-22	06/10/2014	0.17	-129.7	4.709	6.98	9	23.2
MW-22	12/15/2014	3.14	-145	5.328	7.17	3	21.6
MW-22	06/11/2015	0.74	-49.7	6.758	7.27	4	22
MW-22	12/09/2015	0.72	-128	6.391	6.93	3	21.87
MW-22	06/08/2016	0.31	-108.3	5.797	7.24	6	23
MW-22	12/01/2016	0.27	-155.1	4.801	7.43	3	23.3
MW-22	06/07/2017	0.26	-127.1	4.787	7.42	3	22
MW-22	12/06/2017	0.5	-137	4.766	7.27	4	22.3
MW-22	06/06/2018	0.43	-136	6.155	7.06	10	22.4
MW-22	12/05/2018	0.44	-106	4.544	7.22	57	22.6
MW-22	06/12/2019	0.36	-95	4.127	6.63	5	23.5
MW-23	06/08/2012	0.71	-89.4	7.070	6.88	5	22.8
MW-23	12/11/2012	0.35	-172.5	6.610	7.1	8	23.49
MW-23	06/18/2013	0.2	-140.9	6.845	6.98	4	23.8
MW-23	12/12/2013	0.58	-313.2	6.648	6.91	4	22.5
MW-23	12/18/2014	0.3	-124.9	6.902	7.07	3	21.6
MW-23	12/08/2015	0.35	-105.3	5.407	6.85	5	22.71
MW-23	06/09/2016	0.89	-94	6.027	6.96	5	22
MW-23	12/01/2016	0.1	-125.2	6.284	7.32	6	22.8
MW-23	06/06/2017	0.57	-95	6.504	7.33	7	22.7
MW-23	12/08/2017	0.64	-114	6.388	7.04	4	22.6
MW-23	06/07/2018	0.56	-92	6.313	6.96	10	22.3
MW-23	12/05/2018	0.61	-73	6.359	7.28	10	22.1

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-23	06/11/2019	0.63	-51	6.478	7.18	2	22.6
MW-23A	06/08/2012	0.91	-95.7	6.520	7.04	11	22.9
MW-23A	12/12/2012	0.34	-102.1	6.590	6.62	13	21.8
MW-23A	06/18/2013	0.23	-116.6	6.421	6.82	11	24.4
MW-23A	12/11/2013	0.41	-156.6	6.300	6.91	5	24.9
MW-23A	06/10/2014	0.1	-137.5	6.077	6.97	28	25
MW-23A	12/16/2014	0.28	-109.5	5.990	7.02	7	21.2
MW-23A	06/11/2015	0.31	-293	6.236	7.06	7	23.76
MW-23A	12/08/2015	1.43	-75	5.417	6.89	6	22.92
MW-23A	06/09/2016	0.39	-79.3	5.435	6.99	24	22.5
MW-23A	12/01/2016	0.4	-95.6	5.519	7.27	20	20.95
MW-23A	06/06/2017	0.33	-117.1	5.014	7.31	13	24.1
MW-23A	12/08/2017	0.31	-128	5.135	7.17	23	22.4
MW-23A	06/07/2018	1.04	-70	6.013	6.9	5	24.84
MW-23A	12/04/2018	1.68	-71	5.322	7.27	1000	18.5
MW-23A	06/14/2019	0.5	109	4.966	6.57	691	23
MW-23B	06/12/2012	0.18	-110.8	2.510	7.2	10	22.6
MW-23B	12/11/2012	0.8	-195.6	2.510	7.27	9	22.7
MW-23B	12/11/2013	0.31	-172.4	2.796	7.03	9	22.1
MW-23B	12/16/2014	0.19	-144.1	2.821	7.15	7	21.9
MW-23B	12/08/2015	0.53	-85.8	2.629	6.98	87	22.93
MW-23B	12/01/2016	0.81	-101.3	2.629	7.35	9	22.23
MW-23B	12/08/2017	0.52	-119	2.611	6.8	8	22
MW-23B	06/07/2018	0.24	-38	3.700	6.97	83	22.3
MW-23B	12/05/2018	0.22	-44	2.863	7.32	31	21.8
MW-23B	06/11/2019	0.19	-43.1	3.278	7.3	17	22.1
MW-24	06/08/2012	1.17	-199.8	4.130	6.99	22	22.9
MW-24	12/11/2012	0.54	-245.1	1.631	7.21	7	21.5
MW-24	06/18/2013	0.32	-138.5	4.974	6.84	14	22.9
MW-24	12/12/2013	0.21	-156.8	4.810	6.94	27	22.15
MW-24	12/18/2014	0.5	-109.3	4.267	7.1	9	22.71
MW-24	12/08/2015	0.66	-147	4.012	6.96	1	23.1
MW-24	06/07/2016	0.23	-201.9	3.890	7.12	15	23.7
MW-24	11/28/2016	0.9	45.3	3.943	6.77	27	22
MW-24	06/06/2017	0.84	49.6	4.054	6.88	22	22.5
MW-24	12/05/2017	1.13	25	4.085	6.05	31	22
MW-24	12/06/2018	1.1	6	3.875	7.3	32	19.7
MW-25	06/12/2012	1.7	-171.9	4.230	7.28	14	22.2
MW-25	12/10/2012	1.1	-139.7	4.335	6.91	9	22.6

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-25	06/19/2013	0.21	-136.4	4.434	6.95	16	22.64
MW-25	12/09/2013	0.35	-88.1	4.299	7.17	5	21.67
MW-25	06/10/2014	0.15	-124.9	4.330	7.07	15	23.3
MW-25	12/19/2014	0.43	-117.9	4.638	7.04	8	21.75
MW-25	06/08/2015	0.47	-250	4.042	7.07	5	27.06
MW-25	12/10/2015	0.5	-115.1	3.365	6.95	20	21.49
MW-25	06/08/2016	0.33	-131.8	3.647	7.02	7	22.9
MW-25	11/28/2016	1.43	52.8	3.521	6.88	10	21.8
MW-25	06/07/2017	0.22	-99.6	3.904	7.18	6	22
MW-25	12/07/2017	0.32	-121.4	3.976	7.33	5	22.7
MW-25	06/07/2018	0.45	-143.4	3.738	7.29	4	22.7
MW-25	12/06/2018	0.4	-80	4.035	6.92	103	21.7
MW-25	06/14/2019	0.16	-29	3.661	6.53	5	23
MW-25B	06/12/2012	2.91	-80.8	4.060	6.88	4	20.8
MW-25B	12/10/2012	1.1	-122.3	3.914	7.15	14	22.2
MW-25B	06/19/2013	0.44	-114.8	3.985	6.89	9	22.67
MW-25B	12/09/2013	0.38	-95.2	3.870	7.18	8	20.65
MW-25B	06/10/2014	0.21	-115.5	3.753	7.03	15	23.8
MW-25B	12/19/2014	0.49	-109.3	4.183	7.07	8	20.91
MW-25B	06/08/2015	0.62	-267	4.127	7.01	8	25.42
MW-25B	12/11/2015	0.68	-78.3	3.607	6.95	3	21.3
MW-25B	06/08/2016	0.66	-126.9	3.531	7.04	8	21.2
MW-25B	11/28/2016	1.44	-105.6	2.569	6.71	5	21.2
MW-25B	06/07/2017	0.41	-93.7	2.951	7.44	4	21.6
MW-25B	12/06/2017	0.47	-98	3.016	7.3	5	22.1
MW-25B	06/08/2018	0.5	-122.6	4.414	7.23	3	21.2
MW-25B	12/06/2018	0.28	-87	2.766	7.34	14	21.8
MW-25B	06/14/2019	0.35	25	3.315	6.52	7	22.5
MW-26	06/19/2013	0.19	-139.8	2.352	7.15	5	23.46
MW-26	06/10/2014	0.1	-61.9	3.213	7.07	46	22.5
MW-26	08/08/2016	0.45	-133.7	3.500	6.98	15	22.3
MW-26	11/28/2016	0.55	65.6	3.418	6.84	62	21.4
MW-26	06/09/2017	0.43	-104.6	3.159	6.94	43	21.9
MW-26	12/06/2017	0.37	-110.2	5.352	7.11	54	22.6
MW-26	06/07/2018	0.75	-143.2	3.231	7.2	50	22.4
MW-26	12/06/2018	0.6	-15	3.617	6.86	79	21.7
MW-26	06/14/2019	0.18	109	3.352	6.46	4	22.3
MW-27	06/08/2012	0.8	-254.1	3.940	6.96	7	22.7
MW-27	12/11/2012	0.77	-181.9	3.912	7.09	10	22.6

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-27	06/18/2013	0.19	-113.4	3.948	6.85	14	22.06
MW-27	12/10/2013	0.2	-104.2	3.936	7.11	5	21.21
MW-27	06/10/2014	0.13	-147.6	3.867	6.95	-	23.1
MW-27	12/17/2014	0.33	-101.5	4.208	7.07	8	21.82
MW-27	06/08/2015	0.46	-391	3.859	6.9	7	23.86
MW-27	12/10/2015	0.52	-154	3.783	7.03	3	22.5
MW-27	06/09/2016	0.4	-98.7	3.626	6.97	4	23.1
MW-27	11/29/2016	0.49	194.2	3.649	6.91	9	22.1
MW-27	06/09/2017	0.6	-104.6	3.828	7.09	8	22.1
MW-27	12/05/2017	0.6	-105	3.830	7.17	6	21.9
MW-27	12/04/2018	0.19	-35.3	3.587	6.98	2	22
MW-28	06/12/2012	1.19	-198.8	8.780	7.13	59	23.6
MW-28	12/12/2012	1.33	-29.9	1.481	6.8	7	20.7
MW-28	06/18/2013	0.43	-171.4	5.840	6.8	15	23.2
MW-28	12/10/2013	0.27	-120.9	5.482	7.13	11	22.63
MW-28	06/10/2014	0.89	-120.5	6.144	6.99	22	23.2
MW-28	12/19/2014	0.45	-57.2	1.937	6.9	47	21.7
MW-28	06/08/2015	0.38	-306	4.493	6.98	8	25.62
MW-28	12/10/2015	0.34	-231	5.380	7.03	5	23.5
MW-28	06/08/2016	0.24	-92.8	5.029	7.14	102	24.1
MW-28	11/30/2016	0.46	-104.5	3.489	6.7	10	22.3
MW-28	06/08/2017	0.85	-244.9	3.569	6.94	18	23.1
MW-28	12/07/2017	0.53	-211	3.568	6.71	20	20.6
MW-28	06/05/2018	1.13	-275.2	3.685	7.07	21	22.2
MW-28	12/07/2018	0.74	-72	3.230	7.01	17	23.3
MW-28	06/11/2019	0.46	-285	3.829	6.64	67	23.1
MW-29	06/08/2012	1.72	-228.7	4.100	7.07	45	23
MW-29	12/13/2012	0.7	-132.6	4.158	6.94	9	21.4
MW-29	06/18/2013	0.28	-119.2	3.996	6.93	7	23.06
MW-29	12/10/2013	0.21	-145.9	5.002	7.17	11	22.13
MW-29	06/10/2014	0.08	-133.2	4.077	7.04	23	23.8
MW-29	12/16/2014	0.18	-141.9	4.182	7.15	8	21.98
MW-29	06/08/2015	0.54	-61.6	4.051	7.1	7	21.8
MW-29	12/08/2015	0.32	-226	4.105	7.03	7	23.8
MW-29	06/08/2016	0.14	-148.2	3.562	7.02	7	23.6
MW-29	11/30/2016	0.58	-133	3.709	6.9	7	22.8
MW-29	06/08/2017	0.84	-151.2	3.694	6.99	6	22.7
MW-29	12/06/2017	0.63	-94	3.065	7.14	7	22
MW-29	12/04/2018	0.33	-121.7	3.898	7	22	23.2

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-29	06/11/2019	0.36	-207	4.510	6.82	2	24
MW-29A	06/07/2012	0.61	-312.1	2.310	6.89	38	23.9
MW-29A	12/11/2012	1.15	-101.2	2.116	7.05	9	19.5
MW-29A	06/18/2013	0.35	-123.3	2.067	6.82	11	23.35
MW-29A	12/10/2013	0.27	-89.4	2.152	7.08	7	22.27
MW-29A	12/16/2014	0.39	-96.4	2.186	7.02	7	23.07
MW-29A	12/08/2015	0.44	-159	2.130	6.92	3	25.1
MW-29A	11/30/2016	1.21	-18.1	2.027	6.82	45	22.9
MW-29A	12/06/2017	1.53	-96	2.902	6.98	68	22.3
MW-29A	12/07/2018	0.74	-119	2.559	7.09	74	21.6
MW-30	06/12/2012	0.85	-230.6	6.920	7.31	47	22.3
MW-30	12/13/2012	0.32	-174.1	7.050	7.12	15	21.6
MW-30	12/10/2013	0.2	-113.9	7.461	7.13	21	21.14
MW-30	12/16/2014	0.39	-117.9	8.006	7.08	31	21.52
MW-30	12/08/2015	0.37	-223	7.699	6.92	24	23.2
MW-30	06/08/2016	0.3	-121.6	5.289	6.94	15	21.9
MW-30	11/30/2016	0.65	-102.5	7.089	6.83	25	22.7
MW-30	06/08/2017	0.4	-133.4	6.621	7	25	22.6
MW-30	12/06/2017	0.56	-163	6.277	7.1	25	22
MW-30	06/07/2018	0.63	-166.2	6.478	7.14	34	22.3
MW-30	12/04/2018	0.34	-131.7	7.139	6.92	39	22.7
MW-31	06/07/2012	0.39	-320.7	6.120	6.96	20	22.5
MW-31	12/12/2012	0.42	-117.8	3.926	6.87	8	22.8
MW-31	12/10/2013	0.22	-90.1	5.877	7.16	6	22.53
MW-31	12/17/2014	0.22	-100.2	5.873	7.14	3	23.18
MW-31	12/08/2015	0.32	-166	4.842	7.07	1	24.8
MW-31	11/29/2016	0.55	191.1	4.673	6.99	2	22.5
MW-31	06/09/2017	0.7	-195.8	4.739	7.05	2	22.4
MW-31	12/05/2017	0.68	-165	4.518	7.12	3	22.1
MW-31	06/05/2018	0.45	-274.3	6.396	7.23	2	22.8
MW-31	12/04/2018	0.34	-103.3	5.097	6.98	1	24.3
MW-31A	06/07/2012	0.92	-259.3	2.800	7.06	111	23.7
MW-31A	12/11/2012	0.6	-123.1	2.848	6.96	8	22.8
MW-31A	12/10/2013	0.39	-55.4	2.895	7.19	4	23.89
MW-31A	12/17/2014	1.2	-12.1	2.801	7.16	47	23.94
MW-31A	12/08/2015	0.96	-65	2.588	7.01	1	26.2
MW-31A	11/29/2016	0.8	196.8	2.399	6.95	23	22.8
MW-31A	06/07/2017	0.68	-69.1	2.518	7.48	513	21.9
MW-31A	12/05/2017	0.8	-91	2.591	7.37	352	22.2

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-31A	06/04/2018	1.81	-281.4	3.321	7.17	44	23.8
MW-31A	12/04/2018	1.19	-69.3	2.452	7.21	1000	21.4
MW-31B	06/12/2012	1.48	-170.4	7.710	7.3	59	22.8
MW-31B	12/13/2012	0.34	-141.6	7.723	7.03	17	21.9
MW-31B	12/10/2013	0.27	-80.1	7.802	7.14	15	21.58
MW-31B	12/17/2014	0.68	-101.4	7.921	7.07	4	22.31
MW-31B	12/08/2015	0.54	-119	7.424	7	5	22.8
MW-31B	11/29/2016	0.37	196.1	7.003	6.95	9	22.2
MW-31B	06/07/2017	0.36	-110.6	6.933	7.36	4	22.3
MW-31B	12/05/2017	0.54	-119	6.900	7.24	5	21.6
MW-31B	06/05/2018	0.56	-281.4	7.751	7.24	9	21.9
MW-31B	12/04/2018	0.45	-98.7	5.935	7	1	22.9
MW-32	06/07/2012	0.84	-327.2	4.580	7.07	51	22.9
MW-32	12/11/2012	0.44	-227.4	4.703	7.14	9	21.5
MW-32	06/11/2014	0.07	-134.9	4.725	6.98	39	23.4
MW-32	08/08/2016	0.2	-146.8	4.508	7.07	14	23.3
MW-32	11/29/2016	0.4	195.6	4.072	6.98	15	21.2
MW-32	06/09/2017	0.68	-141.3	4.257	6.99	18	21.7
MW-32	12/08/2017	0.64	-134	4.265	7.05	9	22.1
MW-32	06/05/2018	0.37	-279.3	4.908	7.312	18	21.7
MW-32	12/04/2018	0.4	-107.5	3.864	7.02	16	21.9
MW-32	06/11/2019	0.77	-147	4.814	6.6	7	23.3
MW-33A	06/08/2012	0.07	-95.4	3.840	7.12	1000	23.2
MW-33A	12/14/2012	0.78	-57.8	3.928	7.06	992	21.3
MW-33A	06/19/2013	0.36	-128.6	4.517	6.86	65	22.3
MW-33A	12/12/2013	0.13	-288.6	4.086	7.03	341	23.29
MW-33A	06/09/2014	0.15	-115	4.138	6.84	150	25.1
MW-33A	12/16/2014	0.09	-120	4.531	6.95	1000	21.2
MW-33A	06/10/2015	0.79	-241	4.309	7	79	23.21
MW-33A	12/09/2015	0.43	-141	4.323	6.97	1	25.7
MW-33A	06/10/2016	0.42	-37.1	4.503	6.86	13	21
MW-33A	12/01/2016	0.59	-80.9	4.578	7.2	11	25.13
MW-33A	06/08/2017	0.98	24.7	4.728	6.7	1000	21.1
MW-33A	12/07/2017	1.1	39.6	4.906	6.91	1000	23
MW-33B	06/08/2012	0.12	-134.8	5.410	7.21	3	23.1
MW-33B	12/14/2012	0.51	-116.7	5.243	7.17	17	20.9
MW-33B	06/20/2013	0.27	-108.2	5.095	7.01	18	22.5
MW-33B	12/12/2013	0.25	-275.3	6.615	7.02	25	21.56
MW-33B	06/09/2014	0.07	-118.7	6.469	6.94	18	25.1

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-33B	12/16/2014	0.24	-129	7.119	7.06	4	20.2
MW-33B	06/10/2015	0.21	-379	6.449	7.03	43	23.72
MW-33B	12/09/2015	0.46	-141	6.381	7.01	9	23.5
MW-33B	06/10/2016	0.39	-67.2	6.381	6.95	20	21.1
MW-33B	12/01/2016	0.29	-111.8	6.003	7.26	37	21.9
MW-33B	06/09/2017	0.47	-128.9	6.182	7.31	54	22.3
MW-33B	12/07/2017	0.56	-141.8	6.312	7.5	45	22.5
MW-33B	12/07/2018	0.7	-107	5.344	7.18	26	23.1
MW-33B	06/13/2019	0.24	29	4.360	6.51	5	23
MW-34	06/12/2012	0.67	-69.5	2.570	7.12	6	22.4
MW-34	12/12/2012	0.78	-84.9	2.474	7.14	11	21.9
MW-34	11/30/2016	1.1	39.2	2.269	7.08	12	22.4
MW-34	06/06/2017	1.16	29.1	2.290	7.12	12	22.4
MW-34	12/08/2017	1.6	39	2.311	7.05	8	22.3
MW-34	06/05/2018	1.73	-239.5	3.021	7.75	17	22.2
MW-35	06/08/2012	1.07	-250.8	4.930	7.08	5	22.9
MW-35	12/12/2012	0.67	-175.9	4.971	7.16	5	21.2
MW-35	11/30/2016	0.36	-96.3	4.302	6.9	38	22.1
MW-35	06/06/2017	0.4	-106.8	4.149	7.08	24	22
MW-35	12/06/2017	0.55	-118	3.899	7.04	35	26.9
MW-35	06/05/2018	0.49	-119.8	5.495	7.21	25	21.4
MW-36	06/08/2012	0.46	-272.5	4.250	6.94	9	23.2
MW-36	12/11/2012	0.39	-208.8	4.019	7.15	13	22
MW-36	06/20/2013	0.22	-124.9	4.020	6.9	7	22.3
MW-36	12/10/2013	0.59	59.9	4.207	6.86	8	22.3
MW-36	06/10/2014	0.16	-161.6	4.303	6.96	34	23.3
MW-36	12/18/2014	0.29	-117.3	4.647	7.07	22	22.28
MW-36	06/08/2015	0.46	-75.6	4.410	6.96	6	23.3
MW-36	12/10/2015	0.7	-100.3	3.683	6.86	4	21.04
MW-36	06/07/2016	0.34	-101.5	4.438	7.01	13	22.4
MW-36	11/29/2016	0.46	-110.9	4.113	6.5	4	21.62
MW-36	06/08/2017	0.55	-112.6	4.026	6.86	7	21.4
MW-36	12/05/2017	0.53	-119.5	4.189	7.03	7	21.5
MW-36	12/05/2018	0.3	-82	4.452	7.13	27	22.9
MW-37	06/12/2012	1.02	-213.1	3.340	7.38	10	22.9
MW-37	12/13/2012	1.01	-124.5	3.243	7.11	8	21.1
MW-37	06/20/2013	0.31	-103.5	6.100	6.88	12	22.3
MW-37	12/10/2013	0.61	89.2	4.529	6.92	6	21.9
MW-37	06/10/2014	0.06	-153.2	5.499	6.99	48	22.6

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-37	12/18/2014	0.5	-106.6	6.575	7.11	13	21.2
MW-37	06/08/2015	0.48	-66.1	4.153	7	4	22.6
MW-37	12/10/2015	0.56	-87.8	5.105	6.87	3	20.93
MW-37	06/08/2016	0.17	-75.7	7.026	7.13	24	22.5
MW-37	11/29/2016	0.56	-128.6	4.932	7.25	48	22.09
MW-37	06/08/2017	0.42	-132.4	6.492	7.01	64	22.8
MW-37	12/06/2017	0.65	-127.3	6.543	7.17	54	22.4
MW-37	06/07/2018	0.63	-199.4	6.914	7.25	25	21.6
MW-37	12/05/2018	0.63	-61	5.993	7.18	44	22
MW-37	06/11/2019	0.98	-132	7.215	6.56	11	22.8
MW-38	06/08/2012	0.53	-288.7	2.350	6.91	8	22.7
MW-38	12/13/2012	0.55	-88.1	2.226	7.12	7	21.9
MW-38	12/10/2013	0.65	69.9	2.173	6.88	8	22.4
MW-38	12/16/2014	0.7	-77.8	2.308	7.06	6	22.3
MW-38	12/08/2015	0.75	-112	2.350	7.09	36	24.8
MW-38	08/08/2016	0.59	-89.3	2.290	7.07	13	23.2
MW-38	11/28/2016	0.4	-135.8	2.109	7.15	10	23.66
MW-38	06/09/2017	0.35	-28	2.854	7.29	5	22.4
MW-38	12/05/2017	0.37	-41.6	2.984	7.13	3	23
MW-38	06/08/2018	0.7	-108.2	2.980	7.4	2	22.6
MW-38	12/05/2018	0.4	-72	2.729	7.37	38	22.9
MW-39	06/12/2012	1.35	-104.3	3.970	6.82	6	21.4
MW-39	12/11/2012	2.53	-148.2	3.884	7.12	12	21.1
MW-39	12/10/2013	0.9	40.8	4.065	6.94	4	22
MW-39	12/16/2014	0.78	-121.4	4.021	7.06	3	22.19
MW-39	12/07/2015	0.66	-173	4.197	6.97	1	23.3
MW-39	08/08/2016	0.21	-97	3.969	6.77	8	20.1
MW-39	11/28/2016	0.21	-201.3	4.136	7.2	8	22.98
MW-39	06/09/2017	0.16	-98.2	5.980	7.31	12	22.4
MW-39	12/05/2017	0.31	-104.7	6.264	7.33	8	23.1
MW-39	06/08/2018	0.46	-110.08	5.337	7.19	8	22.5
MW-39	12/05/2018	0.71	-56	4.619	7.23	25	21.8
MW-40	06/08/2012	1.47	-248.1	6.420	7.11	15	23.8
MW-40	12/12/2012	0.62	-142.6	6.840	7.08	10	21.2
MW-40	12/10/2013	1.9	49	6.907	6.95	5	20.1
MW-40	12/16/2014	0.46	-135.1	6.502	7.11	8	20.71
MW-40	12/07/2015	0.95	-161	6.266	6.97	1	22.6
MW-40	08/08/2016	0.28	-96.7	6.370	6.82	8	22.3
MW-40	11/28/2016	0.21	-201.6	6.278	7.26	6	22.29

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-40	06/09/2017	0.38	-105.1	2.748	7.33	5	22.4
MW-40	12/05/2017	0.41	-115.3	2.560	7.45	7	22.2
MW-40	06/08/2018	0.35	-101.6	7.312	7.2	3	20.6
MW-40	12/05/2018	0.35	-81	6.049	7.25	21	21.7
MW-41	06/13/2012	1.16	-168.9	7.920	7.2	42	22.5
MW-41	12/11/2012	0.62	-148.8	5.944	7.12	7	22.6
MW-41	06/21/2013	0.29	-133.8	5.973	6.95	5	22.7
MW-41	12/12/2013	0.6	-238.2	6.480	6.94	2	21.9
MW-41	06/11/2014	0.12	-119.9	7.156	6.95	36	23.8
MW-41	12/15/2014	0.87	-133.7	7.001	7.24	4	21.8
MW-41	06/08/2015	1.06	-80.3	7.421	6.87	5	23.6
MW-41	12/08/2015	0.57	-116.4	5.140	6.92	5	21.79
MW-41	06/07/2016	0.32	-123.1	5.846	7.01	6	22.2
MW-41	12/01/2016	3.32	-103.2	7.152	6.96	4	21.7
MW-41	06/07/2017	2.62	-96.4	7.061	7.15	4	22.1
MW-41	12/05/2017	2.06	-113	6.669	7.13	3	22.2
MW-41	06/04/2018	0.6	-207.6	8.796	7.04	2	24.8
MW-41	12/03/2018	0.21	-111	6.730	7.17	37	23.1
MW-41	06/11/2019	1.33	-116	7.028	6.62	12	25.7
MW-50	12/12/2012	1.02	-125.9	3.772	7.15	9	20.8
MW-50	12/10/2013	0.9	-48.4	3.816	6.95	22	22.1
MW-50	12/16/2014	1.16	-130	3.767	7.14	34	20.61
MW-50	12/10/2015	0.43	-99	3.263	6.95	14	21.82
MW-50	11/29/2016	0.33	-132	3.426	7.3	61	23.68
MW-50	12/05/2017	0.44	-103.8	3.327	7.45	52	21.3
MW-50	12/06/2018	0.67	-58	3.714	7.08	10	21.3
MW-51	12/12/2012	0.93	-139.1	4.453	7.1	8	20.6
MW-51	12/10/2013	0.66	-73.5	4.533	6.94	16	21.6
MW-51	12/16/2014	2.97	-102.1	4.283	7.04	23	20.01
MW-51	12/10/2015	1.3	-91.8	3.854	6.9	93	20.37
MW-51	11/29/2016	0.22	-163.6	4.667	7.2	63	22.86
MW-51	12/05/2017	0.91	-103.7	4.537	7.77	43	22.3
MW-51	12/06/2018	0.37	-67	4.985	7.01	55	20.4
MW-53	12/13/2012	0.25	-225.4	3.130	7.17	10	21.1
MW-53	12/10/2013	0.78	-36.2	4.392	6.92	7	21.7
MW-53	12/15/2014	0.29	-93.2	2.902	7.12	30	22.8
MW-53	12/10/2015	0.56	-99.1	3.721	6.92	10	21.6
MW-53	11/29/2016	0.46	-114.6	4.153	7.19	40	23.16
MW-53	12/07/2017	0.77	-83.3	3.126	6.97	24	22.2

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-53	12/06/2018	0.3	-46	3.339	6.97	7	22.2
MW-54	12/13/2012	0.24	-276.4	6.557	7.17	8	21.6
MW-54	12/10/2013	0.79	138.7	6.927	6.93	9	21.8
MW-54	12/15/2014	0.88	-131.4	6.821	7.05	13	22.14
MW-54	12/10/2015	0.73	-106.4	5.213	6.91	5	21.53
MW-54	12/01/2016	0.3	-154.3	6.458	7.07	14	21.89
MW-54	12/07/2017	0.85	-95.5	4.497	7.26	3	21.7
MW-54	12/06/2018	0.6	-64	6.680	7	5	21.6
MW-55	06/08/2012	1.41	-251.9	3.800	7.02	98	23.1
MW-55	12/11/2012	0.55	-195.1	4.057	7.14	7	21.9
MW-55	06/20/2013	0.39	-152.7	4.102	7.15	8	22.7
MW-55	12/09/2013	1.56	-281.4	5.186	6.91	4	21.63
MW-55	06/10/2014	0.19	-178.4	4.899	7.01	29	22.6
MW-55	12/18/2014	0.57	-111.5	5.621	7.12	28	21.47
MW-55	06/08/2015	0.37	-104.1	5.025	7.16	8	23.5
MW-55	12/10/2015	0.41	-143	5.367	7.04	63	22.7
MW-55	08/08/2016	0.37	-102	5.058	7.09	8	22
MW-55	11/28/2016	0.17	-216.3	5.598	7.25	110	22.5
MW-55	06/09/2017	0.33	11.04	0.777	7.66	5	21.6
MW-55	12/05/2017	0.33	89.3	0.870	7.51	5	22
MW-55	06/08/2018	0.87	110.6	2.032	7.36	5	22.3
MW-55	12/06/2018	0.3	-52	5.141	6.96	5	20
MW-55	06/14/2019	2.49	66	5.430	6.55	2	22.8
MW-57A	06/13/2012	0.17	-147.5	2.240	6.87	148	22.6
MW-57A	12/13/2012	0.31	-145.6	2.142	6.98	129	20.5
MW-57A	06/20/2013	0.47	-130.8	2.199	6.84	1000	22.56
MW-57A	12/12/2013	0.72	-338.2	2.325	6.8	174	21.8
MW-57A	06/12/2014	0.08	-122.2	3.007	6.76	31	22.4
MW-57A	12/16/2014	0.24	-153.4	2.238	6.92	53	21.8
MW-57A	06/10/2015	0.57	-79.3	1.803	6.61	15	20.7
MW-57A	12/09/2015	0.63	-140.9	2.338	6.8	24	21.05
MW-57A	06/09/2016	0.22	-114.5	2.075	6.93	66	24.8
MW-57A	12/02/2016	0.59	-149.1	2.130	6.82	57	24.2
MW-57A	06/08/2017	1.21	-136.7	1.687	7.02	120	22.1
MW-57A	12/07/2017	0.82	-146	1.793	7.11	80	22.4
MW-57A	06/08/2018	0.39	-158.9	2.216	7.2	46	22.6
MW-57A	12/04/2018	0.33	-128	2.352	7.23	180	25.5
MW-57A	06/12/2019	0.14	-121	2.652	6.51	122	24.4
MW-57B	06/13/2012	1.29	-101.6	2.690	6.81	9	21.1

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-57B	12/13/2012	0.59	-149.4	2.297	6.94	25	19.9
MW-57B	06/20/2013	0.36	-102.4	2.701	6.87	239	22.83
MW-57B	12/12/2013	0.46	-289.1	2.399	6.92	28	20.7
MW-57B	06/12/2014	0.09	-126.9	2.084	7.08	107	23.1
MW-57B	12/16/2014	0.28	-156	2.387	7	11	21.5
MW-57B	06/10/2015	0.65	-57	1.954	6.83	4	21.4
MW-57B	12/11/2015	0.8	-97.8	2.187	6.95	10	19.56
MW-57B	06/09/2016	0.24	-80.6	2.073	7.05	77	22.2
MW-57B	12/02/2016	0.86	-112.3	1.955	7.02	12	22.3
MW-57B	06/07/2017	0.29	-105.7	1.867	7.33	2	21.2
MW-57B	12/07/2017	0.63	-114	1.951	7.24	4	22.3
MW-57B	06/08/2018	0.14	-137.7	2.437	7.22	5	21.9
MW-57B	12/04/2018	0.32	-80	2.017	7.29	50	23.4
MW-57B	06/12/2019	0.6	16	1.831	6.48	23	23.1
MW-58	06/13/2012	0.15	-111.1	3.060	6.96	89	22.6
MW-58	12/13/2012	0.49	-109.3	3.027	7.03	211	20.5
MW-58	06/21/2013	0.56	-119.2	2.809	6.99	49	22.27
MW-58	12/12/2013	0.29	-352	2.891	7.03	103	22
MW-58	06/12/2014	0.1	-131.1	2.578	7.14	29	23.8
MW-58	12/18/2014	0.3	-138.1	3.081	7.2	11	21.6
MW-58	06/10/2015	0.33	-70.6	3.051	6.96	7	22
MW-58	12/09/2015	0.45	-124	2.484	7.05	39	21.7
MW-58	06/09/2016	0.23	-92.6	2.246	7.15	13	25.4
MW-58	12/02/2016	0.17	-170.3	1.903	7.34	10	24.02
MW-58	06/09/2017	0.35	-119.1	4.944	7.28	39	23.2
MW-58	12/07/2017	0.57	-147	5.043	7.23	54	22.3
MW-58	12/04/2018	0.6	115	1.861	7.35	1000	22.6
MW-58	06/12/2019	1.16	4	1.609	6.61	17	23.6
MW-59A	06/13/2012	1.16	-197.9	5.250	7.29	53	23.3
MW-59A	12/14/2012	4.05	38.7	1.369	7.02	18	19
MW-59A	06/21/2013	0.79	-59.3	4.662	6.97	22	24.6
MW-59A	12/13/2013	0.35	-198.4	4.811	7.19	18	21.4
MW-59A	06/12/2014	0.4	-62.4	4.610	7.01	38	22.9
MW-59A	12/18/2014	2.51	-27.1	4.405	7.23	21	24.03
MW-59A	06/08/2015	73.3	-62.4	4.182	7.17	20	25.6
MW-59A	12/10/2015	0.69	-99	3.775	7.28	8	20.5
MW-59A	06/07/2016	1.74	-65.5	3.601	7.13	4	24
MW-59A	12/02/2016	1.35	-45.6	2.531	7.71	501	20.9
MW-59B	06/13/2012	0.94	-174.8	4.850	7.18	26	21.8

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-59B	12/14/2012	0.91	-121	2.160	7.09	15	20.3
MW-59B	06/21/2013	0.23	-111.9	5.011	6.8	21	24
MW-59B	12/13/2013	0.26	-263	7.074	7	10	21.37
MW-59B	06/12/2014	0.14	-110	7.312	6.87	55	23.5
MW-59B	12/18/2014	0.62	-96.3	7.375	7.06	27	22.39
MW-59B	06/09/2015	0.24	-53.4	6.450	6.94	5	23.7
MW-59B	12/09/2015	0.68	-134	6.458	7.01	1	23.5
MW-59B	06/09/2016	0.25	-69.1	6.562	6.94	34	24.6
MW-59B	12/02/2016	0.55	-83.5	6.672	6.92	48	22.1
MW-59B	06/06/2017	0.25	-110.4	6.540	7.33	4	23.7
MW-59B	12/08/2017	0.41	-110.2	6.206	7.33	9	23.7
MW-59B	06/06/2018	0.3	-94	6.860	6.85	58	22.3
MW-59B	12/06/2018	0.2	169.1	2.522	7.7	24	18.4
MW-59B	06/13/2019	0.12	11	4.482	6.5	28	24.4
MW-59C	06/13/2012	1.62	-164	1.540	7.23	69	21.1
MW-59C	12/11/2012	0.68	-209.7	1.603	7.39	46	22.88
MW-59C	06/21/2013	0.52	-192.2	1.592	7.07	58	23.3
MW-59C	12/13/2013	0.22	-267.9	1.788	7.19	60	20.95
MW-59C	06/12/2014	0.14	-84.1	1.713	7.11	56	22.3
MW-59C	12/18/2014	1.39	-83.5	1.786	7.27	10	22.04
MW-59C	06/09/2015	0.24	-15.2	1.720	7.31	30	23.3
MW-59C	12/11/2015	1.05	-74.1	1.755	7.23	4	19.93
MW-59C	06/09/2016	0.26	-77.9	1.912	7.16	11	24
MW-59C	12/02/2016	1.1	-102.8	1.812	7.12	9	22.4
MW-59C	06/06/2017	0.77	-96.7	1.825	7.33	8	23.7
MW-59C	12/08/2017	0.68	-141.3	1.987	7.54	5	23.6
MW-59C	06/06/2018	0.3	-162	2.198	6.95	59	22.1
MW-59C	12/06/2018	0.65	-52.3	1.807	7.42	6	20.2
MW-59C	06/12/2019	0.27	82	1.771	6.71	4	26.2
MW-60A	06/12/2012	0.75	-101.9	5.700	7.03	33	23.2
MW-60A	12/14/2012	0.89	-136.9	5.453	7.14	10	20.6
MW-60A	06/19/2013	0.41	-126.6	5.407	6.98	13	23.9
MW-60A	12/11/2013	0.61	-114.3	6.305	6.96	11	23.1
MW-60A	06/11/2014	0.16	-103.9	6.714	6.97	5	24.1
MW-60A	12/17/2014	0.31	-121	7.308	7	18	21.8
MW-60A	06/10/2015	0.59	-67.3	6.231	6.89	5	22.2
MW-60A	12/08/2015	0.37	-111.3	4.994	6.9	17	22.1
MW-60A	06/07/2016	0.89	-151.2	5.452	7.14	15	22.5
MW-60A	11/29/2016	0.25	-131.3	6.274	7.08	3	23.18

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-60A	06/07/2017	0.67	-126.2	6.024	7.07	7	23.1
MW-60A	12/06/2017	0.9	-93.5	5.751	7.23	17	23.2
MW-60A	06/06/2018	1.24	-128.4	6.804	7.21	5	21.9
MW-60A	12/05/2018	0.45	-22.6	5.036	7.38	127	21
MW-60A	06/12/2019	0.26	-124.9	4.185	7.23	15	23
MW-60B	06/12/2012	1.19	-93.5	5.730	6.32	26	23.3
MW-60B	12/12/2012	0.68	-131.7	5.721	7.05	11	21.7
MW-60B	06/19/2013	0.53	-120.1	5.423	6.81	20	23.5
MW-60B	12/11/2013	0.8	-128.9	6.337	6.92	6	22.1
MW-60B	06/11/2014	0.08	-109.3	6.699	6.94	25	23.6
MW-60B	12/17/2014	0.48	-133.3	5.711	7	5	21
MW-60B	06/10/2015	0.61	-62.3	4.503	6.78	6	22.1
MW-60B	12/08/2015	0.53	-115.1	5.462	6.89	87	22.06
MW-60B	06/07/2016	0.63	-152	5.578	7.09	7	22.1
MW-60B	11/29/2016	0.2	-140.3	7.418	7.16	35	22.95
MW-60B	06/07/2017	0.41	-153.8	7.337	7.15	68	22.2
MW-60B	12/06/2017	0.58	-96.1	5.680	7.14	47	21.8
MW-60B	06/06/2018	0.81	-186.1	7.631	7.3	15	22
MW-60B	12/05/2018	0.41	0	6.361	7.41	3	21.1
MW-60B	06/12/2019	0.25	-112.6	6.047	7.18	9	22.9
MW-61A	06/08/2012	0.41	-131.5	4.900	7.09	126	24
MW-61A	12/12/2012	0.23	-115.8	4.691	6.92	268	21.1
MW-61A	06/21/2013	0.37	-129.2	4.222	6.87	318	21
MW-61A	12/12/2013	0.72	-298.4	4.325	6.92	216	24.1
MW-61A	06/09/2014	0.13	-126.7	4.080	7.04	63	24.5
MW-61A	12/17/2014	0.2	-149.7	5.929	7.3	24	22.4
MW-61A	06/09/2015	0.31	-312	6.061	7	7	23.64
MW-61A	12/10/2015	0.81	-81	5.563	7.06	19	24.7
MW-61A	06/09/2016	0.37	-121.9	5.073	6.99	91	23
MW-61A	12/01/2016	0.31	-130.2	4.778	6.97	40	23.3
MW-61A	06/06/2017	0.37	-128.9	4.665	7	60	23.2
MW-61A	12/08/2017	0.72	-150.2	4.779	7.2	35	22.3
MW-61A	06/05/2018	0.4	-105	5.315	6.82	15	23
MW-61A	12/07/2018	0.43	-129.7	3.795	7.4	49	22.2
MW-61A	06/13/2019	0.45	-121.4	4.179	7.25	20	22.7
MW-61B	06/08/2012	1.6	-113.5	3.410	7.23	8	28.5
MW-61B	12/13/2012	0.4	-141.7	3.503	7	28	19.6
MW-61B	06/21/2013	0.31	-137	2.999	7	39	20.9
MW-61B	12/12/2013	0.39	-310.6	2.998	6.99	50	22.6

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-61B	06/09/2014	0.14	-114.4	2.085	7.14	12	24.4
MW-61B	12/17/2014	0.24	-132.6	2.809	7.33	8	22.1
MW-61B	06/08/2015	0.33	-339	3.198	7.07	36	23.39
MW-61B	12/09/2015	0.39	-201	3.068	7.07	1	23.7
MW-61B	06/09/2016	0.5	-104.2	3.083	7.05	10	21.2
MW-61B	12/01/2016	0.38	-90.8	2.848	7.01	9	21.8
MW-61B	06/06/2017	0.38	-151.9	3.044	7.14	9	21.6
MW-61B	12/08/2017	0.6	-155.1	3.229	7.27	15	22.6
MW-61B	06/05/2018	0.44	-89	4.501	6.85	9	23.5
MW-61B	12/07/2018	0.54	-133.4	1.396	7.12	26	19.7
MW-61B	06/13/2019	0.16	-133.6	2.458	7.12	4	22.5
MW-62A	06/12/2012	1.63	-165.9	3.970	7.4	312	24.3
MW-62A	12/14/2012	0.91	-136.2	4.140	7.13	7	20.8
MW-62A	06/19/2013	0.44	-138.7	4.254	6.98	100	23.24
MW-62A	12/11/2013	0.25	-203.9	4.299	7.2	107	21.41
MW-62A	06/11/2014	0.15	-201.1	4.199	6.98	219	25.6
MW-62A	12/17/2014	0.26	-141.3	4.282	7.19	25	22.4
MW-62A	06/10/2015	0.22	-300	3.289	7.14	90	24.89
MW-62A	12/08/2015	0.3	-151.3	3.425	6.98	4	22.55
MW-62A	06/07/2016	0.25	-162	3.512	7.06	84	22.4
MW-62A	11/29/2016	0.32	-152.1	3.491	7.26	59	24
MW-62A	06/07/2017	0.46	-169.9	3.417	7.38	56	23.2
MW-62A	12/06/2017	0.46	-107	3.562	6.82	48	21.2
MW-62A	06/06/2018	0.67	-209.2	3.567	7.96	42	21.8
MW-62A	12/05/2018	0.25	-48.6	3.452	7.34	113	23.1
MW-62A	06/12/2019	0.27	-81.2	3.107	7.2	24	23.6
MW-62B	06/12/2012	1.07	-248.6	2.290	7.48	9	22.9
MW-62B	12/11/2012	0.64	-188.4	2.354	7.14	7	21.8
MW-62B	06/19/2013	0.31	-94.2	2.552	7.02	16	22.05
MW-62B	12/11/2013	0.31	-194.6	2.514	7.17	7	20.67
MW-62B	06/11/2014	0.06	-217.9	2.569	7	3	25.5
MW-62B	12/17/2014	0.25	-135	2.876	7.23	4	21.4
MW-62B	06/10/2015	0.19	-353	2.499	7.09	6	23.01
MW-62B	12/08/2015	0.73	-117.5	2.417	6.94	3	22.3
MW-62B	06/07/2016	0.24	-165.8	2.598	7.07	2	22.5
MW-62B	11/29/2016	0.41	182.9	2.638	6.94	3	22.1
MW-62B	06/07/2017	0.69	-165.9	2.838	7.1	2	23.3
MW-62B	12/06/2017	0.37	-131	2.730	7.06	4	20.6
MW-62B	06/06/2018	0.74	-219.4	3.241	7.25	1	22.8

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
MW-62B	12/05/2018	0.27	13.5	2.612	7.35	6	22.8
MW-62B	06/12/2019	0.65	-93.2	2.596	7.24	1	22.9
MW-63	06/05/2018	0.34	-81	3.018	6.97	209	22.9
MW-63	12/04/2018	0.93	32	1.905	7.29	109	21.8
MW-63	03/13/2019	0.73	-75	1.951	6.98	19	21.7
MW-63	06/11/2019	0.14	65.3	2.352	7.39	39	23.1
MW-64A	06/05/2018	0.42	-138	4.166	6.37	51	21.2
MW-64A	12/04/2018	0.45	-121	3.856	6.7	43	27.4
MW-64A	03/13/2019	1.05	-130.2	3.890	6.89	19	20.6
MW-64A	06/11/2019	0.38	-141	4.159	6.26	3	24.2
MW-64B	06/05/2018	0.71	-298.3	3.592	7.17	21	20
MW-64B	12/04/2018	0.37	-84	3.061	7.26	14	20.5
MW-64B	03/13/2019	1.72	-63.5	2.718	6.96	7	21
MW-64B	06/11/2019	1.29	-134	3.192	6.73	4	23
PZ-7A	06/12/2012	0.82	-229.5	3.440	7.35	16	23.4
PZ-7A	12/13/2012	0.56	-181.9	3.539	7.25	12	21.8
PZ-7A	06/19/2013	0.39	-140.9	3.283	7.06	9	24.7
PZ-7A	12/11/2013	0.17	-143.3	3.584	7.28	11	23.66
PZ-7A	06/11/2014	0.12	-169.7	3.675	6.96	35	25.4
PZ-7A	12/17/2014	0.27	-136.2	3.901	7.19	7	22.96
PZ-7A	06/10/2015	0.55	-272	3.539	7.09	399	22.76
PZ-7A	12/09/2015	0.45	-128.4	3.228	6.96	16	22.73
PZ-7A	06/07/2016	0.63	-154.3	3.200	7.28	8	22.8
PZ-7A	11/29/2016	0.56	173.1	3.704	6.94	12	21.7
PZ-7A	06/07/2017	0.62	-	3.727	6.9	45	21.8
PZ-7A	12/06/2017	0.5	-116	3.528	7.06	21	22.1
PZ-7A	06/06/2018	0.83	-144.5	4.217	7.17	33	21.9
PZ-7A	12/05/2018	0.32	-8.3	3.730	7.42	35	23.4
PZ-7A	06/12/2019	0.44	-101.2	3.562	7.29	4	23.9
PZ-7B	06/13/2012	1.92	-158.2	3.690	7.25	573	22.9
PZ-7B	12/13/2012	0.56	-193.2	3.602	7.16	10	22.2
PZ-7B	06/19/2013	0.34	-135.5	3.413	7	14	23.9
PZ-7B	12/11/2013	0.22	-131.9	3.789	7.19	23	22.6
PZ-7B	06/11/2014	0.41	-130.4	3.539	6.92	41	24.4
PZ-7B	12/17/2014	1.76	-125	4.258	7.16	31	22.3
PZ-7B	06/10/2015	0.51	-291	3.847	7.13	8	24.29
PZ-7B	12/09/2015	0.3	-110.4	3.255	6.92	54	21.94
PZ-7B	06/07/2016	0.4	-151.4	3.257	7.14	8	23.5
PZ-7B	11/29/2016	0.92	182.4	3.547	6.92	8	21.7

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
PZ-7B	06/07/2017	0.94	-	3.541	6.94	9	21.8
PZ-7B	12/06/2017	0.66	-90	3.520	6.91	8	21.8
PZ-7B	06/06/2018	1.1	-120.6	3.822	7.07	17	21.5
PZ-7B	12/05/2018	0.49	33.1	3.707	7.4	14	20.5
PZ-7B	06/12/2019	0.41	-81.2	3.431	7.23	16	23.6
EW-2	06/21/2013	1.18	-120.3	4.312	6.85	20	22.72
EW-2	12/13/2013	4.12	-253.6	4.330	7.04	20	20.7
EW-2	06/12/2014	0.72	-110.2	4.684	7	12	21.7
EW-2	12/17/2014	0.58	-118.2	4.936	7.21	2	21.7
EW-2	06/11/2015	0.62	-33	4.341	7.18	3	20.8
EW-2	12/11/2015	1.47	-79.3	3.269	6.97	7	20.07
EW-2	06/10/2016	0.54	-62.9	3.461	7.05	1	22.2
EW-2	12/01/2016	0.8	-108.9	3.119	7.41	6	21.2
EW-2	06/07/2017	1.61	-71.7	3.040	7.38	2	22.9
EW-2	12/06/2017	1.28	-92	2.811	7.22	3	22.2
EW-2	06/06/2018	1.35	-83	3.260	7.24	4	23.6
EW-2	12/04/2018	0.48	-28.8	2.688	6.2	4	20.8
EW-2	06/13/2019	0.35	104	2.827	6.39	2	23.8
EW-4	06/21/2013	0.49	-90.2	2.996	7	10	22.46
EW-4	12/13/2013	0.17	-290.3	4.728	7.13	8	20.55
EW-4	06/12/2014	0.19	-120.3	4.840	7.02	5	20.8
EW-4	12/17/2014	0.43	-88.3	4.507	7.27	3	19.9
EW-4	06/11/2015	0.29	-40.4	4.333	7.18	3	20.9
EW-4	12/09/2015	0.82	-92.8	3.643	6.93	3	20.57
EW-4	06/10/2016	0.56	-68.7	3.695	7.05	1	21.4
EW-4	12/01/2016	0.82	-99.1	3.534	7.06	6	21.3
EW-4	06/09/2017	0.64	-49.3	4.211	7.69	5	22.1
EW-4	12/06/2017	0.54	-51.6	4.629	7.57	2	21.9
EW-4	06/07/2018	0.51	-57	4.110	7.58	6	22.4
EW-4	12/07/2018	2.2	11	4.017	8.15	3	17.4
EW-4	06/14/2019	0.58	-23.8	4.177	7.51	4	21.9
EW-5	06/19/2013	0.26	-81.4	4.474	6.85	61	23.2
EW-5	12/11/2013	0.64	-103	2.225	7	5	21.9
EW-5	06/11/2014	0.12	-95.3	3.472	7	46	23.5
EW-5	12/17/2014	2.15	-103.5	2.992	7.06	4	21.4
EW-5	12/09/2015	-	-79.9	4.144	7.07	8	21.32
EW-5	06/08/2016	2.34	-70.2	5.122	7.02	2	21.2
EW-5	12/02/2016	0.44	-61.3	3.777	7.08	195	22.03
EW-5	06/07/2017	0.6	-41.5	3.462	7.14	79	21.3

TABLE 8
SUMMARY OF WATER QUALITY PARAMETERS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
EW-5	12/06/2017	0.94	-47.9	5.180	7.34	34	22.1
EW-5	06/06/2018	1.27	-72.3	3.651	7.43	7	20.9
EW-5	12/05/2018	0.15	51.8	3.690	7.42	1	24.1
EW-5	06/12/2019	1.41	60	4.057	6.76	31	25.5
EW-7A	06/19/2013	0.53	-139.3	3.951	6.84	321	24.2
EW-7A	12/11/2013	0.69	-149.3	3.716	6.99	50	22.8
EW-7A	06/11/2014	0.1	-177.9	3.870	6.96	197	23.7
EW-7A	12/17/2014	0.49	-119.2	3.878	7.15	32	22.8
EW-7A	12/10/2015	1.88	-89.3	3.382	7.03	7	21.37
EW-7A	06/07/2016	1.07	-133.8	3.398	7.3	2	21.9
EW-7A	11/29/2016	2.89	188.3	3.386	7.37	20	20.9
EW-7A	06/07/2017	2.5	-105.3	3.772	7.39	2	22.1
EW-7A	12/06/2017	0.92	-140	3.419	7.09	6	22.7
EW-7A	06/06/2018	2.67	-142.6	3.946	7.47	4	21.9
EW-7A	12/05/2018	0.14	39.5	3.519	7.41	3	21.5
EW-7A	06/12/2019	1.94	46	3.567	6.69	2	22.9
EW-7B	06/19/2013	0.36	-152.4	3.327	6.78	65	23.8
EW-7B	12/11/2013	0.22	-246.2	3.667	7.12	40	22.31
EW-7B	06/11/2014	0.13	-187.2	3.535	6.9	187	23.4
EW-7B	12/17/2014	0.22	-101.5	3.752	7.11	9	22.24
EW-7B	12/10/2015	1.66	-79.8	3.574	7	7	21.16
EW-7B	06/07/2016	2.07	-120.2	4.157	7.41	3	21.1
EW-7B	11/29/2016	1.64	197.4	4.391	7.12	11	20.2
EW-7B	06/07/2017	1.7	-98.8	4.479	7.19	5	20.8
EW-7B	12/06/2017	1.83	-11.3	4.181	7.11	28	21.9
EW-7B	06/06/2018	1.31	-116.5	4.638	7.23	5	21
EW-7B	12/05/2018	0.11	65.5	4.036	7.47	3	20.8
EW-7B	06/12/2019	1.2	44	3.878	6.43	16	21.9
EW-8	06/21/2013	0.4	-114.2	4.040	6.82	6	21.9
EW-8	12/11/2013	0.41	-249.5	4.083	7.12	20	21.72
EW-8	06/11/2014	0.13	-126.6	3.918	6.96	15	22.2
EW-8	12/18/2014	0.28	-155.4	3.819	7.05	5	20.8
EW-8	06/09/2015	0.44	-28.5	3.228	6.95	4	22.4
EW-8	12/08/2015	0.9	-108.6	2.931	6.95	13	20.06
EW-8	06/07/2016	0.23	-80.2	3.496	7	5	22.6
EW-8	11/30/2016	0.81	-122.5	4.073	6.76	21	20.3
EW-8	06/09/2017	0.87	-148.4	3.926	7.02	16	21.7
EW-8	12/05/2017	0.91	-105	3.911	6.98	16	21.1
EW-8	06/07/2018	1.12	-211.7	4.250	7.14	10	21.8

TABLE 8
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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Dissolved Oxygen mg/L	Oxidation Reduction Potential mv	Specific Electrical Conductance mS/cm	pH pH units	Turbidity NTU	Temperature Deg C
EW-8	12/06/2018	0.55	-7.8	2.808	7.36	9	18.2
EW-8	06/13/2019	0.41	-180.2	3.550	7.12	19	21.8
EW-A	12/09/2015	0.27	-75.9	3.671	6.86	4	20.38
EW-A	06/10/2016	0.62	-64.9	4.152	6.96	2	21.5
EW-A	12/01/2016	0.95	-88.7	4.090	7.26	6	20.7
EW-A	06/09/2017	0.9	-29.7	4.150	7.77	5	21.8
EW-A	12/06/2017	0.73	-42.5	4.341	7.67	3	21.7
EW-A	06/06/2018	0.86	-36	3.998	7.65	7	21.5
EW-A	12/07/2018	1.5	11	3.619	7.25	3	19.1
EW-A	06/13/2019	0.38	87	3.390	6.39	5	21.2

Abbreviations:

mg/L = milligrams per liter
mV = millivolts
mS/cm = milliSiemens per centimeter
NTU = Nephelometric Turbidity Units
Deg C = degrees Celsius
>1000 = turbidity reading exceeds calibration
-- = not available

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-1	11/01/1998	Shallow/Intermediate	Primary	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	**0.4 J**	< 1	< 1	NA	NA
MW-1	10/01/2000	Shallow/Intermediate	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.7**	< 0.5	< 0.5	NA	NA
MW-1	01/01/2004	Shallow/Intermediate	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.3**	< 0.5	< 0.5	NA	NA
MW-1	04/01/2004	Shallow/Intermediate	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.2 J**	< 0.5	< 0.5	< 0.5	NA	NA
MW-1	11/01/2004	Shallow/Intermediate	Primary	< 0.5	**0.27 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	**1.7**	NA
MW-1	08/01/2006	Shallow/Intermediate	Primary	< 0.5	**0.39 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.6**	< 0.5	< 0.5	**1.7**	NA
MW-1	03/01/2008	Shallow/Intermediate	Primary	< 0.5	**0.55**	**0.28 J**	< 0.5	< 0.5	< 0.5	**0.22 J**	**2.4**	< 0.5	< 0.5	**1.8 J**	NA
MW-1	05/13/2009	Shallow/Intermediate	Primary	< 0.5	**0.92**	**0.5 J**	< 0.5	< 0.5	< 0.5	**0.33 J**	**3.9 J**	< 0.5	< 0.5	< 2	NA
MW-1	06/14/2011	Shallow/Intermediate	Primary	< 0.5	**1.5**	**2.2**	< 0.5	< 0.5	< 0.5	< 0.5	**2.1**	< 0.5	< 0.5	**7.9**	< 0.5
MW-1	12/08/2011	Shallow/Intermediate	Primary	< 0.5	**2.9**	**2.5**	< 0.5	< 0.5	< 0.5	< 0.5	**2.6**	< 0.5	< 0.5	**17 J**	< 0.5
MW-1	06/08/2012	Shallow/Intermediate	Primary	< 0.5	**2.5**	**2.1**	< 0.5	< 0.5	< 0.5	< 0.5	**1.8**	< 0.5	< 0.5	**13 J**	< 0.5
MW-1	12/12/2012	Shallow/Intermediate	Primary	< 0.5	**3.5**	**2.4**	< 0.5	< 0.5	< 0.5	< 0.5	**1.6**	< 0.5	< 0.5	**9**	< 0.5
MW-1	06/18/2013	Shallow/Intermediate	Primary	< 0.5	**5.6**	**3.2**	**0.59**	**0.7**	< 0.5	**0.3 J**	**1.6**	< 0.2	< 0.5	**9.2**	< 0.3
MW-1	12/12/2013	Shallow/Intermediate	Primary	< 0.5	**11**	**4.3**	**0.74**	**0.98**	< 0.5	**0.36 J**	**2**	< 0.2	< 0.5	**12**	< 0.3
MW-1	06/12/2014	Shallow/Intermediate	Primary	< 0.5	**9.2**	**3.5**	**0.58**	**0.64**	< 0.5	< 0.2	**1.2**	< 0.2	< 0.5	**12**	< 0.3
MW-1	12/16/2014	Shallow/Intermediate	Primary	< 0.5	**6.3**	**2.6**	< 0.3	< 0.4	< 0.5	< 0.2	**0.96**	< 0.2	< 0.5	**11**	< 0.3
MW-1	12/16/2014	Shallow/Intermediate	Duplicate	< 0.5	**6.2**	**2.5**	< 0.3	< 0.4	< 0.5	< 0.2	**1**	< 0.2	< 0.5	**11**	< 0.3
MW-1	06/10/2015	Shallow/Intermediate	Primary	< 0.5	**11**	**3.6**	**0.51**	**0.57**	< 0.5	< 0.2	**1.8**	< 0.2	< 0.5	**12**	< 0.3
MW-1	12/10/2015	Shallow/Intermediate	Primary	< 0.5	**8**	**2.2**	< 0.3	< 0.4	< 0.5	< 0.2	**0.86**	< 0.2	< 0.5	**8.2**	< 0.3
MW-1	06/07/2016	Shallow/Intermediate	Primary	< 0.5	**8.2**	**3.5**	**0.75**	**0.4 J**	< 0.5	< 0.2	**0.93**	< 0.2	< 0.5	**10**	< 0.3
MW-1	12/02/2016	Shallow/Intermediate	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**6.7**	< 0.3
MW-1	06/06/2017	Shallow/Intermediate	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**8.4**	< 0.3
MW-1	12/07/2017	Shallow/Intermediate	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.9**	< 0.3
MW-1	06/04/2018	Shallow/Intermediate	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-1	06/04/2018	Shallow/Intermediate	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.5 J**	< 0.3
MW-1	12/07/2018	Shallow/Intermediate	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-1	06/14/2019	Shallow/Intermediate	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**1.2 J**	< 0.2
MW-1	06/14/2019	Shallow/Intermediate	Duplicate	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**1.4 J**	< 0.2
MW-2A	06/13/2011	Shallow Gaspur	Primary	< 2	**170**	**350**	**7.3**	**14**	**4.6**	**41**	**6.4**	**2.8**	**5**	**32**	< 2
MW-2A	09/26/2011	Shallow Gaspur	Primary	< 0.5	**150**	**260**	**6**	**14 J**	**29 J**	**35**	**9.2**	**3.2**	< 0.5	**13 J**	< 0.5
MW-2A	09/26/2011	Shallow Gaspur	Duplicate	< 2.5	**120**	**240**	**4.3**	**10 J**	**18 J**	**28**	**7.1**	< 2.5	< 2.5	**44 J**	< 2.5
MW-2A	12/07/2011	Shallow Gaspur	Primary	< 2	**84**	**260**	**3.8**	**14**	**39**	**53**	**11**	**3.5**	**5.4**	**42 J**	< 2
MW-2A	03/28/2012	Shallow Gaspur	Primary	< 0.5	**100**	**240**	**3.9**	**17**	**63**	**57**	**14**	**4.5**	< 0.5	**49**	< 0.5
MW-2A	06/13/2012	Shallow Gaspur	Primary	< 2	**93**	**240**	**2.8**	**16**	**65**	**59**	**16**	**5.4**	**5.4**	**83**	< 2
MW-2A	12/14/2012	Shallow Gaspur	Primary	< 0.5	**56**	**230**	**3.8**	**13**	**61**	**46**	**9.9**	**4.2**	< 0.5	**52 J**	< 0.5
MW-2A	06/20/2013	Shallow Gaspur	Primary	< 0.5	**52**	**380**	**5.6**	**15**	**30**	**37**	**5.5**	**2.6**	**3.7**	**20**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-2A	12/13/2013	Shallow Gaspur	Primary	< 5	**46**	**320**	< 3	**15**	**37**	**29**	**7.3**	< 2	< 5	**16**	< 3
MW-2A	06/12/2014	Shallow Gaspur	Primary	< 1	**38**	**230**	**4.4**	**9.4**	**11**	**15**	**2**	**1.8**	< 1	**11**	< 0.6
MW-2A	12/18/2014	Shallow Gaspur	Primary	< 1	**29**	**190**	**4.3**	**8.8**	**8.9**	**12**	**1.1**	**1.6**	< 1	**9.1**	< 0.6
MW-2A	06/08/2015	Shallow Gaspur	Primary	< 0.5	**35**	**150**	**4**	**8.4**	**6.4**	**11**	**1.2**	**1.9**	**2.9**	**6.3**	< 0.3
MW-2A	12/11/2015	Shallow Gaspur	Primary	< 0.5	**29**	**310**	**6.3**	**14**	**12**	**18**	**1.7**	**2.9**	**3.4**	**6.6**	< 0.3
MW-2A	06/08/2016	Shallow Gaspur	Primary	< 0.5	**49**	**190**	**7.9**	**11**	**4.3**	**12**	**1.2**	**4**	< 0.5	**4.6**	< 0.3
MW-2B	06/13/2011	Shallow Gaspur	Primary	< 0.5	**12**	**20**	**2.9**	**0.99**	**1.2**	**2.5**	**0.68**	**2.1**	< 0.5	**13**	< 0.5
MW-2B	09/26/2011	Shallow Gaspur	Primary	< 0.5	**11**	**27**	**1.6**	**0.89**	**1.4**	**3.3**	**1**	**1.3**	< 0.5	**14**	< 0.5
MW-2B	12/08/2011	Shallow Gaspur	Primary	< 0.5	**17**	**27**	**1.6**	**1.2**	**2.9**	**3.5**	**1.3**	**1.7**	< 0.5	**15 J**	< 0.5
MW-2B	03/27/2012	Shallow Gaspur	Primary	< 0.5	**12**	**35**	**2.1**	**1.6**	**4.1**	**4.1**	**1.5**	**1.7**	< 0.5	**16 J**	< 0.5
MW-2B	06/13/2012	Shallow Gaspur	Primary	< 0.5	**1.5**	**33**	**2.2**	**1**	**4.2**	**3.5**	**1.5**	**1.8**	< 0.5	**19**	< 0.5
MW-2B	12/14/2012	Shallow Gaspur	Primary	< 0.5	**4.9**	**26**	**2.3**	**0.95**	**1.8**	**2.9**	**0.91**	**2.4**	< 0.5	**17**	< 0.5
MW-2B	06/20/2013	Shallow Gaspur	Primary	< 0.5	**1.1**	**6.8**	**2.5**	**0.4 J**	**0.78**	**0.7**	< 0.3	**4.2**	< 0.5	**11**	< 0.3
MW-2B	12/13/2013	Shallow Gaspur	Primary	< 0.5	**0.93**	**5.3**	**2.7**	< 0.4	< 0.5	< 0.2	< 0.3	**2.1**	< 0.5	**15**	< 0.3
MW-2B	12/13/2013	Shallow Gaspur	Duplicate	< 0.5	**0.84**	**4.4**	**2.5**	< 0.4	< 0.5	< 0.2	< 0.3	**2.3**	< 0.5	**15**	< 0.3
MW-2B	06/12/2014	Shallow Gaspur	Primary	< 0.5	**0.42 J**	**3.1**	**2.7**	< 0.4	< 0.5	**0.34 J**	< 0.3	**2.3**	< 0.5	**15**	< 0.3
MW-2B	12/18/2014	Shallow Gaspur	Primary	< 0.5	**1.1**	**19**	**2.9**	**0.8**	**0.66**	**1.3**	< 0.3	**2.4**	< 0.5	**15**	< 0.3
MW-2B	06/09/2015	Shallow Gaspur	Primary	< 0.5	**0.61 J**	**11**	**4.6**	**0.52**	**2.2**	**1.2**	**0.53**	**3.2**	< 0.5	**18**	< 0.3
MW-2B	06/09/2015	Shallow Gaspur	Duplicate	< 0.5	**0.93 J**	**9.3**	**3.8**	**0.42 J**	**1.8**	**1**	**0.43 J**	**2.6**	< 0.5	**18**	< 0.3
MW-2B	12/11/2015	Shallow Gaspur	Primary	< 0.5	**0.57**	**16**	**3.9**	**0.58**	**1.6**	**1.2**	< 0.3	**4.5**	< 0.5	**13**	< 0.3
MW-2B	06/09/2016	Shallow Gaspur	Primary	< 0.5	**0.58**	**9.7**	**5**	**0.49 J**	**2.1**	**0.92**	**0.41 J**	**5.4**	< 0.5	**9.4**	< 0.3
MW-2B	12/01/2016	Shallow Gaspur	Primary	< 0.5	**0.44 J**	**7.7**	**2.8**	< 0.4	**2**	**0.66**	< 0.3	**4.5**	< 0.5	**12**	< 0.3
MW-2B	12/01/2016	Shallow Gaspur	Duplicate	< 0.5	**0.39 J**	**8.1**	**3.1**	**0.55**	**2.2**	**0.78**	< 0.3	**4.8**	< 0.5	**11**	< 0.3
MW-2B	06/06/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**0.88**	**1**	< 0.4	< 0.5	< 0.2	< 0.3	**0.93**	< 0.5	**1.2 J**	< 0.3
MW-2B	12/07/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**7.2**	**1.9**	**0.54**	**2.5**	**0.57**	< 0.3	**5.2**	< 0.5	**8**	< 0.3
MW-2B	06/06/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	**4.4 J**	**0.86**	< 0.4	< 0.5	< 0.2	< 0.3	**8.8 J**	< 0.5	**1.4 J**	< 0.3
MW-2B	06/06/2018	Shallow Gaspur	Duplicate	< 0.5	< 0.2	< 0.2 J	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2 J	< 0.5	< 1	< 0.3
MW-2B	12/06/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	**6.1**	**1.8 J**	< 0.4	**1.1**	< 0.2	< 0.3	**3.8**	< 0.5	**7**	< 0.3
MW-2B	12/06/2018	Shallow Gaspur	Duplicate	< 0.5	< 0.2	**6**	**1.7 J**	< 0.4	**1.1**	**0.35 J**	< 0.3	**3.7**	< 0.5	**7.1**	< 0.3
MW-2B	06/14/2019	Shallow Gaspur	Primary	< 0.5	**2.5**	**18**	**0.88**	**0.81**	**0.56**	< 0.2	< 0.2	**8**	< 0.3	**1.7 J**	< 0.2
MW-2C	06/13/2011	Intermediate Gaspur	Primary	< 0.5	**1.1**	**2.6**	< 0.5	< 0.5	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	< 4	< 0.5
MW-2C	09/27/2011	Intermediate Gaspur	Primary	< 0.5	**4.7**	**4.1**	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 1.1 J	< 0.5
MW-2C	12/08/2011	Intermediate Gaspur	Primary	< 0.5	**0.75**	**1.5**	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 0.95	< 0.5
MW-2C	03/26/2012	Intermediate Gaspur	Primary	< 0.5	**0.89**	**1.7**	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 0.94 J	< 0.5
MW-2C	06/13/2012	Intermediate Gaspur	Primary	< 0.5	**0.81**	**1.6**	< 0.5	< 0.5	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	< 1	< 0.5
MW-2C	12/13/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	**1.9**	< 0.5	< 0.5	< 0.5	< 0.5	**1.9**	< 0.5	< 0.5	< 0.95	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-2C	06/20/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.6**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/13/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.4**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	06/12/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	< 0.2	< 0.5	**1.1 J**	< 0.3
MW-2C	12/18/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	06/09/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.5**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/11/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/11/2015	Intermediate Gaspur	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.8**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	06/09/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/01/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.8**	< 0.2	< 0.5	**1 J**	< 0.3
MW-2C	06/06/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/07/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.2**	< 0.2	< 0.5	**1.4 J**	< 0.3
MW-2C	06/06/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.6**	< 0.2	< 0.5	< 1	< 0.3
MW-2C	12/06/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-2C	06/14/2019	Intermediate Gaspur	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	< 1	< 0.2
MW-4	11/01/1998	Shallow/Intermediate	Primary	< 1	**8**	**14**	**2**	**0.9 J**	**0.9**	**1**	**0.5**	< 1	< 1	NA	NA
MW-4	10/01/2000	Shallow/Intermediate	Primary	< 0.5	**6**	**15**	**2**	**1**	**1**	**4**	**1**	< 0.5	**0.3 J**	NA	NA
MW-4	03/01/2003	Shallow/Intermediate	Primary	< 1	**12**	**38**	**7**	**2**	**2**	**8**	**3**	< 1	< 1	NA	NA
MW-4	01/01/2004	Shallow/Intermediate	Primary	< 0.5	**6.8**	**23**	**2.6**	**0.93**	**0.86**	**3.7**	**1.3**	**0.23 J**	< 0.5	NA	NA
MW-4	11/01/2004	Shallow/Intermediate	Primary	< 0.5	**15**	**30 D**	**6.8**	**3**	**5**	**8.4**	< 0.5	**0.42 J**	< 0.5	**12**	NA
MW-4	08/01/2006	Shallow/Intermediate	Primary	< 0.5	**11**	**24 D**	**3.7**	**2**	**1.3**	**8.8**	**2.8**	< 0.5	**0.67**	**15**	NA
MW-4	03/01/2008	Shallow/Intermediate	Primary	< 0.5	**8.4**	**19 D**	**2.8**	**1.8**	**1.5**	**8.5**	**3.6**	**0.33 J**	< 0.5	**15**	NA
MW-4	05/13/2009	Shallow/Intermediate	Primary	< 0.5	**9.5**	**20**	**2.6**	**1.4**	< 0.5	**9.4**	**4.5**	**0.31 J**	**0.41 J**	**13**	NA
MW-4	06/15/2011	Shallow/Intermediate	Primary	< 0.5	**6.7**	**17**	**1.9**	**1.4**	**1**	**17**	**6.2**	< 0.5	< 0.5	**35**	< 0.5
MW-4	12/08/2011	Shallow/Intermediate	Primary	< 0.5	**8.3**	**14**	**1.5**	**1.2**	**1**	**17**	**6**	< 0.5	< 0.5	**26**	< 0.5
MW-4	06/07/2012	Shallow/Intermediate	Primary	< 0.5	**7.9**	**13**	**1.8**	**1.2**	**0.93**	**17**	**5.1**	< 0.5	< 0.5	**19 J**	< 0.5
MW-4	12/11/2012	Shallow/Intermediate	Primary	< 0.5	**5.3**	**10**	**0.78**	**0.82**	< 0.5	**14**	**5.4**	< 0.5	< 0.5	**40 J**	< 0.5
MW-4	06/17/2013	Shallow/Intermediate	Primary	< 0.5	**1.6**	**7.4**	**0.42 J**	**0.53**	< 0.5	**11**	**2.4**	< 0.2	< 0.5	**29**	< 0.3
MW-4	12/12/2013	Shallow/Intermediate	Primary	< 0.5	**0.4 J**	**2.5**	< 0.3	< 0.4	< 0.5	**1**	< 0.3	< 0.2	< 0.5	**29**	< 0.3
MW-4	06/12/2014	Shallow/Intermediate	Primary	< 0.5	**0.31 J**	**2.2**	< 0.3	< 0.4	< 0.5	**1.2**	**0.57**	< 0.2	< 0.5	**31**	< 0.3
MW-4	12/19/2014	Shallow/Intermediate	Primary	< 0.5	**0.38 J**	**2.6**	< 0.3	< 0.4	< 0.5	**2**	**0.6**	< 0.2	< 0.5	**29**	< 0.3
MW-4	06/11/2015	Shallow/Intermediate	Primary	< 0.5	**0.52**	**2.3**	< 0.3	< 0.4	< 0.5	**2.4**	**1 J**	< 0.2	< 0.5	**31**	< 0.3
MW-4	12/07/2015	Shallow/Intermediate	Primary	< 0.5	**0.39 J**	**5.5**	**0.55**	< 0.4	< 0.5	**3.1**	**0.77**	< 0.2	< 0.5	**16**	< 0.3
MW-4	06/10/2016	Shallow/Intermediate	Primary	< 0.5	< 0.2	**5.6**	< 0.3	< 0.4	< 0.5	**3.5**	**0.84**	< 0.2	< 0.5	**15**	< 0.3
MW-4	12/02/2016	Shallow/Intermediate	Primary	< 0.5	**0.46 J**	**10**	**0.72**	**0.91**	**0.56**	**6.8**	**1.9**	< 0.2	< 0.5	**23**	< 0.3
MW-4	06/06/2017	Shallow/Intermediate	Primary	< 0.5	**0.4 J**	**8.9**	**1**	**0.7**	**0.91**	**6.5**	**1.4**	< 0.2	< 0.5	**23**	< 0.3
MW-4	06/06/2017	Shallow/Intermediate	Duplicate	< 0.5	**0.36 J**	**9.4**	**0.96**	**0.64**	**1.1**	**6.5**	**1.4**	< 0.2	< 0.5	**23**	< 0.3

TABLE 9
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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-4	12/08/2017	Shallow/Intermediate	Primary	< 0.5	**0.41 J**	**9.6**	**0.66**	**0.57**	< 0.5	**4.4**	**1.9**	< 0.2	< 0.5	**13**	< 0.3
MW-4	06/05/2018	Shallow/Intermediate	Primary	< 0.5	**0.58**	**12**	< 0.3	**0.73**	< 0.5	**5.2**	**2**	< 0.2	< 0.5	**8.2**	< 0.3
MW-4	12/07/2018	Shallow/Intermediate	Primary	< 0.5	**0.55**	**8.7**	**0.45 J**	**0.55**	< 0.5	**2.5**	**1.1**	< 0.2	< 0.5	**8.6**	< 0.3
MW-4	06/13/2019	Shallow/Intermediate	Primary	< 0.5	**1**	**10**	< 0.4	**0.9**	< 0.4	**1.2**	**1.8**	< 0.4	< 0.3	**3.2**	< 0.2
MW-4B	06/14/2011	Intermediate Gaspur	Primary	< 0.5	**1.9**	**4.2**	< 0.5	**1**	< 0.5	< 0.5	**3.9**	< 0.5	< 0.5	< 3.6	< 0.5
MW-4B	09/26/2011	Intermediate Gaspur	Primary	< 0.5	**2.6**	**6.3**	< 0.5	**2**	< 0.5	< 0.5	**4.8**	**0.84**	< 0.5	< 0.94 J	< 0.5
MW-4B	12/06/2011	Intermediate Gaspur	Primary	< 0.5	**1.8**	**5.5**	< 0.5	**1.4**	< 0.5	< 0.5	**4.7**	< 0.5	< 0.5	< 0.95	< 0.5
MW-4B	12/06/2011	Intermediate Gaspur	Duplicate	< 0.5	**2**	**5.7**	< 0.5	**1.5**	< 0.5	< 0.5	**5.4**	< 0.5	< 0.5	< 0.95	< 0.5
MW-4B	03/26/2012	Intermediate Gaspur	Primary	< 0.5	**1.2**	**8.4**	< 0.5	**2.3**	< 0.5	< 0.5	**5.7**	**0.66**	< 0.5	< 0.94 J	< 0.5
MW-4B	06/07/2012	Intermediate Gaspur	Primary	< 0.5	**0.84**	**5.5**	< 0.5	**1.2**	< 0.5	< 0.5	**4.3**	< 0.5	< 0.5	< 0.94	< 0.5
MW-4B	12/12/2012	Intermediate Gaspur	Primary	< 0.5	**0.56**	**9.4**	< 0.5	**2.6**	< 0.5	< 0.5	**4.5**	**0.73**	< 0.5	< 0.95	< 0.5
MW-4B	06/20/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**12**	< 0.3	**4**	< 0.5	< 0.2	**4.1**	**1.1**	< 0.5	**1 J**	< 0.3
MW-4B	12/12/2013	Intermediate Gaspur	Primary	< 0.5	**0.38 J**	**28**	< 0.3	**7.9**	< 0.5	< 0.2	**3.3**	**4.2**	< 0.5	< 1	< 0.3
MW-4B	06/12/2014	Intermediate Gaspur	Primary	< 0.5	**1.4**	**33**	< 0.3	**9**	< 0.5	< 0.2	**2.6**	**5.6**	< 0.5	**1.1 J**	< 0.3
MW-4B	12/19/2014	Intermediate Gaspur	Primary	< 0.5	**1.4**	**26**	< 0.3	**7**	< 0.5	< 0.2	**1.4**	**5.2**	< 0.5	< 1	< 0.3
MW-4B	06/11/2015	Intermediate Gaspur	Primary	< 0.5	**1.6**	**31**	< 0.3	**9.1**	**0.87**	< 0.2	**3.1 J**	**7.8**	< 0.5	< 1	< 0.3
MW-4B	12/07/2015	Intermediate Gaspur	Primary	< 0.5	**1.2**	**32**	< 0.3	**9.7**	**2.3**	< 0.2	**2.2**	**7.1**	< 0.5	< 1	< 0.3
MW-4B	06/10/2016	Intermediate Gaspur	Primary	< 0.5	**1.2**	**36**	< 0.3	**11**	**1.6**	< 0.2	**2.7**	**6.2**	< 0.5	< 1	< 0.3
MW-4B	06/10/2016	Intermediate Gaspur	Duplicate	< 0.5	**1.1**	**39**	< 0.3	**12**	**1.6**	< 0.2	**3.6**	**6.8**	< 0.5	< 1	< 0.3
MW-4B	12/02/2016	Intermediate Gaspur	Primary	< 0.5	**1.3**	**45**	< 0.3	**14**	**2.3**	< 0.2	**3.7**	**5.7**	< 0.5	< 1	< 0.3
MW-4B	06/08/2017	Intermediate Gaspur	Primary	< 0.5	**0.52**	**8.8**	< 0.3	**2.8**	**0.91**	< 0.2	**1.8**	**1.6**	< 0.5	< 1	< 0.3
MW-4B	12/08/2017	Intermediate Gaspur	Primary	< 0.5	**1.4**	**39**	< 0.3	**14**	**2.8**	< 0.2	**3.5**	**5.3**	< 0.5	< 1	< 0.3
MW-4B	06/04/2018	Intermediate Gaspur	Primary	< 0.5	**1.2**	**37**	< 0.3	**17**	**5**	< 0.2	**4.2**	**6.7**	< 0.5	< 1	< 0.3
MW-4B	12/07/2018	Intermediate Gaspur	Primary	< 0.5	**1.1**	**53**	< 0.3	**20**	**3.4**	< 0.2	**3.5**	**4.8**	< 0.5	< 1	< 0.3
MW-4B	06/13/2019	Intermediate Gaspur	Primary	< 0.5	**1.1**	**55**	< 0.4	**24**	**8**	< 0.2	**4.6**	**6.6**	< 0.3	< 1	< 0.2
MW-4B	06/13/2019	Intermediate Gaspur	Duplicate	< 0.5	**1**	**55**	< 0.4	**25**	**7.8**	< 0.2	**4.7**	**6.6**	< 0.3	< 1	< 0.2
MW-15	12/01/2000	Intermediate Gaspur	Primary	**1**	**590**	**150**	**10**	**7**	**2.2**	**22**	**4.1**	**1**	**2**	NA	NA
MW-15	02/01/2001	Intermediate Gaspur	Primary	**2**	**700**	**170**	**10**	**6**	**2**	**20**	**3.7**	**1**	**2**	NA	NA
MW-15	05/01/2003	Intermediate Gaspur	Primary	< 10 *	**250**	**98**	**9 J**	**3 J**	< 10 *	**10 J**	**11**	< 10 *	< 10 *	NA	NA
MW-15	01/01/2004	Intermediate Gaspur	Primary	**0.3 J**	**360 D**	**160 D**	**6.7**	**6.5**	**1.2**	**14**	**14**	**0.85**	**4.1**	NA	NA
MW-15	07/01/2004	Intermediate Gaspur	Primary	< 0.5	**87 D**	**70 D**	**3.9**	**3.5**	**1.1**	**7.3**	**3.9**	**0.43 J**	**1.3**	**54**	NA
MW-15	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**17**	**82 D**	**1.1**	**2.3**	< 0.5	**1.6**	**2.5**	**0.36 J**	< 0.5	**12**	NA
MW-15	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**37 D**	**57 D**	**1.6**	**2.6**	**1.3**	**3.6**	**3.6**	**0.31 J**	< 0.5	**7.5**	NA
MW-15	05/13/2009	Intermediate Gaspur	Primary	< 0.5	**27 D**	**55 D**	**1.8**	**2**	**1.7 J**	**3.9**	**3.6**	**0.4 J**	< 0.5	**6**	NA
MW-15	07/15/2010	Intermediate Gaspur	Primary	< 0.5	**18**	**50**	**1.8**	**2.2**	**1.5 J**	**3.4 J**	**2.9**	**0.62**	**0.58**	**7.4 J**	< 0.5
MW-15	06/17/2013	Intermediate Gaspur	Primary	< 0.5	**0.36 J**	**30**	**0.59**	**3**	**0.9**	**1.1**	**1.8**	**3.8**	< 0.5	**6**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-15	12/11/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**34**	**0.47 J**	**2.2**	< 0.5	**0.8**	**2.2**	**6.7**	< 0.5	**4.3**	< 0.3
MW-15	06/11/2014	Intermediate Gaspur	Primary	< 0.5	**0.38 J**	**28**	< 0.3	**1.7**	< 0.5	< 0.2	**1.6**	**3.4**	< 0.5	**3.6**	< 0.3
MW-15	12/19/2014	Intermediate Gaspur	Primary	< 0.5	**0.47 J**	**32**	< 0.3	**7.8**	< 0.5	< 0.2	**2**	**4.6**	< 0.5	**1 J**	< 0.3
MW-15	06/08/2015	Intermediate Gaspur	Primary	< 0.5	**0.5**	**30**	< 0.3	**9.8**	**0.75**	< 0.2	**4.4**	**5.1**	< 0.5	< 1	< 0.3
MW-15	12/07/2015	Intermediate Gaspur	Primary	< 0.5	**0.84**	**35**	< 0.3	**8.1**	**0.66**	**0.37 J**	**3.3**	**4.7**	< 0.5	< 1	< 0.3
MW-15	06/07/2016	Intermediate Gaspur	RS	< 0.5	**2.6**	**53**	**0.95**	**3.4**	**0.72**	**0.81**	**2.1**	**1.7**	< 0.5	NA	< 0.3
MW-15	06/07/2016	Intermediate Gaspur	Primary	< 0.5	**2.6**	**52**	**0.82**	**3.7**	**0.81**	**0.87**	**2.1**	**2**	< 0.5	**1.7 J**	< 0.3
MW-15	11/30/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	**25**	< 0.3	**6.4**	**0.55**	< 0.2	**3.6**	**2.4**	< 0.5	**1.1 J**	< 0.3
MW-15	06/07/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**27**	**0.35 J**	**2.9**	< 0.5	**0.54**	**2.6**	**2.8**	< 0.5	**2.7**	< 0.3
MW-15	12/05/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-15	12/05/2017	Intermediate Gaspur	Duplicate	< 0.5	< 0.2	**0.87**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**0.4 J**	< 0.5	< 1	< 0.3
MW-15	06/07/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	**23**	< 0.3	**2.8**	< 0.5	**0.6**	**4.1**	**1.7**	< 0.5	**1.6 J**	< 0.3
MW-15	12/04/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	**22**	< 0.3	**3.4**	< 0.5	**0.55**	**3.2**	**1.1**	< 0.5	**1.2 J**	< 0.3
MW-15	06/13/2019	Intermediate Gaspur	Primary	< 0.5	< 0.3	**26**	< 0.4	**4.9**	< 0.4	< 0.2	**3.2**	**1**	< 0.3	**1.6 J**	< 0.2
MW-15B	05/01/2009	Lower Gaspur	Primary	< 0.5	**32 D**	**120 D**	**1.7**	**4.1**	**8.2**	**13**	**4.5**	**0.64**	< 0.5	**17**	NA
MW-15B	07/14/2010	Lower Gaspur	Primary	< 0.5	**13**	**100**	**2.1**	**4.9**	**8.3**	**6.5**	**5.9**	< 0.5	**0.73**	**9.4 J**	< 0.5
MW-15B	07/14/2010	Lower Gaspur	Duplicate	< 0.5	**13**	**100**	**2**	**4.7**	**7.7**	**6.3**	**6**	< 0.5	**0.72**	**9 J**	< 0.5
MW-15B	06/15/2011	Lower Gaspur	Primary	< 0.5	**13**	**120**	**2.9**	**5.9**	**5.6**	**7.2**	**7**	**0.9**	**0.84**	**14**	< 0.5
MW-15B	12/07/2011	Lower Gaspur	Primary	< 1	**7.3**	**100**	**1.8**	**4.7**	**2.5**	**4.5**	**5.3**	**1.2**	< 1	**14**	< 1
MW-15B	06/08/2012	Lower Gaspur	Primary	< 0.5	**7**	**92**	**1.7**	**4.9**	**2.9**	**4**	**5.1**	**1.9**	**0.71**	**12 J**	< 0.5
MW-15B	12/12/2012	Lower Gaspur	Primary	< 0.5	**4.8**	**72**	**1.3**	**4**	**2.2**	**2.8**	**4.1**	**2.7**	**0.56**	**12**	< 0.5
MW-15B	06/18/2013	Lower Gaspur	Primary	< 0.5	< 0.2	**67**	**1.6**	**4.5**	**5.1**	**4.6**	**4.4**	**2.6**	< 0.5	**11**	< 0.3
MW-15B	06/18/2013	Lower Gaspur	Duplicate	< 0.5	< 0.2	**69**	**1.6**	**4.6**	**5.2**	**4.6**	**4.4**	**2.6**	< 0.5	**12**	< 0.3
MW-15B	12/12/2013	Lower Gaspur	Primary	< 0.5	**0.25 J**	**69**	**1.6**	**4**	**4.3**	**3.2**	**3.6**	**2.2**	< 0.5	**12**	< 0.3
MW-15B	06/11/2014	Lower Gaspur	Primary	< 0.5	< 0.2	**67**	**1.5**	**4**	**3.6**	**3.7**	**3.5**	**1.7**	< 0.5	**14**	< 0.3
MW-15B	06/11/2014	Lower Gaspur	Duplicate	< 0.5	< 0.2	**64**	**1.5**	**3.7**	**3.4**	**3.5**	**3.4**	**1.8**	< 0.5	**13**	< 0.3
MW-15B	12/18/2014	Lower Gaspur	Primary	< 0.5	**1.6**	**55**	**0.9**	**3.8**	**1.2**	**1.1**	**2.2**	**1.9**	< 0.5	**5**	< 0.3
MW-15B	06/09/2015	Lower Gaspur	Primary	< 0.5	**1.2**	**42**	**0.6**	**5**	**0.97**	**1.2**	**4.2**	**2.6**	< 0.5	**2.8**	< 0.3
MW-15B	12/08/2015	Lower Gaspur	Primary	< 0.5	**3.2**	**82**	**1.2**	**5.7**	**1.1**	**1.6**	**3.9**	**1.9**	< 0.5	< 1	< 0.3
MW-15B	06/07/2016	Lower Gaspur	RS	< 0.5	< 0.2	**21**	< 0.3	**4**	< 0.5	< 0.2	**2.6**	**1.9**	< 0.5	NA	< 0.3
MW-15B	06/07/2016	Lower Gaspur	Primary	< 0.5	< 0.2	**20**	**0.42 J**	**4**	< 0.5	**0.31 J**	**2.2**	**1.6**	< 0.5	< 1	< 0.3
MW-15B	11/30/2016	Lower Gaspur	Primary	< 0.5	**2.2**	**41**	**0.63**	**3.3**	**0.7**	**0.72**	**1.6**	**1.2**	< 0.5	< 1	< 0.3
MW-15B	11/30/2016	Lower Gaspur	Duplicate	< 0.5	**2**	**38**	**0.68**	**3.3**	**0.57**	**0.58**	**1.5**	**1**	< 0.5	< 1	< 0.3
MW-15B	06/06/2017	Lower Gaspur	Primary	< 0.5	**0.71**	**34**	**0.42 J**	**2.7**	**1.5**	**0.7**	**1.8**	**1.6**	< 0.5	**2.9**	< 0.3
MW-15B	12/05/2017	Lower Gaspur	Primary	< 0.5	**1.2**	**41**	**0.58**	**3.3**	< 0.5	**0.65**	**3.1**	**1.6**	< 0.5	**2.5**	< 0.3
MW-15B	12/05/2017	Lower Gaspur	Duplicate	< 0.5	**1**	**42**	**0.53**	**3.4**	< 0.5	**0.71**	**3**	**1.5**	< 0.5	**2.4**	< 0.3

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ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-15B	06/07/2018	Lower Gaspur	Primary	< 0.5	**0.78**	**42**	**0.53**	**3.8**	**0.75**	**0.89**	**3.7**	**2.1**	< 0.5	**2 J**	< 0.3
MW-15B	12/06/2018	Lower Gaspur	Primary	< 0.5	**0.62**	**32**	**0.66 J**	**2.9**	**1**	**0.68**	< 0.3	**1.1**	< 0.5	**2 J**	< 0.3
MW-15B	06/13/2019	Lower Gaspur	Primary	< 0.5	**0.48 J**	**35**	< 0.4	**2.9**	**0.84**	< 0.2	**2.3**	**0.91**	< 0.3	**2**	< 0.2
MW-16	12/01/2000	Exposition	Primary	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 0.5	< 1	< 1	NA	NA
MW-16	02/01/2001	Exposition	Primary	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1	< 0.5	< 1	< 1	NA	NA
MW-16	03/01/2003	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.2 J**	< 0.5	< 0.5	NA	NA
MW-16	01/01/2004	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-16	11/01/2004	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	NA
MW-16	08/01/2006	Exposition	Primary	< 0.5	< 0.5	**0.25 J**	< 0.5	< 0.5	< 0.5	< 0.5	**0.58**	< 0.5	< 0.5	< 1	NA
MW-16	03/01/2008	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.79**	< 0.5	< 0.5	< 2	NA
MW-16	05/13/2009	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-16	06/14/2011	Exposition	Primary	< 0.5	< 0.5	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	< 3.6	< 0.5
MW-16	06/14/2011	Exposition	Duplicate	< 0.5	< 0.5	**0.58**	< 0.5	< 0.5	< 0.5	< 0.5	**1**	< 0.5	< 0.5	< 3.6	< 0.5
MW-16	12/05/2011	Exposition	Primary	< 0.5	< 0.5	**0.61**	< 0.5	< 0.5	< 0.5	< 0.5	**1.2**	< 0.5	< 0.5	< 0.94	< 0.5
MW-16	12/13/2012	Exposition	Primary	< 0.5	< 0.5	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**1.1**	< 0.5
MW-16	12/13/2012	Exposition	Duplicate	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**1.9**	< 0.5
MW-16	12/11/2013	Exposition	Primary	< 0.5	< 0.2	**2**	< 0.3	< 0.4	< 0.5	< 0.2	**1.1**	< 0.2	< 0.5	< 1	< 0.3
MW-16	12/19/2014	Exposition	Primary	< 0.5	< 0.2	**2**	< 0.3	< 0.4	< 0.5	< 0.2	**0.72**	< 0.2	< 0.5	< 1	< 0.3
MW-16	12/07/2015	Exposition	Primary	< 0.5	< 0.2	**2.4**	< 0.3	< 0.4	< 0.5	< 0.2	**1.1**	< 0.2	< 0.5	< 1	< 0.3
MW-16	06/07/2016	Exposition	Primary	< 0.5	< 0.2	**2.4**	< 0.3	< 0.4	< 0.5	< 0.2	**1.1**	< 0.2	< 0.5	< 1	< 0.3
MW-16	11/30/2016	Exposition	Primary	< 0.5	< 0.2	**2.7**	< 0.3	< 0.4	< 0.5	< 0.2	**0.96**	< 0.2	< 0.5	**1.3 J**	< 0.3
MW-16	06/06/2017	Exposition	Primary	< 0.5	< 0.2	**3.2**	< 0.3	< 0.4	< 0.5	< 0.2	**0.8**	< 0.2	< 0.5	**2.2**	< 0.3
MW-16	12/05/2017	Exposition	Primary	< 0.5	< 0.2	**3.7**	< 0.3	< 0.4	< 0.5	< 0.2	**1.3**	< 0.2	< 0.5	**2.1**	< 0.3
MW-16	06/07/2018	Exposition	Primary	< 0.5	< 0.2	**4**	< 0.3	< 0.4	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	**1.5 J**	< 0.3
MW-16	12/06/2018	Exposition	Primary	< 0.5	< 0.2	**1.8**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.4 J**	< 0.3
MW-16	06/13/2019	Exposition	Primary	< 0.5	< 0.3	**3.4**	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**2.8**	< 0.2
MW-17	12/01/2000	Shallow Gaspur	Primary	< 1	**3**	**0.5 J**	< 1	< 1	< 0.5	**0.3 J**	< 1	< 1	< 1	NA	NA
MW-17	02/01/2001	Shallow Gaspur	Primary	< 1	< 1	< 1	< 1	< 1	< 0.5	< 0.5	< 1	< 1	< 1	NA	NA
MW-17	03/01/2003	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.2 J**	< 0.5	< 0.5	NA	NA
MW-17	01/01/2004	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-17	11/01/2004	Shallow Gaspur	Primary	< 0.5	**0.58**	**0.52**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.9**	NA
MW-17	08/01/2006	Shallow Gaspur	Primary	< 0.5	**1.7**	**2.1**	**0.34 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.7 J**	NA
MW-17	03/01/2008	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.79**	< 0.5	< 0.5	< 0.5	**0.41 J**	**0.39 J**	< 0.5	< 0.5	< 1	NA
MW-17	05/12/2009	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.2 J**	< 0.5	< 0.5	**1.5 J**	NA
MW-17	06/14/2011	Shallow Gaspur	Primary	< 0.5	**2.6**	**4.1**	**1.4**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.6	< 0.5
MW-17	12/06/2011	Shallow Gaspur	Primary	< 0.5	**2.3**	**3.9**	**1.9**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.6 J**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-17	06/07/2012	Shallow Gaspur	Primary	< 0.5	**1.4**	**2.1**	**1.4**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.5**	< 0.5
MW-17	12/12/2012	Shallow Gaspur	Primary	< 0.5	**1.9**	**3.6**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.1**	< 0.5
MW-17	12/12/2012	Shallow Gaspur	Duplicate	< 0.5	**1.8**	**3**	**0.97**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**10**	< 0.5
MW-17	06/18/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	**1.4**	**0.53**	< 0.4	< 0.5	**0.93**	< 0.3	< 0.2	< 0.5	**4.3**	< 0.3
MW-17	12/12/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	**2.6**	**0.7**	< 0.4	< 0.5	**0.83**	**0.77**	< 0.2	< 0.5	**5**	< 0.3
MW-17	06/11/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	**2.4**	**0.35 J**	< 0.4	< 0.5	**0.31 J**	**0.57**	< 0.2	< 0.5	**4.3**	< 0.3
MW-17	12/16/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	**3.6**	**0.55**	< 0.4	< 0.5	**0.5**	**0.64**	< 0.2	< 0.5	**4.8**	< 0.3
MW-17	06/09/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	**3.1**	**0.57**	< 0.4	< 0.5	**0.49 J**	**1.3**	< 0.2	< 0.5	**3.4**	< 0.3
MW-17	12/09/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	**2.6**	**0.48 J**	< 0.4	< 0.5	**0.36 J**	**0.76**	< 0.2	< 0.5	**1.9 J**	< 0.3
MW-17	06/09/2016	Shallow Gaspur	Primary	< 0.5	**2.4**	**5.6**	**2.2**	< 0.4	< 0.5	**1.1**	**0.86**	< 0.2	< 0.5	**4**	< 0.3
MW-17	06/09/2016	Shallow Gaspur	Duplicate	< 0.5	**2.3**	**5.6**	**2.3**	< 0.4	< 0.5	**1.2**	**0.93**	< 0.2	< 0.5	**4.3**	< 0.3
MW-17	12/01/2016	Shallow Gaspur	Primary	< 0.5	**3**	**4.2**	**1.8**	< 0.4	< 0.5	**1.2**	**0.56**	< 0.2	< 0.5	**8.1**	< 0.3
MW-17	06/06/2017	Shallow Gaspur	Primary	< 0.5	**4.9**	**3.3**	**2.4**	< 0.4	< 0.5	**0.8**	< 0.3	< 0.2	< 0.5	**8.7**	< 0.3
MW-17	12/08/2017	Shallow Gaspur	Primary	< 0.5	**0.57**	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-17	06/07/2018	Shallow Gaspur	Primary	< 0.5	**13**	**5.3**	**2.5**	< 0.4	< 0.5	**1.2**	< 0.3	< 0.2	< 0.5	**5.5**	< 0.3
MW-17	12/06/2018	Shallow Gaspur	Primary	< 0.5	**17**	**5.7**	**1.9**	< 0.4	< 0.5	**0.93**	**0.64**	< 0.2	< 0.5	**7.5**	< 0.3
MW-17	06/13/2019	Shallow Gaspur	Primary	< 0.5	**16**	**6.7**	**2.1**	< 0.3	< 0.4	**1.1**	< 0.2	< 0.4	< 0.3	**7.8**	< 0.2
MW-18	12/01/2000	Exposition	Primary	< 1	< 1	**0.6 J**	< 1	< 1	< 0.5	< 1	**0.4 J**	< 1	< 1	NA	NA
MW-18	02/01/2001	Exposition	Primary	< 1	< 1	**0.5 J**	< 1	< 1	< 0.5	< 1	**0.3 J**	< 1	< 1	NA	NA
MW-18	03/01/2003	Exposition	Primary	< 0.5	**0.2 J**	**0.8 J**	< 0.5	< 0.5	< 0.5	< 0.5	**0.2 J**	< 0.5	< 0.5	NA	NA
MW-18	01/01/2004	Exposition	Primary	< 0.5	**0.24 J**	**0.72**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-18	08/01/2006	Exposition	Primary	< 0.5	**0.57**	**0.96**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.9	NA
MW-18	03/01/2008	Exposition	Primary	< 0.5	**0.33 J**	**0.67**	< 0.5	< 0.5	< 0.5	< 0.5	**0.33 J**	< 0.5	< 0.5	< 2	NA
MW-18	05/12/2009	Exposition	Primary	< 0.5	**1.1**	**1.6**	**0.39 J**	< 0.5	< 0.5	**0.6**	**0.48 J**	< 0.5	< 0.5	< 2	NA
MW-18	06/14/2011	Exposition	Primary	< 0.5	< 0.5	**0.83**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.6	< 0.5
MW-18	12/05/2011	Exposition	Primary	< 0.5	< 0.5	**0.89**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-18	12/11/2012	Exposition	Primary	< 0.5	< 0.5	**0.99**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94 J	< 0.5
MW-18	12/12/2013	Exposition	Primary	< 0.5	< 0.2	**1.3**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-18	12/16/2014	Exposition	Primary	< 0.5	< 0.2	**1.4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-18	12/09/2015	Exposition	Primary	< 0.5	< 0.2	**1.6**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-18	12/09/2015	Exposition	Duplicate	< 0.5	< 0.2	**1.8**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-18	12/01/2016	Exposition	Primary	< 0.5	< 0.2	**1.8**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-18	06/07/2017	Exposition	Primary	< 0.5	< 0.2	**2.1**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-18	12/08/2017	Exposition	Primary	< 0.5	< 0.2	**2.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-18	12/06/2018	Exposition	Primary	< 0.5	< 0.2	**2.4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.2**	< 0.3
MW-18	06/13/2019	Exposition	Primary	< 0.5	< 0.3	**3.3**	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**2.6**	< 0.2

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-19	12/01/2000	Shallow Gaspur	Primary	< 1	**6700**	**45**	**18**	**9**	**1.2**	**31**	**12**	**1**	< 1	NA	NA
MW-19	02/01/2001	Shallow Gaspur	Primary	< 1	**5700**	**33**	**16**	**8**	**1**	**29**	**9.7**	**1**	< 1	NA	NA
MW-19	05/01/2003	Shallow Gaspur	Primary	< 50 *	**1000**	< 50 *	< 50 *	< 50 *	< 50 *	< 50 *	**39 J**	< 50 *	< 50 *	NA	NA
MW-19	01/01/2004	Shallow Gaspur	Primary	< 0.5	**450 D**	**11**	**2.8 J**	**1.5**	**0.19 J**	**3**	**34 D**	< 0.5	< 0.5	NA	NA
MW-19	07/01/2004	Shallow Gaspur	Primary	< 0.5	**99 D**	**4.5**	**1.6 J**	**0.65**	**0.25 J**	**0.77**	**33 D**	< 0.5	< 0.5	**17**	NA
MW-19	08/01/2006	Shallow Gaspur	Primary	< 0.5	**94 D**	**13**	**1.1**	**1.6**	< 0.5	**0.96**	**23**	< 0.5	< 0.5	**3.7**	NA
MW-19	03/01/2008	Shallow Gaspur	Primary	< 0.5	**42 D**	**15**	**0.73**	**1.6**	**0.31 J**	**0.56**	**14**	< 0.5	< 0.5	**3.3**	NA
MW-19	05/19/2009	Shallow Gaspur	Primary	< 0.5	**36 D**	**21 D**	< 0.5 J	**1.3 J**	< 0.5	**0.38 J**	**8.2**	< 0.5	< 0.5	**2.8**	NA
MW-19	06/15/2011	Shallow Gaspur	Primary	< 0.5	**11**	**29**	< 0.5	**0.89**	< 0.5	< 0.5	**5.5**	< 0.5	< 0.5	**4.2**	< 0.5
MW-19	12/07/2011	Shallow Gaspur	Primary	< 0.5	**6.2**	**26**	< 0.5	**1.8**	< 0.5	< 0.5	**7.1**	< 0.5	< 0.5	**2.9**	< 0.5
MW-19	12/07/2011	Shallow Gaspur	Duplicate	< 0.5	**7.1**	**23**	< 0.5	**1.5**	< 0.5	< 0.5	**7.4**	< 0.5	< 0.5	**2.9**	< 0.5
MW-19	06/07/2012	Shallow Gaspur	Primary	< 0.5	**4.5**	**15**	< 0.5	< 0.5	< 0.5	< 0.5	**6**	< 0.5	< 0.5	**3.4 J**	< 0.5
MW-19	12/12/2012	Shallow Gaspur	Primary	< 0.5	**6.5**	**38**	< 0.5	**3.4**	**0.87**	< 0.5	**2.6**	< 0.5	< 0.5	**4.5**	< 0.5
MW-19	06/18/2013	Shallow Gaspur	Primary	< 0.5	**8**	**11**	**1.2**	**0.73**	**8.5**	**0.55**	**20**	< 0.2	< 0.5	**7.3**	< 0.3
MW-19	12/11/2013	Shallow Gaspur	Primary	< 0.5	**4.7**	**4.3**	**2.4**	**0.43 J**	**7**	**0.7**	**41**	< 0.2	< 0.5	**5.1**	< 0.3
MW-19	06/11/2014	Shallow Gaspur	Primary	< 0.5	**9.8**	**13**	**3.8**	**1.1**	**4.3**	**1.2**	**74**	**0.45 J**	< 0.5	**4.2**	< 0.3
MW-19	12/15/2014	Shallow Gaspur	Primary	< 0.5	**7.3**	**7.9**	**3.3**	**0.98**	**2.5**	**1.1**	**34**	< 0.2	< 0.5	**3.3**	< 0.3
MW-19	06/09/2015	Shallow Gaspur	Primary	< 0.5	**9.5**	**19**	**3.3**	**2.3**	**2.7**	**1.3**	**28**	< 0.2	< 0.5	**3.2**	< 0.3
MW-19	12/09/2015	Shallow Gaspur	Primary	< 0.5	**9.8**	**19**	**3.9**	**1.7**	**3**	**1.4**	**26**	< 0.2	< 0.5	**3.4**	< 0.3
MW-19	06/07/2016	Shallow Gaspur	Primary	< 0.5	**8**	**6.5**	**7**	**0.68**	**3.2**	**1.5**	**19**	< 0.2	< 0.5	**5.5**	< 0.3
MW-19	12/01/2016	Shallow Gaspur	Primary	< 0.5	**7.1**	**15**	**5.6**	**1.9**	**1**	**1.1**	**12**	< 0.2	< 0.5	**4.8**	< 0.3
MW-19	06/08/2017	Shallow Gaspur	Primary	< 0.5	**1.5**	**7**	**1.6**	**0.56**	**7.1**	**0.91**	**8.3**	< 0.2	< 0.5	**9.8**	< 0.3
MW-19	06/08/2017	Shallow Gaspur	Duplicate	< 0.5	**2.2**	**6.1**	**2**	**0.63**	**4.9**	**0.87**	**6.8**	< 0.2	< 0.5	**12**	< 0.3
MW-19	12/07/2017	Shallow Gaspur	Primary	< 0.5	**3**	**8.6**	< 0.3	**0.55**	**1.8**	**0.69**	**6**	< 0.2	< 0.5	**8.3**	< 0.3
MW-19	06/07/2018	Shallow Gaspur	Primary	< 0.5	**4.4**	**15**	**2.2**	**1.7**	< 0.5	**0.98**	**1.8**	< 0.2	< 0.5	**4.7**	< 0.3
MW-19	12/07/2018	Shallow Gaspur	Primary	< 0.5	**2.2**	**4.9**	**1.6**	< 0.4	**1.1**	**0.53**	**2.7**	< 0.2	< 0.5	**4.9**	< 0.3
MW-19	06/12/2019	Shallow Gaspur	Primary	< 0.5	**2.3**	**9.1**	**1.2**	**0.9**	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**2.2**	< 0.2
MW-20	02/01/2003	Shallow Gaspur	Primary	**5.6**	**300**	**110**	**7.6**	**5.4**	< 5	**32**	**6.4**	NA	NA	NA	NA
MW-20	05/01/2003	Shallow Gaspur	Primary	< 13	**520**	**140**	< 13	< 13	< 13	**41**	< 13	< 13 *	< 13 *	NA	NA
MW-20	12/01/2003	Shallow Gaspur	Primary	**5.2**	**570**	**150**	**16**	**7.8**	**3.6**	**44**	**7.6**	**1.1**	**4.2**	NA	NA
MW-20	02/01/2004	Shallow Gaspur	Primary	**4.1**	**490**	**140**	**14**	**7.3**	**2.8**	**39**	**7.8**	**0.97**	**4.1**	NA	NA
MW-20	04/04/2004	Shallow Gaspur	Primary	**5.1**	**670**	**180**	**15**	**8.9**	< 0.5	**48**	**8**	< 0.5	**4.9**	**120**	NA
MW-20	07/01/2004	Shallow Gaspur	Primary	**4**	**470 D**	**140 D**	**16**	**7.6**	**3**	**45**	**7.3**	**1.1**	**4.3**	NA	NA
MW-20	11/01/2004	Shallow Gaspur	Primary	**5.1**	**770 D**	**200 E**	**24**	**11**	**8.3**	**58 D**	**12**	**1.2**	**5.9 J**	NA	NA
MW-20	04/01/2005	Shallow Gaspur	Primary	**2.4**	**120 D**	**45 D**	**7.2**	**4.6**	**1.9**	**13 D**	**7.9**	**0.68**	**3.7**	**180**	NA
MW-20	07/01/2005	Shallow Gaspur	Primary	**3.2**	**520 D**	**200 D**	**18**	**8.2**	**4.7**	**54 D**	**10**	**0.85**	**4.4**	**140**	NA

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MW-20	07/01/2005	Shallow Gaspur	Primary	**1.2**	**210 D**	**98 D**	**3.8**	**3.5**	**0.69**	**22**	**8.4**	**0.45 J**	**3**	**150**	NA
MW-20	08/01/2005	Shallow Gaspur	Primary	**2.7**	**230**	**81**	**11**	**5.5**	**2.3**	**30**	**11**	**0.5**	**4.3**	**160**	NA
MW-20	09/01/2005	Shallow Gaspur	Primary	**2**	**160**	**60**	**6.3**	**2.6**	**1.1**	**24**	**6.8**	**0.3**	**2.6**	**140**	NA
MW-20	09/01/2005	Shallow Gaspur	Primary	**1.7**	**150**	**50**	**5.5**	**2.7**	**0.8**	**21**	**6.3**	**0.3**	**2.6**	**120**	NA
MW-20	10/01/2005	Shallow Gaspur	Primary	**2.4**	**220**	**71**	**6.5**	**3**	**1**	**34**	**6.5**	**0.4**	**3.6**	**120**	NA
MW-20	11/01/2005	Shallow Gaspur	Primary	**1.1**	**130**	**39**	**5.4**	**1.8**	**0.7**	**22**	**3.7**	**0.3**	**1.8**	**98**	NA
MW-20	01/01/2006	Shallow Gaspur	Primary	**2.8**	**240**	**64**	**10**	**4.2**	**1**	**34**	**6.7**	**0.5**	**3.5**	**110**	NA
MW-20	03/01/2006	Shallow Gaspur	Primary	**0.75**	**110 D**	**31 D**	**2**	**1**	**0.62**	**16**	**2.7**	< 0.5	< 0.5	**79**	NA
MW-20	06/01/2006	Shallow Gaspur	Primary	**1.8**	**340**	**77**	**15**	**6**	**3.1**	**34**	**6.3**	**0.6**	**3.6**	**160**	NA
MW-20	08/01/2006	Shallow Gaspur	Primary	**0.99**	**140 D**	**26**	**5**	**2**	< 0.5	**14**	**3.9**	**0.4 J**	**2**	**71**	NA
MW-20	03/01/2008	Shallow Gaspur	Primary	**2.4**	**200 D**	**120 D**	**9.1**	**4.6**	**2.7**	**42 D**	**5.8**	**0.57**	**2.8**	**66**	NA
MW-20	05/12/2009	Shallow Gaspur	Primary	**1.3 J**	**100 D**	**130 D**	**9.2**	**4.6**	< 2.5	**32**	**5.3**	< 2.5	< 2.5	**39**	NA
MW-20	06/16/2011	Shallow Gaspur	Primary	< 2	**81**	**230**	**12**	**6.7**	**19**	**43**	**5.9**	< 2	**3.5**	**240**	< 2
MW-20	12/09/2011	Shallow Gaspur	Primary	< 1	**72**	**200**	**9**	**5.8**	**9.9**	**33**	**6.3**	< 1	**2.9**	**140 J**	**1.6**
MW-20	06/13/2012	Shallow Gaspur	Primary	< 2	**56**	**250**	**13**	**7.3**	**15**	**34**	**6.4**	< 2	< 2	**190**	< 2
MW-20	12/14/2012	Shallow Gaspur	Primary	< 0.5	**24**	**92**	**6.6**	**5.1**	**27**	**15**	**3.1**	**0.51**	< 0.5	**170**	**0.68**
MW-20	06/18/2013	Shallow Gaspur	Primary	< 0.5	**12**	**140**	**9.1**	**6.9**	**23**	**20**	**4**	**0.41 J**	**1.1**	**60**	< 0.3
MW-20	12/13/2013	Shallow Gaspur	Primary	< 1	**32**	**130**	**8.2**	**5.4**	**36**	**17**	**2.8**	< 0.4	< 1	**100**	< 0.6
MW-20	06/10/2014	Shallow Gaspur	Primary	< 0.5	**6.8**	**110**	**4.6**	**4**	**28**	**11**	**1.6**	**0.31 J**	< 0.5	**91**	< 0.3
MW-20	12/19/2014	Shallow Gaspur	Primary	< 0.5	**29**	**56**	**3.2**	**2.4**	**18**	**6**	**0.66**	< 0.2	< 0.5	**69**	< 0.3
MW-20	06/11/2015	Shallow Gaspur	Primary	< 0.5	**21**	**110**	**6.5**	**5.1**	**28**	**13**	**2.7 J**	**0.35 J**	**0.83**	**140**	< 0.3
MW-20	06/11/2015	Shallow Gaspur	Duplicate	< 0.5	**19**	**100**	**6.5**	**5.2**	**28**	**12**	**2.3 J**	**0.29 J**	**0.72**	**150**	< 0.3
MW-20	12/09/2015	Shallow Gaspur	Primary	< 0.5	**50**	**280**	**15**	**8**	**11**	**36**	**4.9**	**0.68**	**2.2**	**220**	**1.1**
MW-20	06/07/2016	Shallow Gaspur	Primary	**0.82**	**250**	**170**	**26**	**9.4**	**5.2**	**49**	**7**	**1**	< 0.5	**240**	**2.1**
MW-20	12/02/2016	Shallow Gaspur	Primary	**0.64**	**190**	**340**	**24**	**13**	**6.6**	**73**	**7.8**	**0.96**	< 0.5	**280**	**2.8**
MW-20	06/08/2017	Shallow Gaspur	Primary	< 0.5	**47**	**160**	**4.6**	**5.6**	**1.5**	**29**	**3.1**	**0.44 J**	**2.4**	**240**	**3.1**
MW-20	12/07/2017	Shallow Gaspur	Primary	< 1	**69**	**190**	**7**	**6.9**	**1.5**	**39**	**5.1**	< 0.4	< 1	**130**	**4.9**
MW-20	06/05/2018	Shallow Gaspur	Primary	< 0.5	**24**	**86**	**2.4**	**3**	< 0.5	**24**	**3.2**	< 0.2	< 0.5	**130**	**5.5**
MW-20	12/04/2018	Shallow Gaspur	Primary	< 0.5	**28**	**67**	**3**	**2.4**	< 0.5	**18**	**2.5**	**0.39 J**	< 0.5	**360**	**3.9**
MW-20	06/11/2019	Shallow Gaspur	Primary	< 0.5	**12**	**44**	**0.48 J**	**1.1**	< 0.5	**10**	**1.7 J**	< 0.2	**0.93**	**280**	**2.8**
MW-20B	07/01/2005	Intermediate Gaspur	Primary	< 0.5	**0.3 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.5**	NA
MW-20B	07/01/2005	Intermediate Gaspur	Primary	< 0.5	**16**	**13**	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-20B	08/01/2005	Intermediate Gaspur	Primary	< 0.5	**19**	**17**	**0.2 J**	**1.4**	< 0.5	**0.3 J**	< 0.5	< 0.5	< 0.5	**0.6**	NA
MW-20B	09/01/2005	Intermediate Gaspur	Primary	< 0.5	**18**	**13**	**0.2 J**	**1**	< 0.5	**0.4 J**	< 0.5	< 0.5	< 0.5	**0.5**	NA
MW-20B	09/01/2005	Intermediate Gaspur	Primary	< 0.5	**6.2**	**8.4**	< 0.5	**0.6**	< 0.5	**0.2 J**	< 0.5	< 0.5	< 0.5	< 1	NA
MW-20B	10/01/2005	Intermediate Gaspur	Primary	< 0.5	**6**	**6.9**	< 0.5	**0.5**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	NA

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-20B	11/01/2005	Intermediate Gaspur	Primary	< 0.5	**6.1**	**14**	**0.2 J**	**1**	**0.2 J**	**0.4 J**	< 0.5	< 0.5	< 0.5	**0.8 J**	NA
MW-20B	01/01/2006	Intermediate Gaspur	Primary	< 0.5	**10**	**17**	**0.4**	**1.2**	**0.3**	**0.7**	**0.2**	< 0.5	< 0.5	**1.8**	NA
MW-20B	03/01/2006	Intermediate Gaspur	Primary	< 0.5	**6.3**	**16**	< 0.5	**0.87**	< 0.5	**0.8**	< 0.5	< 0.5	< 0.5	**2.2**	NA
MW-20B	05/01/2006	Intermediate Gaspur	Primary	NA	**11**	**19**	**0.4 J**	**1.4**	**0.4 J**	**0.6**	NA	NA	NA	**1.9**	NA
MW-20B	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**17**	**27 D**	**0.68**	**2**	< 0.5	**1.7**	< 0.5	< 0.5	< 0.5	**3.7**	NA
MW-20B	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**19**	**27 D**	**0.62**	**2.2**	**0.71**	**1.9**	< 0.5	< 0.5	< 0.5	**3**	NA
MW-20B	05/12/2009	Intermediate Gaspur	Primary	< 0.5	**7.7**	**17 D**	**0.84**	**1.6**	< 0.5	**2.2**	< 0.5	< 0.5	< 0.5	**80 D**	NA
MW-20B	07/14/2010	Intermediate Gaspur	Primary	< 0.5	**15**	**120**	**4.4**	**6**	**13**	**18**	**2.4**	< 0.5	**0.82**	**61 J**	< 0.5
MW-20B	06/16/2011	Intermediate Gaspur	Primary	< 0.5	**2.9**	**160**	**4.7**	**8.7**	**28**	**26**	**5**	**0.71**	**1.3**	**140**	< 0.5
MW-20B	12/09/2011	Intermediate Gaspur	Primary	< 1	< 1	**140**	**3.1**	**8.7**	**34**	**27**	**7.1**	< 1	**1.4**	**110 J**	< 1
MW-20B	06/12/2012	Intermediate Gaspur	Split	< 0.5	**0.41 J**	**120 D**	**4.2**	**14**	**31 D**	**23 D**	**7.1**	**1.2**	**1.7**	**61**	NA
MW-20B	06/12/2012	Intermediate Gaspur	Primary	< 1	< 1	**180**	**4.4**	**12**	**30**	**30**	**7.9**	**1.2**	**1.7**	**120**	< 1
MW-20B	12/12/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	**140**	**3.7**	**9.1**	**44**	**26**	**6.5**	**0.89**	**1.7**	**140**	< 0.5
MW-20B	12/12/2012	Intermediate Gaspur	Primary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**200**	NA
MW-20B	06/18/2013	Intermediate Gaspur	Primary	< 0.5	**0.76**	**140**	**4.2**	**9.5**	**31**	**28**	**4.7**	**0.6**	**1.2**	**78**	< 0.3
MW-20B	12/12/2013	Intermediate Gaspur	Primary	< 0.5	**2.1**	**100**	**3.5**	**7.5**	**22**	**14**	**2.3**	**0.38 J**	< 0.5	**53**	< 0.3
MW-20B	06/10/2014	Intermediate Gaspur	Primary	< 0.5	**2.8**	**74**	**3**	**5.8**	**11**	**8.2**	**1.4**	**0.25 J**	< 0.5	**39**	< 0.3
MW-20B	12/19/2014	Intermediate Gaspur	Primary	< 0.5	**0.82**	**10**	**0.76**	**1.7**	**6.6**	**1.4**	**0.3 J**	< 0.2	< 0.5	**9.1**	< 0.3
MW-20B	12/19/2014	Intermediate Gaspur	Duplicate	< 0.5	**0.84**	**10**	**0.77**	**1.8**	**7.3**	**2**	**0.31 J**	< 0.2	< 0.5	**9.2**	< 0.3
MW-20B	06/11/2015	Intermediate Gaspur	Primary	< 0.5	**2.1**	**13**	**1.2**	**1.3**	**5.4**	**2.1**	**0.66 J**	< 0.2	< 0.5	**7.2**	< 0.3
MW-20B	12/09/2015	Intermediate Gaspur	Primary	< 0.5	**2**	**19**	**1.3**	**1.1**	**2.7**	**2**	**0.61**	< 0.2	< 0.5	**3.8**	< 0.3
MW-20B	06/07/2016	Intermediate Gaspur	Primary	< 0.5	**1.3**	**9.6**	**1.5**	**0.83**	**1.9**	**1.7**	**0.5**	< 0.2	< 0.5	**6.5**	< 0.3
MW-20B	12/01/2016	Intermediate Gaspur	Primary	< 0.5	**1.7**	**20**	**1.4**	**1.2**	**3.7**	**3**	**0.79**	< 0.2	< 0.5	**9.3**	< 0.3
MW-20B	06/06/2017	Intermediate Gaspur	Primary	< 0.5	**2**	**22**	**2**	**1.3**	**9.8**	**3.5**	**0.58**	< 0.2	< 0.5	**14**	< 0.3
MW-20B	12/07/2017	Intermediate Gaspur	Primary	< 0.5	**0.69**	**1.5**	< 0.3	< 0.4	< 0.5	**0.34 J**	< 0.3	< 0.2	< 0.5	**1.9 J**	< 0.3
MW-20B	06/05/2018	Intermediate Gaspur	Primary	< 0.5	**2.2**	**26**	**1.3**	**1.8**	**4.7**	**4.1**	**1**	< 0.2	< 0.5	**8.6**	< 0.3
MW-20B	12/07/2018	Intermediate Gaspur	Primary	< 0.5	**1.4**	**18**	**1.1**	**1.1**	**3**	**2.7**	< 0.3	< 0.2	< 0.5	**12**	< 0.3
MW-20B	06/11/2019	Intermediate Gaspur	Primary	< 0.5	**1.7**	**26**	**1.6**	**1.7**	**4.1**	**4.2**	< 0.2	< 0.4	< 0.3	**20**	< 0.2
MW-21	12/01/2003	Shallow Gaspur	Primary	**2.3**	**870**	**370**	**25**	**14**	**5.2**	**61**	**17**	**2.7**	**9.7**	NA	NA
MW-21	02/01/2004	Shallow Gaspur	Primary	**2.2**	**680**	**330**	**27**	**16 J**	**4.9**	**51**	**17**	**2.6**	**9.3**	NA	NA
MW-21	03/01/2004	Shallow Gaspur	Primary	**3**	**980**	**490**	**50 J**	**20**	**5**	**80**	**20**	< 0.5	**11**	**280**	NA
MW-21	07/01/2004	Shallow Gaspur	Primary	**2.8**	**640 D**	**340 D**	**29**	**15**	**5.8**	**69**	**17**	**2.6**	**8.3**	NA	NA
MW-21	11/01/2004	Shallow Gaspur	Primary	**2.1**	**720 D**	**430 D**	**24**	**11**	**64 D**	**59 D**	**21**	**3**	**8.2 J**	NA	NA
MW-21	03/01/2005	Shallow Gaspur	Primary	**0.43 J**	**180 D**	**120 D**	**13 J**	**11**	**20**	**18 D**	**5.8 D**	**1.5**	**3.3**	**170**	NA
MW-21	11/01/2005	Shallow Gaspur	Primary	< 0.5	**220**	**120**	**28**	**12**	**18**	**35**	**6**	**1.6**	**2.6**	**240**	NA
MW-21	03/01/2006	Shallow Gaspur	Primary	< 0.5	**390 D**	**280 D**	**19**	**17**	**23**	**50**	**12**	**2.7**	< 0.5	**360**	NA

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-21	08/01/2006	Shallow Gaspur	Primary	< 0.5	**260 D**	**260 D**	**20**	**19**	**30 D**	**55 D**	**16**	**3.5**	**5.5**	**280**	NA
MW-21	03/01/2008	Shallow Gaspur	Primary	< 0.5	**320 D**	**340 D**	**19**	**23 D**	**41 D**	**66 D**	**16**	**3.4**	**6.4**	**330 D**	NA
MW-21	05/13/2009	Shallow Gaspur	Primary	< 5	**340 D**	**500 D**	**15**	**16**	**14**	**53**	**14**	**3.2 J**	**6.3**	< 2	NA
MW-21	07/15/2010	Shallow Gaspur	Primary	< 1.2	**270**	**400**	**19**	**21**	**18 J**	**76 J**	**18**	**3.6**	**8.7**	**220 J**	**6**
MW-21	06/16/2011	Shallow Gaspur	Primary	< 5	**310**	**580**	**20**	**28**	**20**	**89**	**23**	< 5	< 5	**190 J**	**7.2**
MW-21	12/09/2011	Shallow Gaspur	Primary	< 5	**210**	**420**	**11**	**17**	**14**	**66**	**22**	< 5	**6.5**	**200 J**	< 5
MW-21	06/12/2012	Shallow Gaspur	Split	< 2	**120 D**	**340 D**	**11**	**19**	**26**	**54**	**18**	**2.8**	**6.8**	**120**	NA
MW-21	06/12/2012	Shallow Gaspur	Primary	< 5	**150**	**480**	**12**	**21**	**24**	**64**	**21**	< 5	< 5	**320**	< 5
MW-21	12/12/2012	Shallow Gaspur	Primary	< 2.5	**290**	**630**	**26**	**30**	**26**	**100**	**29**	**3.3**	< 2.5	**390**	**26**
MW-21	12/12/2012	Shallow Gaspur	Primary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**600 J**	NA
MW-21	06/18/2013	Shallow Gaspur	Primary	< 0.5	**210**	**490**	**25**	**24**	**18**	**100**	**18**	**1.5**	**6.9**	**140**	**1.8**
MW-21	06/18/2013	Shallow Gaspur	Duplicate	< 0.5	**200**	**460**	**23**	**22**	**17**	**93**	**17**	**1.4**	**6.3**	**140**	**1.8**
MW-21	12/13/2013	Shallow Gaspur	Primary	< 5	**170**	**510**	**26**	**25**	**19**	**91**	**19**	< 2	< 5	**180**	< 3
MW-21	12/13/2013	Shallow Gaspur	Duplicate	< 5	**170**	**570**	**26**	**26**	**15**	**81**	**15**	< 2	< 5	**180**	< 3
MW-21	06/10/2014	Shallow Gaspur	Primary	< 2.5	**160**	**530**	**22**	**23**	**9**	**83**	**16**	**1.6 J**	< 2.5	**200**	< 1.5
MW-21	06/10/2014	Shallow Gaspur	Duplicate	< 2.5	**160**	**540**	**23**	**23**	**9**	**85**	**16**	**1.8 J**	< 2.5	**200**	< 1.5
MW-21	12/18/2014	Shallow Gaspur	Primary	< 2.5	**86**	**600**	**24**	**27**	**11**	**98**	**15**	**2 J**	< 2.5	**230**	< 1.5
MW-21	06/09/2015	Shallow Gaspur	Primary	< 2.5	**59**	**690**	**32**	**39**	**30**	**140**	**35**	**2.4 J**	**8.6**	**300**	**19**
MW-21	12/10/2015	Shallow Gaspur	Primary	< 2.5	**20**	**700**	**24**	**35**	**22**	**110**	**22**	**2.6**	**10**	**450**	< 1.5
MW-21	06/08/2016	Shallow Gaspur	Primary	< 2.5	**7.7**	**670**	**27**	**31**	**30**	**110**	**26**	**3.7**	< 2.5	**330**	< 1.5
MW-21	12/02/2016	Shallow Gaspur	Primary	< 2.5	**16**	**660**	**15**	**26**	**36**	**76**	**18**	**3.4**	**8.6**	**250**	< 1.5
MW-21	06/08/2017	Shallow Gaspur	Primary	< 2.5	**5**	**430**	**7.6**	**18**	**8.8**	**33**	**10**	**2.7**	**7.4**	**160**	< 1.5
MW-21	12/07/2017	Shallow Gaspur	Primary	< 2.5	< 1	**280**	**3.7**	**11**	**5.6**	**16**	**5.5**	< 1	< 2.5	**44**	< 1.5
MW-21	06/07/2018	Shallow Gaspur	Primary	< 2.5	**1.6 J**	**180**	**3.3**	**5.4**	**7.4**	**18**	< 1.5	< 1	< 2.5	**22**	< 1.5
MW-21	06/07/2018	Shallow Gaspur	Duplicate	< 2.5	**1.8 J**	**180**	**3.4**	**5.2**	**6**	**17**	< 1.5	< 1	< 2.5	**24**	< 1.5
MW-21	12/07/2018	Shallow Gaspur	Primary	< 2	**4.1**	**64**	**2**	**2.5**	**3.3**	**7.2**	< 1.2	**5.2**	< 2	**23**	< 1.2
MW-21	06/11/2019	Shallow Gaspur	Primary	< 0.5	**1.1**	**59**	**1.8**	**1.7**	**4.4 J**	**6.3**	**1.5 J**	**0.49 J**	**0.74**	**36**	< 0.3
MW-22	01/01/2004	Shallow Gaspur	Primary	< 0.5	**7.2**	**2.9**	< 0.5	**0.21 J**	< 0.5	< 0.5	< 0.5	**1.8**	< 0.5	NA	NA
MW-22	11/01/2004	Shallow Gaspur	Primary	< 0.5	**9.6**	**9.7**	< 0.5	**0.53**	**0.56**	**0.38 J**	< 0.5	**3.7**	< 0.5	**1.1**	NA
MW-22	08/01/2006	Shallow Gaspur	Primary	< 0.5	**3.2**	**6.3**	< 0.5	< 0.24 J	< 0.5	**1.2**	< 0.5	**4.1**	< 0.5	**0.9**	NA
MW-22	03/01/2008	Shallow Gaspur	Primary	< 0.5	**3.6**	**4.9**	< 0.5	**0.28 L**	**0.28 J**	**0.91**	< 0.5	< 0.5	< 0.5	**0.73 J**	NA
MW-22	05/18/2009	Shallow Gaspur	Primary	< 0.5	**2.8**	**6.3 J**	< 0.5 J	**0.28 J**	< 0.5	**1.7**	< 0.5	**3.8**	< 0.5	**2.1**	NA
MW-22	12/06/2011	Shallow Gaspur	Primary	< 0.5	**1.7**	**6.3**	< 0.5	< 0.5	< 0.5	**4**	< 0.5	**1.1**	< 0.5	**3.8 J**	< 0.5
MW-22	06/13/2012	Shallow Gaspur	Primary	< 0.5	**2.2**	**6.9**	< 0.5	< 0.5	< 0.5	**3.7**	< 0.5	**0.96**	< 0.5	**4**	< 0.5
MW-22	12/11/2012	Shallow Gaspur	Primary	< 0.5	**1.5**	**4.9**	< 0.5	< 0.5	< 0.5	**2.6**	< 0.5	< 0.5	< 0.5	**3.9 J**	< 0.5
MW-22	06/19/2013	Shallow Gaspur	Primary	< 0.5	**1.3**	**4.8**	< 0.3	< 0.4	< 0.5	**4.3**	< 0.3	< 0.2	< 0.5	**5 J**	< 0.3

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Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-22	12/11/2013	Shallow Gaspur	Primary	< 0.5	**3.6**	**12**	< 0.3	**3.2**	< 0.5	**5.1**	< 0.3	**1.3**	< 0.5	**5.6**	< 0.3
MW-22	06/10/2014	Shallow Gaspur	Primary	< 0.5	**5.8**	**16**	< 0.3	**5.8**	< 0.5	**3.3**	**1.2**	**2.3**	< 0.5	**4.8**	< 0.3
MW-22	12/15/2014	Shallow Gaspur	Primary	< 0.5	**2.6**	**12**	< 0.3	**1.9**	< 0.5	**7.8**	**0.57**	**0.7**	< 0.5	**10**	< 0.3
MW-22	12/15/2014	Shallow Gaspur	Duplicate	< 0.5	**2.6**	**13**	< 0.3	**2**	< 0.5	**8.7**	**0.78**	**0.81**	< 0.5	**10**	< 0.3
MW-22	06/11/2015	Shallow Gaspur	Primary	< 0.5	**2**	**13**	< 0.3	**0.77**	< 0.5	**13**	**0.93 J**	< 0.2	< 0.5	**14**	< 0.3
MW-22	12/09/2015	Shallow Gaspur	Primary	< 0.5	**3.4**	**20**	**0.42 J**	< 0.4	< 0.5	**17**	**0.65**	< 0.2	< 0.5	**19**	< 0.3
MW-22	06/08/2016	Shallow Gaspur	Primary	< 0.5	**2.8**	**14**	**0.61**	**0.54**	< 0.5	**9.2**	**0.63**	< 0.2	< 0.5	**12**	< 0.3
MW-22	12/01/2016	Shallow Gaspur	Primary	< 0.5	**2.2**	**13**	**0.53**	**0.7**	< 0.5	**5**	**0.58**	**1.1**	< 0.5	**11**	< 0.3
MW-22	06/07/2017	Shallow Gaspur	Primary	< 0.5	**1.8**	**9.7**	< 0.3	**0.77**	< 0.5	**2.7**	**0.39 J**	**0.73**	< 0.5	**13**	< 0.3
MW-22	12/06/2017	Shallow Gaspur	Primary	< 0.5	**2.7**	**16**	**0.5**	**0.69**	< 0.5	**5.8**	**0.79**	**0.4 J**	< 0.5	**11**	< 0.3
MW-22	06/06/2018	Shallow Gaspur	Primary	< 0.5	**3.4**	**20**	< 0.3	**0.8**	< 0.5	**8.7**	< 0.3	< 0.2	< 0.5	**10**	< 0.3
MW-22	12/05/2018	Shallow Gaspur	Primary	< 0.5	**3.5**	**12**	< 0.3	< 0.4	< 0.5	**3.8**	< 0.3	< 0.2	< 0.5	**12**	< 0.3
MW-22	12/05/2018	Shallow Gaspur	Duplicate	< 0.5	**3.5**	**13**	< 0.3	< 0.4	< 0.5	**4**	< 0.3	< 0.2	< 0.5	**12**	< 0.3
MW-22	06/12/2019	Shallow Gaspur	Primary	< 0.5	**3.3**	**16**	< 0.3	**0.63**	< 0.5	**5.6**	< 0.3	< 0.2	< 0.5	**12**	< 0.3
MW-23	01/01/2004	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-23	11/01/2004	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.69**	< 0.5	< 0.5	< 0.5	**0.21 J**	< 0.5	< 0.5	< 0.5	**2.7**	NA
MW-23	08/01/2006	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.95**	< 0.5	< 0.5	< 0.5	**0.6**	< 0.5	< 0.5	< 0.5	< 0.9	NA
MW-23	03/01/2008	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.76**	< 0.5	< 0.5	< 0.5	**0.54**	**0.43 J**	< 0.5 J	< 0.5	**0.64 J**	NA
MW-23	05/19/2009	Shallow Gaspur	Primary	< 0.5	< 0.5	**1**	< 0.5	< 0.5	< 0.5	**0.93 J**	**0.6 J**	< 0.5	< 0.5	< 2	NA
MW-23	07/14/2010	Shallow Gaspur	Primary	< 0.5	< 0.5	**1**	< 0.5	< 0.5	< 0.5	**0.99**	< 0.5	< 0.5	< 0.5	< 0.8	< 0.5
MW-23	06/14/2011	Shallow Gaspur	Primary	< 0.5	< 0.5	**1.2**	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	**12**	< 0.5
MW-23	12/06/2011	Shallow Gaspur	Primary	< 0.5	**0.52**	**1.3**	**0.76**	< 0.5	< 0.5	**1.3**	**0.58**	< 0.5	< 0.5	**3.6 J**	< 0.5
MW-23	06/08/2012	Shallow Gaspur	Primary	< 0.5	**0.64**	**1.6**	**0.9**	< 0.5	< 0.5	**1.4**	**0.68**	< 0.5	< 0.5	**3.7 J**	< 0.5
MW-23	12/11/2012	Shallow Gaspur	Primary	< 0.5	**0.53**	**0.98**	**0.63**	< 0.5	< 0.5	**0.94**	**0.56**	< 0.5	< 0.5	**4.5**	< 0.5
MW-23	06/18/2013	Shallow Gaspur	Primary	< 0.5	**0.65**	**1.2**	**1.1**	< 0.4	< 0.5	**1.2**	< 0.3	< 0.2	< 0.5	**4.8**	< 0.3
MW-23	12/12/2013	Shallow Gaspur	Primary	< 0.5	**2.3**	**2.3**	**1.3**	< 0.4	< 0.5	**1.3**	< 0.3	< 0.2	< 0.5	**5**	< 0.3
MW-23	12/18/2014	Shallow Gaspur	Primary	< 0.5	**1.4**	**1.9**	**0.56**	< 0.4	< 0.5	**0.3 J**	**0.42 J**	< 0.2	< 0.5	**1.3 J**	< 0.3
MW-23	12/08/2015	Shallow Gaspur	Primary	< 0.5	**4.8**	**5.2**	**1.8**	< 0.4	< 0.5	**1.6**	**0.74**	< 0.2	< 0.5	**4.1**	< 0.3
MW-23	06/09/2016	Shallow Gaspur	Primary	< 0.5	**9.3**	**5.1**	**2.9**	< 0.4	< 0.5	**1.6**	**0.8**	< 0.2	< 0.5	**5**	< 0.3
MW-23	12/01/2016	Shallow Gaspur	Primary	< 0.5	**16**	**5.8**	**3.4**	**0.41 J**	< 0.5	**1.8**	**0.71**	< 0.2	< 0.5	**8.4**	< 0.3
MW-23	06/06/2017	Shallow Gaspur	Primary	< 0.5	**18**	**4.7**	**2.8**	< 0.4	**0.58**	**1.3**	< 0.3	< 0.2	< 0.5	**11**	< 0.3
MW-23	12/08/2017	Shallow Gaspur	Primary	< 0.5	**2.4**	**16**	**1.5**	< 0.4	< 0.5	**1.3**	**0.76**	< 0.2	< 0.5	**5.9**	< 0.3
MW-23	06/07/2018	Shallow Gaspur	Primary	< 0.5	**20**	**7.2**	**2.8**	< 0.4	< 0.5	**2**	**1**	< 0.2	< 0.5	**5.2**	< 0.3
MW-23	12/05/2018	Shallow Gaspur	Primary	< 0.5	**9.8**	**6.4**	**1.8**	< 0.4	< 0.5	**0.95**	< 0.3	< 0.2	< 0.5	**5.7**	< 0.3
MW-23	06/11/2019	Shallow Gaspur	Primary	< 0.5	**14**	**6.2**	**2.3**	< 0.3	< 0.4	**1.3**	< 0.2	< 0.4	< 0.3	**5.6**	< 0.2
MW-23A	07/27/2011	Shallow Gaspur	Primary	< 0.5	**35**	**5.9**	**1.3**	< 0.5	< 0.5	**0.57**	**10**	< 0.5	< 0.5	**2.9**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-23A	09/27/2011	Shallow Gaspur	Primary	< 0.5	**19**	**4.7**	**0.93**	< 0.5	< 0.5	< 0.5	**4.6**	< 0.5	< 0.5	< 3.4	< 0.5
MW-23A	12/06/2011	Shallow Gaspur	Primary	< 0.5	**17**	**4.1**	**1.1**	< 0.5	< 0.5	< 0.5	**3.6**	< 0.5	< 0.5	**3 J**	< 0.5
MW-23A	03/26/2012	Shallow Gaspur	Primary	< 0.5	**14**	**4.7**	**0.92**	< 0.5	< 0.5	< 0.5	**3.2**	< 0.5	< 0.5	**3 J**	< 0.5
MW-23A	06/08/2012	Shallow Gaspur	Primary	< 0.5	**6.4**	**8.3**	**1**	< 0.5	< 0.5	**0.53**	**2.8**	< 0.5	< 0.5	**2.9 J**	< 0.5
MW-23A	12/12/2012	Shallow Gaspur	Primary	< 0.5	**1.8**	**4.3**	**0.53**	< 0.5	< 0.5	< 0.5	**0.76**	< 0.5	< 0.5	**3.5**	< 0.5
MW-23A	06/18/2013	Shallow Gaspur	Primary	< 0.5	**5.6**	**6.7**	**0.89**	< 0.4	< 0.5	**1.1**	**1.8**	< 0.2	< 0.5	**2.7**	< 0.3
MW-23A	12/11/2013	Shallow Gaspur	Primary	< 0.5	**8.5**	**12**	**1.2**	< 0.4	< 0.5	**0.86**	**2.4**	< 0.2	< 0.5	**3**	< 0.3
MW-23A	06/10/2014	Shallow Gaspur	Primary	< 0.5	**7.8**	**7.5**	< 0.3	< 0.4	< 0.5	< 0.2	**1.9**	< 0.2	< 0.5	**3.2**	< 0.3
MW-23A	12/16/2014	Shallow Gaspur	Primary	< 0.5	**4.9**	**10**	< 0.3	< 0.4	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	**2.4**	< 0.3
MW-23A	06/11/2015	Shallow Gaspur	Primary	< 0.5	**4.3**	**6.1**	**0.48 J**	< 0.4	< 0.5	< 0.2	**1.2 J**	< 0.2	< 0.5	**4.5**	< 0.3
MW-23A	12/08/2015	Shallow Gaspur	Primary	< 0.5	**7.8**	**4.3**	**0.42 J**	< 0.4	< 0.5	< 0.2	**1.3**	< 0.2	< 0.5	**3.2**	< 0.3
MW-23A	06/09/2016	Shallow Gaspur	Primary	< 0.5	**3.6**	**2.6**	**0.56**	< 0.4	< 0.5	< 0.2	**1**	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-23A	12/01/2016	Shallow Gaspur	Primary	< 0.5	**2.8**	**2.6**	**0.35 J**	< 0.4	< 0.5	< 0.2	**1.2**	< 0.2	< 0.5	**2.9**	< 0.3
MW-23A	06/06/2017	Shallow Gaspur	Primary	< 0.5	**2.4**	**1.9**	**0.57**	< 0.4	< 0.5	< 0.2	**0.74**	< 0.2	< 0.5	**3.2**	< 0.3
MW-23A	06/06/2017	Shallow Gaspur	Duplicate	< 0.5	**1.9**	**1.8**	**0.6**	< 0.4	< 0.5	< 0.2	**0.68**	< 0.2	< 0.5	**3.4**	< 0.3
MW-23A	12/08/2017	Shallow Gaspur	Primary	< 0.5	**2.3**	**1.9**	**0.41 J**	< 0.4	< 0.5	< 0.2	**1.1**	< 0.2	< 0.5	**2.6**	< 0.3
MW-23A	06/07/2018	Shallow Gaspur	Primary	< 0.5	**3.4**	**2.7**	**0.55**	< 0.4	< 0.5	< 0.2	**1.5**	< 0.2	< 0.5	**1.6 J**	< 0.3
MW-23A	12/04/2018	Shallow Gaspur	Primary	< 0.5	**1.9**	**1.8**	**0.38 J**	< 0.4	< 0.5	< 0.2	**0.93**	< 0.2	< 0.5	**1.9 J**	< 0.3
MW-23A	06/14/2019	Shallow Gaspur	Primary	< 0.5	**2**	**1.7**	< 0.4	< 0.3	< 0.4	< 0.2	**0.91**	< 0.4	< 0.3	**1.6 J**	< 0.2
MW-23B	05/19/2009	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.39 J**	< 0.5	< 0.5	< 2	NA
MW-23B	07/14/2010	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.8 J	< 0.5
MW-23B	06/14/2011	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.6	< 0.5
MW-23B	12/05/2011	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-23B	06/12/2012	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.62**	< 0.5	< 0.5	< 0.95	< 0.5
MW-23B	12/11/2012	Lower Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.61**	< 0.5	< 0.5	< 0.95 J	< 0.5
MW-23B	12/11/2012	Lower Gaspur	Duplicate	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.55**	< 0.5	< 0.5	< 0.95 J	< 0.5
MW-23B	12/11/2013	Lower Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-23B	12/16/2014	Lower Gaspur	Primary	< 0.5	**0.27 J**	**0.67**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-23B	12/08/2015	Lower Gaspur	Primary	< 0.5	**0.4 J**	**0.57**	< 0.3	< 0.4	< 0.5	< 0.2	**0.38 J**	< 0.2	< 0.5	< 1	< 0.3
MW-23B	12/01/2016	Lower Gaspur	Primary	< 0.5	**0.34 J**	**0.5**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-23B	12/08/2017	Lower Gaspur	Primary	< 0.5	**0.33 J**	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**0.54**	< 0.2	< 0.5	< 1	< 0.3
MW-23B	06/07/2018	Lower Gaspur	Primary	< 0.5	**0.61**	**0.48 J**	< 0.3	< 0.4	< 0.5	< 0.2	**0.82**	< 0.2	< 0.5	< 1	< 0.3
MW-23B	12/05/2018	Lower Gaspur	Primary	< 0.5	**0.47 J**	**0.51 J+**	< 0.3	< 0.4	< 0.5	< 0.2	**0.82**	< 0.2	< 0.5	< 1	< 0.3
MW-23B	06/11/2019	Lower Gaspur	Primary	< 0.5	**0.39 J**	**0.42 J**	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	< 1	< 0.2
MW-24	01/01/2004	Shallow Gaspur	Primary	< 0.5	**3.1**	**1.6**	< 0.5	< 0.5	< 0.5	< 0.5	**1.6**	< 0.5	< 0.5	NA	NA
MW-24	11/01/2004	Shallow Gaspur	Primary	< 0.5	**3.1**	**2.3**	< 0.5	< 0.5	< 0.5	< 0.5	**2.3**	< 0.5	< 0.5	< 1	NA

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-24	08/01/2006	Shallow Gaspur	Primary	< 0.5	**2.1**	**1.3**	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 1	NA
MW-24	03/01/2008	Shallow Gaspur	Primary	< 0.5	**11**	**6.5**	**0.21 J**	**1.6**	**0.26 J**	< 0.5	**2.7**	< 0.5	< 0.5	< 2	NA
MW-24	05/17/2009	Shallow Gaspur	Primary	< 0.5	**19**	**12**	< 0.5	**3.3**	< 0.5	< 0.5 J	**2.8 J**	**1.2**	< 0.5	< 2	NA
MW-24	06/15/2011	Shallow Gaspur	Primary	< 0.5	**8.3**	**7.8**	< 0.5	**2.5**	< 0.5	< 0.5	**1.4**	< 0.5	< 0.5	< 4.2	< 0.5
MW-24	12/06/2011	Shallow Gaspur	Primary	< 0.5	**3.5**	**2.4**	< 0.5	< 0.5	< 0.5	< 0.5	**0.57**	< 0.5	< 0.5	< 0.94	< 0.5
MW-24	06/08/2012	Shallow Gaspur	Primary	< 0.5	**3.9**	**2.9**	< 0.5	**0.92**	< 0.5	< 0.5	**0.56**	< 0.5	< 0.5	< 0.94	< 0.5
MW-24	12/11/2012	Shallow Gaspur	Primary	< 0.5	**3.9**	**2.6**	< 0.5	**0.7**	< 0.5	< 0.5	**0.71**	< 0.5	< 0.5	< 0.95	< 0.5
MW-24	06/18/2013	Shallow Gaspur	Primary	< 0.5	**1.5**	**1**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**0.35 J**	< 0.5	< 1	< 0.3
MW-24	12/12/2013	Shallow Gaspur	Primary	< 0.5	**0.89**	**0.61**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**0.22 J**	< 0.5	< 1	< 0.3
MW-24	12/12/2013	Shallow Gaspur	Duplicate	< 0.5	**1.1**	**0.73**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**0.25 J**	< 0.5	< 1	< 0.3
MW-24	12/18/2014	Shallow Gaspur	Primary	< 0.5	**1.7**	**2.6**	< 0.3	**0.54**	< 0.5	< 0.2	**0.33 J**	**0.29 J**	< 0.5	< 1	< 0.3
MW-24	12/08/2015	Shallow Gaspur	Primary	< 0.5	**2.6**	**5.5**	< 0.3	**0.72**	< 0.5	< 0.2	**0.84**	**0.58**	< 0.5	< 1	< 0.3
MW-24	06/07/2016	Shallow Gaspur	Primary	< 0.5	**1.7**	**3.6**	< 0.3	**0.66**	< 0.5	< 0.2	**0.66**	**0.43 J**	< 0.5	< 1	< 0.3
MW-24	11/28/2016	Shallow Gaspur	Primary	< 0.5	**1.6**	**4.1**	< 0.3	**0.59**	< 0.5	< 0.2	**0.6**	**0.29 J**	< 0.5	< 1	< 0.3
MW-24	11/28/2016	Shallow Gaspur	Duplicate	< 0.5	**1.7**	**4.2**	< 0.3	**0.56**	< 0.5	< 0.2	**0.58**	**0.32 J**	< 0.5	< 1	< 0.3
MW-24	06/06/2017	Shallow Gaspur	Primary	< 0.5	**0.6**	**0.48 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-24	12/05/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-24	12/06/2018	Shallow Gaspur	Primary	< 0.5	**1.4 J**	**3 J**	< 0.3	**0.54**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-25	01/01/2004	Intermediate Gaspur	Primary	**0.33 J**	**50 D**	**40 D**	**1.7**	**2.9**	**0.75**	**4.7 J**	**3.3**	**0.35 J**	< 0.5	NA	NA
MW-25	07/01/2004	Intermediate Gaspur	Primary	< 0.5	**62 D**	**64 D**	**1.2**	**3.3**	**0.7**	**2.2**	**3**	**0.36 J**	**0.83**	**9.6**	NA
MW-25	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**20**	**44 D**	**0.79**	**2.3**	< 0.5	**1.1**	**2.5**	**0.32 J**	< 0.5	**4.3**	NA
MW-25	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**12**	**22 D**	**0.27 J**	**1.7**	**0.32 J**	**0.4 J**	**1.7**	**0.47 J**	< 0.5	**1.7 J**	NA
MW-25	05/17/2009	Intermediate Gaspur	Primary	< 0.5	**9.2**	**22 D**	< 0.5	**2**	< 0.5	**0.37 J**	< 0.5	**0.83**	< 0.5	< 2	NA
MW-25	06/15/2011	Intermediate Gaspur	Primary	< 0.5	**3.8**	**21**	< 0.5	**3.1**	< 0.5	< 0.5	**1.7**	**1.1**	< 0.5	**2.2 J**	< 0.5
MW-25	12/06/2011	Intermediate Gaspur	Primary	< 0.5	**3.6**	**21**	< 0.5	**4**	< 0.5	< 0.5	**2**	**1.1**	< 0.5	**1.4**	< 0.5
MW-25	06/12/2012	Intermediate Gaspur	Primary	< 0.5	**3.4**	**21**	< 0.5	**3.9**	< 0.5	< 0.5	**2.1**	**1.4**	< 0.5	**1.4**	< 0.5
MW-25	12/10/2012	Intermediate Gaspur	Primary	< 0.5	**2.8**	**27**	< 0.5	**4.8**	< 0.5	< 0.5	**1.9**	**1.6**	< 0.5	**1.8**	< 0.5
MW-25	12/10/2012	Intermediate Gaspur	Duplicate	< 0.5	**2.8**	**26**	< 0.5	**4.8**	< 0.5	< 0.5	**1.8**	**1.5**	< 0.5	**2.5**	< 0.5
MW-25	06/19/2013	Intermediate Gaspur	Primary	< 0.5	**2**	**19**	< 0.3	**4.2**	< 0.5	< 0.2	**1.4**	**0.96**	< 0.5	**1.7 J**	< 0.3
MW-25	12/09/2013	Intermediate Gaspur	Primary	< 0.5	**1.9**	**25**	< 0.3	**5.9**	< 0.5	**0.38 J**	**1.4**	**1.3**	< 0.5	**1.5 J**	< 0.3
MW-25	06/10/2014	Intermediate Gaspur	Primary	< 0.5	**1.8**	**21**	< 0.3	**4.7**	< 0.5	< 0.2	**1.2**	**0.94**	< 0.5	**2**	< 0.3
MW-25	12/19/2014	Intermediate Gaspur	Primary	< 0.5	**1.2**	**21**	< 0.3	**4.2**	< 0.5	< 0.2	**1.1**	**0.76**	< 0.5	**1.1 J**	< 0.3
MW-25	06/08/2015	Intermediate Gaspur	Primary	< 0.5	**1.8**	**24**	< 0.3	**7.2**	< 0.5	**0.38 J**	**2.1**	**1.5**	< 0.5	**1.4 J**	< 0.3
MW-25	12/10/2015	Intermediate Gaspur	Primary	< 0.5	**3**	**23**	< 0.3	**7.7**	< 0.5	< 0.2	**1.7**	**0.4 J**	< 0.5	< 1	< 0.3
MW-25	06/08/2016	Intermediate Gaspur	Primary	< 0.5	**3.4**	**27**	**0.39 J**	**7.8**	< 0.5	< 0.2	**2.2**	**1.6**	< 0.5	< 1	< 0.3
MW-25	11/28/2016	Intermediate Gaspur	Primary	< 0.5	**2.2**	**26**	< 0.3	**8.1**	< 0.5	< 0.2	**1.8**	**0.48 J**	< 0.5	< 1	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-25	06/07/2017	Intermediate Gaspur	Primary	< 0.5	**1.4**	**21**	< 0.3	**7.8**	< 0.5	**0.61**	**1.5**	< 0.2	< 0.5	**2.1**	< 0.3
MW-25	12/07/2017	Intermediate Gaspur	Primary	< 0.5	**0.55**	**14**	< 0.3	**3.1**	< 0.5	**0.36 J**	**0.84**	< 0.2	< 0.5	**2 J**	< 0.3
MW-25	06/07/2018	Intermediate Gaspur	Primary	< 0.5	**0.67**	**25**	< 0.3	**7**	< 0.5	**1.4**	**1.6**	< 0.2	< 0.5	**2.4**	< 0.3
MW-25	12/06/2018	Intermediate Gaspur	Primary	< 0.5	**0.58**	**21**	< 0.3	**6**	< 0.5	**0.78**	< 0.3	< 0.2	< 0.5	**2 J**	< 0.3
MW-25	06/14/2019	Intermediate Gaspur	Primary	< 0.5	**0.48 J**	**22**	< 0.4	**5.7**	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**2**	< 0.2
MW-25	06/14/2019	Intermediate Gaspur	Duplicate	< 0.5	**0.46 J**	**24**	< 0.4	**6.4**	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**2.1**	< 0.2
MW-25B	03/01/2008	Lower Gaspur	Primary	< 0.5	**36 D**	**72 D**	**1.3**	**4.5**	**0.91**	**2.7**	**3.1**	**0.31 J**	< 0.5	**11**	NA
MW-25B	05/17/2009	Lower Gaspur	Primary	< 0.5	**22 D**	**51 D**	**0.59**	**2.5**	< 0.5	**1.1 J**	**2.1 J**	**0.66**	**0.33 J**	< 2	NA
MW-25B	06/15/2011	Lower Gaspur	Primary	< 0.5	**3.7**	**32**	< 0.5	**2.7**	< 0.5	< 0.5	**2.3**	**1.4**	< 0.5	**2 J**	< 0.5
MW-25B	12/07/2011	Lower Gaspur	Primary	< 0.5	**3.6**	**35**	< 0.5	**3.4**	< 0.5	< 0.5	**2.4**	**1.8**	< 0.5	**2.9**	< 0.5
MW-25B	06/12/2012	Lower Gaspur	Split	< 0.5	**2.1**	**27 D**	**0.31 J**	**3**	**0.37 J**	**0.31 J**	**2.1**	**2**	**0.1 J**	**3.6**	NA
MW-25B	06/12/2012	Lower Gaspur	Primary	< 0.5	**2.9**	**33**	< 0.5	**3.2**	< 0.5	< 0.5	**2.9**	**2.8**	< 0.5	**2.3**	< 0.5
MW-25B	12/10/2012	Lower Gaspur	Primary	< 0.5	**1.3**	**48**	< 0.5	**4.7**	< 0.5	< 0.5	**2.4**	**3.2**	< 0.5	**3.2**	< 0.5
MW-25B	06/19/2013	Lower Gaspur	Primary	< 0.5	**0.61**	**40**	**0.44 J**	**5**	< 0.5	**0.58**	**2.4**	**2.6**	< 0.5	**2.7 J**	< 0.3
MW-25B	12/09/2013	Lower Gaspur	Primary	< 0.5	**0.55**	**40**	< 0.3	**5**	< 0.5	< 0.2	**2.3**	**2.8**	< 0.5	**2.8**	< 0.3
MW-25B	06/10/2014	Lower Gaspur	Primary	< 0.5	**0.6**	**38**	< 0.3	**5**	< 0.5	< 0.2	**1.8**	**2.9**	< 0.5	**2.6**	< 0.3
MW-25B	12/19/2014	Lower Gaspur	Primary	< 0.5	**0.49 J**	**30**	< 0.3	**4.4**	**0.77**	< 0.2	**1.1**	**2.5**	< 0.5	**1.6 J**	< 0.3
MW-25B	06/08/2015	Lower Gaspur	Primary	< 0.5	**0.65**	**29**	< 0.3	**5.6**	**1.1**	**0.39 J**	**2.2**	**2.4**	< 0.5	**2.2**	< 0.3
MW-25B	12/11/2015	Lower Gaspur	Primary	< 0.5	**0.84**	**37**	< 0.3	**9.3**	**0.77**	**0.32 J**	**2**	**3.4**	< 0.5	< 1	< 0.3
MW-25B	12/11/2015	Lower Gaspur	Duplicate	< 0.5	**0.83**	**37**	< 0.3	**9.4**	**0.75**	**0.29 J**	**1.9**	**3.4**	< 0.5	< 1	< 0.3
MW-25B	06/08/2016	Lower Gaspur	Primary	< 0.5	**1.2**	**40**	**0.46 J**	**7.9**	**1.1**	**0.4 J**	**2.8**	**3.8**	< 0.5	< 1	< 0.3
MW-25B	11/28/2016	Lower Gaspur	Primary	< 0.5	**0.91**	**24**	< 0.3	**5.2**	**2.4**	< 0.2	**1.5**	**2.4**	< 0.5	**2 J**	< 0.3
MW-25B	06/07/2017	Lower Gaspur	Primary	< 0.5	**0.79**	**16**	< 0.3	**3.4**	**1.1**	< 0.2	**1**	**0.86**	< 0.5	< 1 J	< 0.3
MW-25B	12/06/2017	Lower Gaspur	Primary	< 0.5	< 0.2	**0.48 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-25B	06/08/2018	Lower Gaspur	Primary	< 0.5	< 0.2	**21**	< 0.3	**4.6**	< 0.5	**1**	**1.8**	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-25B	12/06/2018	Lower Gaspur	Primary	< 0.5	< 0.2	**0.61**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-25B	06/14/2019	Lower Gaspur	Primary	< 0.5	< 0.3	**16**	< 0.4	**3.5**	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**1.2 J**	< 0.2
MW-26	01/01/2004	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-26	11/01/2004	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	NA
MW-26	08/01/2006	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.9	NA
MW-26	03/01/2008	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-26	05/17/2009	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-26	03/28/2012	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.2 J**	< 0.5
MW-26	06/19/2013	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1 J	< 0.3
MW-26	06/19/2013	Exposition	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1 J	< 0.3
MW-26	06/10/2014	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-26	08/08/2016	Exposition	Primary	< 0.5	< 0.2	**0.4 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-26	11/28/2016	Exposition	Primary	< 0.5	< 0.2	**0.52**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-26	06/09/2017	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-26	12/06/2017	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.3 J**	< 0.3
MW-26	06/07/2018	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-26	12/06/2018	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-26	06/14/2019	Exposition	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	< 1	< 0.2
MW-27	01/01/2004	Intermediate Gaspur	Primary	< 0.5	**4.9**	**2.4**	< 0.5	**0.17 J**	< 0.5	< 0.5	**1.8**	< 0.5	< 0.5	NA	NA
MW-27	07/01/2004	Intermediate Gaspur	Primary	< 0.5	**3.4**	**2.3**	< 0.5	**0.2 J**	< 0.5	< 0.5	**1.7**	< 0.5	< 0.5	**0.5 J**	NA
MW-27	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**1.4**	**0.87**	< 0.5	< 0.5	< 0.5	< 0.5	**0.72**	< 0.5	< 0.5	< 1	NA
MW-27	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**1.6**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	**1.2**	< 0.5	< 0.5	< 2	NA
MW-27	05/19/2009	Intermediate Gaspur	Primary	< 0.5	**12**	**8.6**	< 0.5	**1.9**	< 0.5	< 0.5	**3**	< 0.5	< 0.5	< 2	NA
MW-27	06/15/2011	Intermediate Gaspur	Primary	< 0.5	**1.6**	**4.9**	< 0.5	**0.58**	< 0.5	< 0.5	**0.87**	**0.87**	< 0.5	< 3.7	< 0.5
MW-27	06/15/2011	Intermediate Gaspur	Duplicate	< 0.5	**1.6**	**5.5**	< 0.5	**0.56**	< 0.5	< 0.5	**0.96**	**0.91**	< 0.5	< 3.7	< 0.5
MW-27	12/06/2011	Intermediate Gaspur	Primary	< 0.5	**2.9**	**18**	< 0.5	**2**	< 0.5	< 0.5	**1.6**	**3.2**	< 0.5	< 0.94	< 0.5
MW-27	06/08/2012	Intermediate Gaspur	Primary	< 0.5	**1.9**	**11**	< 0.5	**1.1**	< 0.5	< 0.5	**1.1**	**1.8**	< 0.5	< 0.94	< 0.5
MW-27	12/11/2012	Intermediate Gaspur	Primary	< 0.5	**1.4**	**6.5**	< 0.5	**0.55**	< 0.5	< 0.5	**1.1**	**0.97**	< 0.5	< 0.95	< 0.5
MW-27	06/18/2013	Intermediate Gaspur	Primary	< 0.5	**1.3**	**10**	< 0.3	**1.1**	< 0.5	< 0.2	**0.84**	**1.2**	< 0.5	< 1	< 0.3
MW-27	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**1**	**6.1**	< 0.3	**0.82**	< 0.5	< 0.2	< 0.3	**0.52**	< 0.5	< 1	< 0.3
MW-27	06/10/2014	Intermediate Gaspur	Primary	< 0.5	**1**	**5.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-27	12/17/2014	Intermediate Gaspur	Primary	< 0.5	**0.7**	**2.2**	< 0.3	< 0.4	< 0.5	< 0.2	**0.3 J**	< 0.2	< 0.5	< 1	< 0.3
MW-27	06/08/2015	Intermediate Gaspur	Primary	< 0.5	**0.95**	**1.6**	< 0.3	< 0.4	< 0.5	< 0.2	**0.44 J**	< 0.2	< 0.5	< 1	< 0.3
MW-27	12/10/2015	Intermediate Gaspur	Primary	< 0.5	**1.5**	**2.4**	< 0.3	< 0.4	< 0.5	< 0.2	**0.65**	< 0.2	< 0.5	< 1	< 0.3
MW-27	06/09/2016	Intermediate Gaspur	Primary	< 0.5	**1.4**	**2.1**	< 0.3	**0.53**	< 0.5	< 0.2	**0.77**	< 0.2	< 0.5	< 1	< 0.3
MW-27	06/09/2016	Intermediate Gaspur	Duplicate	< 0.5	**1.3**	**1.9**	< 0.3	< 0.4	< 0.5	< 0.2	**0.52**	< 0.2	< 0.5	< 1	< 0.3
MW-27	11/29/2016	Intermediate Gaspur	Primary	< 0.5	**1.3**	**2.1**	< 0.3	**0.53**	< 0.5	< 0.2	**0.66**	< 0.2	< 0.5	< 1	< 0.3
MW-27	06/09/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.53**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-27	12/05/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.38 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-27	12/04/2018	Intermediate Gaspur	Primary	< 0.5	**1**	**1.4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-28	01/01/2004	Lower Gaspur	Primary	< 0.5	**11**	**10**	< 0.5	**0.48 J**	< 0.5	< 0.5	**1.8 J**	< 0.5	< 0.5	NA	NA
MW-28	11/01/2004	Lower Gaspur	Primary	< 0.5	**18**	**21**	< 0.5	**1.1**	**0.73**	< 0.5	**2.4**	< 0.5	< 0.5	< 1	NA
MW-28	08/01/2006	Lower Gaspur	Primary	< 0.5	**13**	**15**	**0.44 J**	**0.77**	< 0.5	**0.74**	**1.4**	< 0.5	< 0.5	**5**	NA
MW-28	03/01/2008	Lower Gaspur	Primary	< 0.5	**20**	**29 D**	**0.73**	**1.7**	**0.63**	**0.73**	**1.8**	< 0.5	< 0.5	**15**	NA
MW-28	05/19/2009	Lower Gaspur	Primary	< 0.5	**15 D**	**26 D**	**0.73 J**	**1.3 J**	**0.41 J**	**2.3 J**	**1.6 J**	< 0.5	< 0.5	**7.6**	NA
MW-28	06/15/2011	Lower Gaspur	Primary	< 0.5	**23**	**36**	**0.72**	**2.1**	**0.56**	**2.2**	**2.9**	< 0.5	< 0.5	**13**	**0.58**
MW-28	12/07/2011	Lower Gaspur	Primary	< 0.5	**18**	**37**	**0.7**	**2.4**	**0.65**	**2.2**	**2.6**	< 0.5	< 0.5	**14**	**0.55**

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-28	06/12/2012	Lower Gaspur	Primary	< 0.5	**5 J**	**14 J**	< 0.5	**0.69 J**	< 0.5	< 0.5	**1.2 J**	< 0.5	< 0.5	**11 J**	< 0.5
MW-28	06/12/2012	Lower Gaspur	Duplicate	< 0.5	**4.1 J**	**12 J**	< 0.5	**0.6 J**	< 0.5	< 0.5	**1.1 J**	< 0.5	< 0.5	**11 J**	< 0.5
MW-28	12/12/2012	Lower Gaspur	Primary	< 0.5	**12**	**39**	**0.69**	**2.3**	**0.76**	**1.8**	**2.6**	**0.54**	< 0.5	**8.2**	**0.51**
MW-28	06/18/2013	Lower Gaspur	Primary	< 0.5	**0.96**	**59**	**1.1**	**3.8**	**0.81**	**2.4**	**2.6**	**0.27 J**	< 0.5	**13**	< 0.3
MW-28	12/10/2013	Lower Gaspur	Primary	< 0.5	**2.1**	**73**	**1.2**	**3.7**	**0.99**	**2.6**	**2.2**	**0.22 J**	< 0.5	**13**	< 0.3
MW-28	06/10/2014	Lower Gaspur	Primary	< 0.5	**1.9**	**63**	**0.98**	**3.2**	**0.75**	**1.7**	**1.9**	< 0.2	< 0.5	**14**	< 0.3
MW-28	12/19/2014	Lower Gaspur	Primary	< 0.5	**0.82**	**19**	< 0.3	**1**	< 0.5	**0.61**	**0.55**	< 0.2	< 0.5	**5**	< 0.3
MW-28	06/08/2015	Lower Gaspur	Primary	< 0.5	**3.7**	**50**	**0.67**	**3.1**	**1.6**	**1.8**	**2.7**	< 0.2	< 0.5	**10**	**0.56**
MW-28	06/08/2015	Lower Gaspur	Duplicate	< 0.5	**4**	**51**	**0.73**	**4**	**1.8**	**1.9**	**2.9**	< 0.2	< 0.5	**11**	**0.54**
MW-28	12/10/2015	Lower Gaspur	Primary	< 0.5	**3.5**	**50**	**0.72**	**3.4**	**2.4**	**1.6**	**2.2**	**0.41 J**	< 0.5	**9**	< 0.3
MW-28	06/08/2016	Lower Gaspur	Primary	< 0.5	**3.1**	**31**	**0.52**	**3.6**	**3.3**	**0.96**	**3.1**	**1.8**	< 0.5	**6.2**	< 0.3
MW-28	11/30/2016	Lower Gaspur	Primary	< 0.5	**2.2**	**20**	**0.4 J**	**1.8**	**1.9**	**0.51**	**1.5**	**0.82**	< 0.5	**5**	< 0.3
MW-28	06/08/2017	Lower Gaspur	Primary	< 0.5	**2.4**	**18**	< 0.3	**2.4**	**5.2**	**0.39 J**	**2.4**	**0.8**	< 0.5	**3.7**	< 0.3
MW-28	12/07/2017	Lower Gaspur	Primary	< 0.5	**3.6**	**37**	**0.42 J**	**3.1**	**2.6**	**0.56**	**3.1**	**1**	< 0.5	**3.5**	< 0.3
MW-28	12/07/2017	Lower Gaspur	Duplicate	< 0.5	**3.4**	**34**	**0.47 J**	**3.1**	**2.5**	**0.61**	**2.6**	**0.99**	< 0.5	**3.2**	< 0.3
MW-28	06/05/2018	Lower Gaspur	Primary	< 0.5	**1.3**	**22**	< 0.3	**2.5**	**3.7**	< 0.2	**3.4**	**0.82**	< 0.5	**1.4 J**	< 0.3
MW-28	12/07/2018	Lower Gaspur	Primary	< 0.5	**0.26 J**	**2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-28	06/11/2019	Lower Gaspur	Primary	< 0.5	**0.92**	**16**	< 0.4	**2**	**4**	< 0.2	**1.9**	**0.45 J**	< 0.3	**1.4 J**	< 0.2
MW-28	06/11/2019	Lower Gaspur	Duplicate	< 0.5	**1**	**17**	< 0.4	**2.1**	**4.3**	< 0.2	**1.9**	**0.48 J**	< 0.3	**1.7 J**	< 0.2
MW-29	01/01/2004	Intermediate Gaspur	Primary	< 0.5	**16**	**4.7**	< 0.5	**0.63**	< 0.5	< 0.5	**1.5**	< 0.5	< 0.5	NA	NA
MW-29	11/01/2004	Intermediate Gaspur	Primary	< 0.5	**21**	**5.7**	**0.38 J**	**0.96**	**0.38 J**	< 0.5	< 0.5	< 0.5	< 0.5	**2.2**	NA
MW-29	08/01/2006	Intermediate Gaspur	Primary	**0.21 J**	**59 D**	**45 D**	**2.3**	**2.4**	**0.84**	**7.9**	**3.9**	**0.33 J**	< 0.5	NA	NA
MW-29	03/01/2008	Intermediate Gaspur	Primary	**0.25 J**	**74 D**	**61 D**	**2.1**	**4.2**	**1**	**5**	**2.8**	**0.34 J**	< 0.5	**14**	NA
MW-29	05/18/2009	Intermediate Gaspur	Primary	< 0.5	**40 D**	**82 D**	**2.1**	**3.3**	**0.72**	**5.9 J**	**3.1 J**	**0.42 J**	**0.8**	**11**	NA
MW-29	06/16/2011	Intermediate Gaspur	Primary	< 0.5	**5.8**	**73**	**0.89**	**6.3**	**0.52**	**2**	**2.3**	**0.77**	< 0.5	**11**	< 0.5
MW-29	06/16/2011	Intermediate Gaspur	Duplicate	< 0.5	**6.1**	**72**	**0.89**	**6.4**	< 0.5	**2**	**2.3**	**0.79**	< 0.5	**11**	< 0.5
MW-29	12/08/2011	Intermediate Gaspur	Primary	< 0.5	**4.7**	**51**	**0.51**	**4.2**	< 0.5	**1.1**	**2.4**	**1.6**	< 0.5	**9.2 J**	< 0.5
MW-29	06/08/2012	Intermediate Gaspur	Primary	< 0.5	**3.6**	**49**	< 0.5	**4.1**	< 0.5	**1.1**	**2.3**	**2.1**	< 0.5	**6.5**	< 0.5
MW-29	12/13/2012	Intermediate Gaspur	Primary	< 0.5	**2.5**	**49**	< 0.5	**4**	< 0.5	**0.96**	**2.9**	**2.2**	< 0.5	< 6.5	< 0.5
MW-29	06/18/2013	Intermediate Gaspur	Primary	< 0.5	**1.4**	**40**	**0.59**	**3.4**	**0.76**	**1**	**2**	**1.9**	< 0.5	**5.7**	< 0.3
MW-29	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**1**	**50**	**0.74**	**5.6**	< 0.5	**0.81**	**2.2**	**3.5**	< 0.5	**6.1**	< 0.3
MW-29	06/10/2014	Intermediate Gaspur	Primary	< 0.5	**1**	**49**	**0.72**	**4.1**	**0.69**	**1.1**	**2.1**	**2.6**	< 0.5	**7.5**	< 0.3
MW-29	12/16/2014	Intermediate Gaspur	Primary	< 0.5	**0.8**	**41**	**0.64**	**3.8**	**0.72**	**0.87**	**1.4**	**3.3**	< 0.5	**6.5**	< 0.3
MW-29	06/08/2015	Intermediate Gaspur	Primary	< 0.5	**2.1**	**38**	**0.53**	**4.4**	**0.75**	**0.83**	**2**	**3.3**	< 0.5	**4.2**	< 0.3
MW-29	12/08/2015	Intermediate Gaspur	Primary	< 0.5	**0.81**	**62**	**1**	**5.8**	**1.8**	**1.5**	**2.6**	**1.9**	< 0.5	**5.2**	< 0.3
MW-29	06/08/2016	Intermediate Gaspur	Primary	< 0.5	**0.74**	**43**	**0.78**	**5.8**	**0.82**	**0.76**	**2.3**	**1.9**	< 0.5	**2.1**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-29	11/30/2016	Intermediate Gaspur	Primary	< 0.5	**0.53**	**41**	**0.45 J**	**6.6**	< 0.5	**0.5**	**2**	**2.5**	< 0.5	**2.6**	< 0.3
MW-29	06/08/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29	12/06/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.5**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29	12/04/2018	Intermediate Gaspur	Primary	< 0.5	**0.77**	**29**	< 0.3	**6.8**	< 0.5	**0.75**	**1.7**	**1.5**	< 0.5	**3.1**	< 0.3
MW-29	12/04/2018	Intermediate Gaspur	Duplicate	< 0.5	**0.85**	**31**	< 0.3	**6.8**	< 0.5	**0.85**	**1.7**	**1.8**	< 0.5	**3.1**	< 0.3
MW-29	06/11/2019	Intermediate Gaspur	Primary	< 0.5	**0.95**	**21**	< 0.4	**5.5**	< 0.4	< 0.2	**1.2**	< 0.4	< 0.3	**2.4**	< 0.2
MW-29A	03/01/2008	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.28 J**	NA
MW-29A	05/18/2009	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-29A	06/14/2011	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.7	< 0.5
MW-29A	12/06/2011	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-29A	12/06/2011	Shallow Gaspur	Duplicate	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	< 0.5
MW-29A	06/07/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94 J	< 0.5
MW-29A	12/11/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	< 0.5
MW-29A	06/18/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/10/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/10/2013	Shallow Gaspur	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/16/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/16/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/08/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	11/30/2016	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/06/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-29A	12/07/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-30	01/01/2004	Lower Gaspur	Primary	< 0.5	**110 D**	**5.1**	**0.43 J**	**0.84**	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	NA	NA
MW-30	07/01/2004	Lower Gaspur	Primary	< 0.5	**110 D**	**6.1**	**0.77**	**1.4**	**0.2 J**	**0.42 J**	**3.7**	< 0.5	< 0.5	**8.5**	NA
MW-30	08/01/2006	Lower Gaspur	Primary	< 0.5	**180 D**	**9.4**	**1.1**	**1.5**	< 0.5	**1.5**	**5.3**	< 0.5	< 0.5	**8.1**	NA
MW-30	03/01/2008	Lower Gaspur	Primary	< 0.5	**180 D**	**16**	**1.1**	**2.5**	**0.44 J**	**1.7**	**5.4**	**0.26 J**	< 0.5	**8.1**	NA
MW-30	05/19/2009	Lower Gaspur	Primary	< 0.5	**100 D**	**37 D**	**1.4**	**2.6**	< 0.5	**2 J**	**4.9 J**	**0.33 J**	< 0.5	**5.4**	NA
MW-30	06/16/2011	Lower Gaspur	Primary	< 0.5	**72**	**52**	**0.93**	**2.2**	< 0.5	**1.4**	**3**	< 0.5	< 0.5	**11**	< 0.5
MW-30	12/08/2011	Lower Gaspur	Primary	< 0.5	**44**	**54**	**0.66**	**1.9**	< 0.5	**1.2**	**2.6**	< 0.5	< 0.5	**11 J**	< 0.5
MW-30	06/12/2012	Lower Gaspur	Primary	< 0.5	**29**	**66**	**0.78**	**2.1**	**5.3**	**1.2**	**2.8**	< 0.5	< 0.5	**10**	< 0.5
MW-30	12/13/2012	Lower Gaspur	Primary	< 0.5	**33**	**70**	**0.88**	**2.6**	**2.3**	**1.3**	**2.9**	< 0.5	< 0.5	< 12	< 0.5
MW-30	12/10/2013	Lower Gaspur	Primary	< 0.5	**13**	**74**	**0.95**	**3.9**	**3.1**	**1.1**	**1.6**	< 0.2	< 0.5	**10**	< 0.3
MW-30	12/16/2014	Lower Gaspur	Primary	< 0.5	**6.7**	**63**	**0.71**	**4.6**	**1.6**	**0.76**	**1.1**	< 0.2	< 0.5	**11**	< 0.3
MW-30	12/08/2015	Lower Gaspur	Primary	< 0.5	**4.8**	**71**	**0.79**	**3.9**	**3**	**1.1**	**1.7**	< 0.2	< 0.5	**10**	< 0.3
MW-30	06/08/2016	Lower Gaspur	Primary	< 0.5	**3.4**	**57**	**0.93**	**5.6**	**0.58**	**0.96**	**1.2**	< 0.2	< 0.5	**9.6**	< 0.3
MW-30	11/30/2016	Lower Gaspur	Primary	< 0.5	**1.8**	**61**	**0.71**	**5.8**	**1.4**	**0.83**	**1.3**	< 0.2	< 0.5	**9.7**	< 0.3
MW-30	06/08/2017	Lower Gaspur	Primary	< 0.5	**2.5**	**68**	**0.75**	**6.1**	**5.3**	**1.1**	**1.4**	< 0.2	< 0.5	**13**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-30	12/06/2017	Lower Gaspur	Primary	< 0.5	**0.47 J**	**3.6**	< 0.3	**0.49 J**	**0.9**	< 0.2	< 0.3	< 0.2	< 0.5	**1.7 J**	< 0.3
MW-30	06/07/2018	Lower Gaspur	Primary	< 0.5	**3.3**	**88**	**0.85**	**8.1**	**2.5**	**1.7**	**2.3**	< 0.2	< 0.5	**8.9**	< 0.3
MW-30	12/04/2018	Lower Gaspur	Primary	< 0.5	**3.2**	**78**	**0.84**	**7.1**	**1.5**	**1.4**	**2.5**	**0.8**	< 0.5	**12**	< 0.3
MW-31	01/01/2004	Intermediate Gaspur	Primary	< 0.5	**79 D**	**22 D**	**1.4**	**2**	< 0.5	< 0.5	**8**	**0.42 J**	< 0.5	NA	NA
MW-31	07/01/2004	Intermediate Gaspur	Primary	< 0.5	**63 D**	**17**	**1.3**	**1.6**	**0.26 J**	**0.36 J**	**5.5**	**0.31 J**	< 0.5	**17**	NA
MW-31	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**11**	**4.4**	**0.49 J**	< 0.5	< 0.5	**0.49 J**	< 0.5	< 0.5	< 0.5	**2.6**	NA
MW-31	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**5.6**	**3.5**	**0.32 J**	**0.73**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.7 J**	NA
MW-31	05/17/2009	Intermediate Gaspur	Primary	< 0.5	**10**	**5.4**	**0.4 J**	**0.73**	< 0.5	< 0.5	**0.29 J**	< 0.5	< 0.5	< 2	NA
MW-31	06/14/2011	Intermediate Gaspur	Primary	< 0.5	**24**	**13**	**0.81**	**1.1**	< 0.5	**0.53**	< 0.5	< 0.5	< 0.5	**15**	**2.4**
MW-31	12/07/2011	Intermediate Gaspur	Primary	< 0.5	**41**	**22**	**1.4**	**1.9**	< 0.5	**0.99**	< 0.5	< 0.5	< 0.5	**12 J**	**4**
MW-31	06/07/2012	Intermediate Gaspur	Primary	< 0.5	**35**	**24**	**1.2**	**1.6**	< 0.5 J	**1.2**	< 0.5	< 0.5	< 0.5	**16 J**	**3.1**
MW-31	12/12/2012	Intermediate Gaspur	Primary	< 0.5	**53**	**33**	**1.9**	**2.2**	< 0.5	**1.8**	< 0.5	< 0.5	< 0.5	**45**	**3.9**
MW-31	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**30**	**25**	**1.4**	**1.9**	< 0.5	**1.1**	< 0.3	< 0.2	< 0.5	**21**	**3.5**
MW-31	12/17/2014	Intermediate Gaspur	Primary	< 0.5	**18**	**15**	**1.4**	**1.2**	< 0.5	**0.56**	< 0.3	< 0.2	< 0.5	**19**	< 0.3
MW-31	12/08/2015	Intermediate Gaspur	Primary	< 0.5	**16**	**15**	**1.6**	**1.3**	< 0.5	**0.86**	< 0.3	< 0.2	< 0.5	**14**	**0.94**
MW-31	11/29/2016	Intermediate Gaspur	Primary	< 0.5	**9.5**	**14**	**1.5**	**1.2**	< 0.5	**0.61**	**0.43 J**	< 0.2	< 0.5	**11**	< 0.3
MW-31	06/09/2017	Intermediate Gaspur	Primary	< 0.5	**0.8**	**3.5**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**3.6**	< 0.3
MW-31	12/05/2017	Intermediate Gaspur	Primary	< 0.5	**1.1**	**4.1**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.6**	< 0.3
MW-31	12/05/2017	Intermediate Gaspur	Duplicate	< 0.5	**1.2**	**4.6**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.4**	< 0.3
MW-31	06/05/2018	Intermediate Gaspur	Primary	< 0.5	**10**	**29**	**1.4**	**2**	< 0.5	**0.69**	**6.1**	< 0.2	< 0.5	**13**	< 0.3
MW-31	12/04/2018	Intermediate Gaspur	Primary	< 0.5	**8.7**	**24**	**0.97**	**1.5**	< 0.5	**0.57**	**3.6**	< 0.2	< 0.5	**14**	< 0.3
MW-31A	03/01/2008	Shallow Gaspur	Primary	< 0.5	**0.44 J**	**12**	< 0.5	**0.4 J**	**0.38 J**	< 0.5	< 0.5	< 0.5	< 0.5	**1.4 J**	NA
MW-31A	05/17/2009	Shallow Gaspur	Primary	< 0.5	**0.34 J**	**14**	< 0.5	**0.43 J**	**0.36 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-31A	06/14/2011	Shallow Gaspur	Primary	< 0.5	< 0.5	**13**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**3 J**	< 0.5
MW-31A	12/06/2011	Shallow Gaspur	Primary	< 0.5	< 0.5	**12**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**3.3**	< 0.5
MW-31A	06/07/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	**12**	< 0.5	< 0.5	< 0.5 J	< 0.5	< 0.5	< 0.5	< 0.5	**1.8 J**	< 0.5
MW-31A	12/11/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	**14**	< 0.5	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	< 0.5
MW-31A	12/11/2012	Shallow Gaspur	Duplicate	< 0.5	< 0.5	**14**	< 0.5	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.7**	< 0.5
MW-31A	12/10/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	**17**	< 0.3	**0.77**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	12/17/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	**9.8**	< 0.3	**0.42 J**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	12/08/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	**14**	< 0.3	**0.57**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	12/08/2015	Shallow Gaspur	Duplicate	< 0.5	**0.28 J**	**13**	< 0.3	**0.55**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	11/29/2016	Shallow Gaspur	Primary	< 0.5	< 0.2	**6.6**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	06/07/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**4.4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	12/05/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31A	06/04/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	**4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-31A	12/04/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	**2.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-31B	03/01/2008	Lower Gaspur	Primary	< 0.5	**250 D**	**13**	**1.7**	**4**	**0.34 J**	**2**	**4.9**	**0.2 J**	< 0.5	**9.7**	NA
MW-31B	05/17/2009	Lower Gaspur	Primary	< 0.5 J	**180 DJ**	**13 J**	**0.9 J**	**3.2 J**	< 0.5 J	**1.1 J**	**2.5 J**	< 0.5 J	< 0.5 J	< 2	NA
MW-31B	06/16/2011	Lower Gaspur	Primary	< 0.5	**63**	**29**	**0.53**	**3.3**	< 0.5	< 0.5	**1.4**	< 0.5	< 0.5	**3.6 J**	< 0.5
MW-31B	12/07/2011	Lower Gaspur	Primary	< 0.5	**41**	**28**	**0.55**	**3**	< 0.5	< 0.5	**0.99**	< 0.5	< 0.5	**2.5**	< 0.5
MW-31B	06/12/2012	Lower Gaspur	Primary	< 0.5	**7.6**	**63**	**0.5**	**1.4**	< 0.5	**0.71**	**3.1**	< 0.5	< 0.5	**2.2**	< 0.5
MW-31B	12/13/2012	Lower Gaspur	Primary	< 0.5	**14**	**52**	**0.54**	**3.8**	< 0.5	< 0.5	**1.5**	< 0.5	< 0.5	< 3.5	< 0.5
MW-31B	12/10/2013	Lower Gaspur	Primary	< 0.5	**5**	**87**	**1**	**9.5**	< 0.5	< 0.2	**2**	< 0.2	< 0.5	**4.8**	< 0.3
MW-31B	12/17/2014	Lower Gaspur	Primary	< 0.5	**2.5**	**71**	**0.72**	**9.5**	< 0.5	**0.56**	**1.8**	< 0.2	< 0.5	**5.8**	< 0.3
MW-31B	12/08/2015	Lower Gaspur	Primary	< 0.5	**3**	**64**	**0.86**	**9.4**	< 0.5	**0.68**	**2.2**	< 0.2	< 0.5	**4.6**	< 0.3
MW-31B	11/29/2016	Lower Gaspur	Primary	< 0.5	**2**	**53**	**1**	**7.1**	< 0.5	**0.79**	**2**	< 0.2	< 0.5	**6.2**	< 0.3
MW-31B	06/07/2017	Lower Gaspur	Primary	< 0.5	**1.6**	**47**	**0.84**	**3.4**	< 0.5	**0.67**	**2.9**	< 0.2	< 0.5	**8.5**	< 0.3
MW-31B	06/07/2017	Lower Gaspur	Duplicate	< 0.5	**1.7**	**49**	**0.97**	**3.4**	< 0.5	**0.62**	**2.9**	< 0.2	< 0.5	**8.3**	< 0.3
MW-31B	12/05/2017	Lower Gaspur	Primary	< 0.5	**1.5**	**43**	**0.5**	**2.6**	< 0.5	**0.58**	**3.4**	< 0.2	< 0.5	**6**	< 0.3
MW-31B	06/05/2018	Lower Gaspur	Primary	< 0.5	**2.3**	**190**	**1.8**	**12**	< 0.5	**1.8**	**13**	< 0.2	< 0.5	**6.4**	< 0.3
MW-31B	12/04/2018	Lower Gaspur	Primary	< 2.5	**1.8 J**	**180**	< 1.5	**8.3**	< 2.5	< 1	**21**	< 1	< 2.5	**8.9**	< 1.5
MW-32	01/01/2004	Exposition	Primary	< 0.5	**1.3**	**0.17 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-32	01/01/2004	Exposition	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA
MW-32	11/01/2004	Exposition	Primary	< 0.5	**0.46 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	NA
MW-32	08/01/2006	Exposition	Primary	< 0.5	**0.24 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.9	NA
MW-32	03/01/2008	Exposition	Primary	< 0.5	**0.47 J**	< 0.5	< 0.5	< 0.5	**0.73**	< 0.5	**0.32 J**	< 0.5	< 0.5	< 2	NA
MW-32	05/15/2009	Exposition	Primary	< 0.5	**0.33 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-32	12/05/2011	Exposition	Primary	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-32	06/07/2012	Exposition	Primary	< 0.5	**0.83**	**1**	< 0.5	< 0.5	< 0.5 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-32	12/11/2012	Exposition	Primary	< 0.5	**0.9**	**1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	< 0.5
MW-32	06/11/2014	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	07/13/2016	Exposition	Primary	< 0.5	< 0.5	**0.67**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-32	07/13/2016	Exposition	Duplicate	< 0.5	< 0.5	**0.63**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-32	08/08/2016	Exposition	Primary	< 0.5	< 0.2	**1.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	11/29/2016	Exposition	Primary	< 0.5	< 0.2	**1.3**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	06/09/2017	Exposition	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	12/08/2017	Exposition	Primary	< 0.5	< 0.2	**0.52**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	06/05/2018	Exposition	Primary	< 0.5	< 0.2	**0.95**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	12/04/2018	Exposition	Primary	< 0.5	< 0.2	**0.79**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-32	06/11/2019	Exposition	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	< 1	< 0.2
MW-33A	07/01/2005	Shallow Gaspur	Primary	< 0.5	**2.3**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**540**	NA

TABLE 9
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SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-33A	07/01/2005	Shallow Gaspur	Primary	**5.6**	**940 D**	**190 D**	**29 E**	**12**	**4.6**	**50 D**	**8.1**	**2.5**	**4.9**	**630**	NA
MW-33A	08/01/2005	Shallow Gaspur	Primary	**4.6**	**1200**	**190**	**27**	**15**	**7.2**	**49**	**7.3**	**2.2**	**3.9**	**470**	NA
MW-33A	09/01/2005	Shallow Gaspur	Primary	**4.9**	**1200**	**210**	**33**	**11**	**5.5**	**52**	**6.1**	**2**	**3.3**	**500**	NA
MW-33A	09/01/2005	Shallow Gaspur	Primary	**1.6**	**990**	**100**	**9.9**	**4.3**	**1.6**	**19**	**4.2**	**0.9**	**1.9**	**350**	NA
MW-33A	10/01/2005	Shallow Gaspur	Primary	**2.9**	**450**	**100**	**16**	**6**	**2.4**	**26**	**4.4**	**1.2**	**2.7**	**440**	NA
MW-33A	11/01/2005	Shallow Gaspur	Primary	**4.4**	**680**	**140**	**20**	**7.8**	**3.2**	**42**	**5**	**1**	**3.4**	**300**	NA
MW-33A	01/01/2006	Shallow Gaspur	Primary	**1.6**	**670**	**74**	**10**	**3.7**	**0.9**	**18**	**3.2**	**0.7**	**1.4**	**270**	NA
MW-33A	03/01/2006	Shallow Gaspur	Primary	< 2.5	**280 D**	**33**	**4.2**	< 2.5	< 2.5	**10**	< 2.5	< 2.5	< 2.5	**170**	NA
MW-33A	04/01/2006	Shallow Gaspur	Primary	**0.6**	**160**	**25**	**2.3**	**1.1**	**0.3**	**9.4**	**1.7**	**0.3**	**0.9**	**140**	NA
MW-33A	04/01/2006	Shallow Gaspur	Primary	**1.1**	**260**	**29**	**5**	**1.9**	**0.7**	**12**	**1.9**	**0.3**	**1**	**120**	NA
MW-33A	05/01/2006	Shallow Gaspur	Primary	**0.4**	**120**	**14**	**1.7**	**0.7**	**0.2**	**5.3**	**0.8**	< 0.5	**0.4**	**220**	NA
MW-33A	06/01/2006	Shallow Gaspur	Primary	**1.6**	**180**	**62**	**3.5**	**2.1**	**0.6**	**22**	**2.3**	**0.3**	**2.4**	**99**	NA
MW-33A	08/01/2006	Shallow Gaspur	Primary	< 0.5	**130 D**	**41 D**	**2.9**	**1.6**	< 0.5	**21**	< 0.5	**0.33 J**	**1.5**	**74**	NA
MW-33A	03/01/2008	Shallow Gaspur	Primary	**2.2**	**490 D**	**140 D**	**17**	**6.3**	**2.4**	**28 D**	**3.5**	**1**	**2.4**	**450 D**	NA
MW-33A	05/12/2009	Shallow Gaspur	Primary	**1.8 J**	**480 D**	**81 D**	**12 J**	**4 J**	**1.6 J**	**26 J**	< 2.5	< 2.5	< 2.5	**110 D**	NA
MW-33A	06/16/2011	Shallow Gaspur	Primary	< 1	**140**	**130**	**7.9**	**3.6**	**1.4**	**23**	**2.1**	< 1	**1.7**	**300**	< 1
MW-33A	06/16/2011	Shallow Gaspur	Duplicate	< 1	**140**	**130**	**7.8**	**3.5**	**1.4**	**23**	**2**	< 1	< 1	**280**	< 1
MW-33A	12/09/2011	Shallow Gaspur	Primary	< 1	**130**	**160**	**7.3**	**4.3**	**2.1**	**28**	**3.2**	< 1	**2**	**170 J**	< 1
MW-33A	06/08/2012	Shallow Gaspur	Primary	**0.75**	**130**	**170**	**10**	**4.9**	**2.5**	**34**	**3.2**	**0.54**	< 0.5	**280 J**	**1.2**
MW-33A	12/14/2012	Shallow Gaspur	Primary	< 0.5	**53**	**190**	**9.2**	**4.5**	**3**	**35**	**2.9**	< 0.5	**1.7**	**170 J**	**0.86**
MW-33A	06/19/2013	Shallow Gaspur	Primary	< 0.5	**46**	**270**	**16**	**9.2**	**6.7**	**54**	**4.2**	**0.65**	**2.1**	**180 J**	**0.92**
MW-33A	12/12/2013	Shallow Gaspur	Primary	< 0.5	**78**	**150**	**11**	**4.7**	**3.4**	**33**	**2.4**	**0.46 J**	< 0.5	**160**	< 0.3
MW-33A	06/09/2014	Shallow Gaspur	Primary	< 0.5	**32**	**200**	**11**	**6.7**	**4.9**	**29**	**2.4**	**0.49 J**	< 0.5	**180**	< 0.3
MW-33A	12/16/2014	Shallow Gaspur	Primary	< 0.5	**56**	**140**	**10**	**5.6**	**3.3**	**37**	**2.3**	**0.4 J**	< 0.5	**150**	< 0.3
MW-33A	12/16/2014	Shallow Gaspur	Duplicate	< 0.5	**66**	**130**	**11**	**5.4**	**3.2**	**34**	**2.1**	**0.38 J**	< 0.5	**160**	< 0.3
MW-33A	06/10/2015	Shallow Gaspur	Primary	< 0.5	**63**	**89**	**9.2**	**4.9**	**3.3**	**36**	**3.9**	**0.41 J**	**1.3**	**180**	< 0.3
MW-33A	12/09/2015	Shallow Gaspur	Primary	< 0.5	**97**	**120**	**14**	**7**	**4.6**	**46**	**3.9**	**0.6**	**1.8**	**260**	< 0.3
MW-33A	06/10/2016	Shallow Gaspur	Primary	< 0.5	**96**	**150**	**19**	**7.9**	**3.4**	**49**	**3.8**	< 0.2	< 0.5	**260**	< 0.3
MW-33A	12/01/2016	Shallow Gaspur	Primary	< 0.5	**130**	**190**	**19**	**10**	**4.2**	**59**	**4.3**	**1**	< 0.5	**230**	< 0.3
MW-33A	06/08/2017	Shallow Gaspur	Primary	< 0.5	**110**	**200**	**12**	**7.7**	**2.3**	**45**	**3.2**	**0.85**	**2.5**	**260**	< 0.3
MW-33A	12/07/2017	Shallow Gaspur	Primary	< 1	**180**	**220**	**16**	**10**	**2.1**	**60**	**4.6**	**0.78 J**	< 1	**140**	< 0.6
MW-33B	07/01/2005	Intermediate Gaspur	Primary	< 0.5	**39 D**	**41 D**	**1.1**	**0.5 JB**	**1.9 B**	**1.3**	< 0.5	< 0.5	< 0.5	**1.4**	NA
MW-33B	07/01/2005	Intermediate Gaspur	Primary	< 0.5	**26 D**	**30 D**	< 0.5	**2.5**	< 0.5	**1.9**	< 0.5	**0.15 J**	< 0.5	**2.1**	NA
MW-33B	08/01/2005	Intermediate Gaspur	Primary	< 0.5	**30**	**36**	**2.3**	**3.8**	**0.6**	**2.9**	**0.5**	< 0.5	< 0.5	**2.5**	NA
MW-33B	09/01/2005	Intermediate Gaspur	Primary	< 0.5	**38**	**42**	**2.4**	**3.3**	**0.6**	**2.4**	< 0.5	< 0.5	< 0.5	**2**	NA
MW-33B	09/01/2005	Intermediate Gaspur	Primary	< 0.5	**34**	**32**	**1.5**	**2.7**	< 0.5	**1.7**	< 0.5	< 0.5	< 0.5	< 1	NA

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Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-33B	10/01/2005	Intermediate Gaspur	Primary	< 0.5	**35**	**28**	**1**	**2.1**	**0.2 J**	**1.2**	**0.3**	< 0.5	< 0.5	**0.6**	NA
MW-33B	11/01/2005	Intermediate Gaspur	Primary	< 0.5	**34**	**28**	**1.3**	**2.9**	**0.3**	**1.3**	**0.3**	< 0.5	< 0.5	**0.6 J**	NA
MW-33B	01/01/2006	Intermediate Gaspur	Primary	< 0.5	**41**	**28**	**1.5**	**3.1**	**0.3**	**1.4**	**0.4**	< 0.5	< 0.5	**0.7**	NA
MW-33B	03/01/2006	Intermediate Gaspur	Primary	< 0.5	**26 D**	**25 D**	**0.97**	**1.9**	< 0.5	**1.2**	< 0.5	< 0.5	< 0.5	**0.8**	NA
MW-33B	04/01/2006	Intermediate Gaspur	Primary	< 0.5	**30**	**26**	**0.9**	**1.9**	**0.3**	**1.2**	< 0.5	**0.3 J**	< 0.5	**0.8**	NA
MW-33B	05/01/2006	Intermediate Gaspur	Primary	< 0.5	**24**	**24**	**1**	**1.9**	**0.2 J**	**1.1**	< 0.5	< 0.5	< 0.5	**0.8**	NA
MW-33B	06/01/2006	Intermediate Gaspur	Primary	< 0.5	**25**	**28**	**0.9**	**2.1**	**0.2**	**1**	**0.2 J**	< 0.5	< 0.5	**1**	NA
MW-33B	08/01/2006	Intermediate Gaspur	Primary	< 0.5	**21**	**27 D**	**0.95**	**1.7**	< 0.5	**1.4**	< 0.5	< 0.5	< 0.5	**0.7 J**	NA
MW-33B	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**31 D**	**140 D**	**4.9**	**6.5**	**1.3**	**8.4**	**0.68**	**0.25 J**	**0.77**	**16**	NA
MW-33B	05/12/2009	Intermediate Gaspur	Primary	< 2.5	**28**	**160 D**	**7**	**5.4**	**1.8 J**	**12**	< 2.5	< 2.5	< 2.5	< 2	NA
MW-33B	07/14/2010	Intermediate Gaspur	Primary	< 0.5	**19**	**160**	**10**	**7.1**	**1.8**	**14**	**0.88**	< 0.5	**0.79**	**22 J**	< 0.5
MW-33B	06/16/2011	Intermediate Gaspur	Primary	< 0.5	**9.2**	**120**	**7.8**	**5.5**	**2.9**	**8.5**	**0.51**	< 0.5	< 0.5	**40**	< 0.5
MW-33B	12/08/2011	Intermediate Gaspur	Primary	< 0.5	**9.9**	**100**	**6**	**4.5**	**1.6**	**8.1**	**0.59**	< 0.5	**0.66**	**18**	< 0.5
MW-33B	06/08/2012	Intermediate Gaspur	Primary	< 0.5	**8**	**140**	**8.9**	**6.4**	**2**	**9.9**	**0.81**	< 0.5	**1.1**	**16 J**	< 0.5
MW-33B	12/14/2012	Intermediate Gaspur	Primary	< 0.5	**6.1**	**130**	**7.1**	**5.2**	**1.2**	**7.6**	**0.56**	< 0.5	**0.78**	**14 J**	< 0.5
MW-33B	06/20/2013	Intermediate Gaspur	Primary	< 0.5	**5.2**	**120**	**7.4**	**4.1**	**1.5**	**12**	**0.61**	< 0.2	< 0.5	**25**	< 0.3
MW-33B	12/12/2013	Intermediate Gaspur	Primary	< 0.5	**3**	**39**	**3.8**	**2**	**0.68**	**2.4**	< 0.3	< 0.2	< 0.5	**12**	< 0.3
MW-33B	06/09/2014	Intermediate Gaspur	Primary	< 0.5	**2.2**	**22**	**1.6**	**1.1**	< 0.5	**1.4**	**0.41 J**	< 0.2	< 0.5	**4.6**	< 0.3
MW-33B	12/16/2014	Intermediate Gaspur	Primary	< 0.5	**2.2**	**43**	**2.9**	**2**	< 0.5	**2.6**	**0.37 J**	< 0.2	< 0.5	**5**	< 0.3
MW-33B	06/10/2015	Intermediate Gaspur	Primary	< 0.5	**2.5**	**42**	**2.9**	**2.5**	< 0.5	**2.5**	**0.86**	< 0.2	< 0.5	**4**	< 0.3
MW-33B	12/09/2015	Intermediate Gaspur	Primary	< 0.5	**2.1**	**44**	**2.4**	**2**	< 0.5	**2.6**	**0.87**	< 0.2	< 0.5	**3.1**	< 0.3
MW-33B	06/10/2016	Intermediate Gaspur	Primary	< 0.5	**2.1 J**	**29**	**2.4**	**1.3**	< 0.5	**1.3**	**0.59**	< 0.2	< 0.5	**4.8**	< 0.3
MW-33B	06/10/2016	Intermediate Gaspur	Duplicate	< 0.5	**3.7 J**	**30**	**2.5**	**1.5**	< 0.5	**1.6**	**0.64**	< 0.2	< 0.5	**4.7**	< 0.3
MW-33B	12/01/2016	Intermediate Gaspur	Primary	< 0.5	**2.3**	**35**	**3.3**	**2.1**	< 0.5	**1.2**	**0.6**	< 0.2	< 0.5	**8.3**	< 0.3
MW-33B	06/09/2017	Intermediate Gaspur	Primary	< 0.5	**0.71**	**1.6**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-33B	12/07/2017	Intermediate Gaspur	Primary	< 0.5	**0.77**	**1.4**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-33B	12/07/2018	Intermediate Gaspur	Primary	< 0.5	**1.8**	**25**	**2.9**	**1.4**	< 0.5	**0.9**	< 0.3	< 0.2	< 0.5	**10**	< 0.3
MW-33B	06/13/2019	Intermediate Gaspur	Primary	< 0.5	**1.6**	**34**	**2.8**	**1.4**	< 0.4	**1.2**	< 0.2	< 0.4	< 0.3	**11**	< 0.2
MW-34	03/01/2008	Shallow Gaspur	Primary	< 0.5	**6.1**	**180 D**	**1.4**	**8.1**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-34	05/16/2009	Shallow Gaspur	Primary	< 0.5	**46 E**	**420 E**	**1.8**	**24 E**	**0.71**	**0.5**	< 0.5	< 0.5	< 0.5	< 2	NA
MW-34	12/09/2011	Shallow Gaspur	Primary	< 2.5	**46**	**540**	< 2.5	**20**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**5.6**	< 2.5
MW-34	12/09/2011	Shallow Gaspur	Duplicate	< 5	**41**	**500**	< 5	**18**	< 5	< 5	< 5	< 5	< 5	**5.3**	< 5
MW-34	06/12/2012	Shallow Gaspur	Split	< 2	**52**	**600 D**	**2.1**	**26**	**1.4 J**	**2.2**	< 2	< 2	< 2	**2.5**	NA
MW-34	06/12/2012	Shallow Gaspur	Primary	< 2.5	**56**	**620**	< 2.5	**25**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**5.3**	< 2.5
MW-34	06/12/2012	Shallow Gaspur	Duplicate	< 5	**64**	**730**	< 5	**28**	< 5	< 5	< 5	< 5	< 5	**5.2**	< 5
MW-34	12/12/2012	Shallow Gaspur	Primary	< 5	**63**	**610**	< 5	**26**	< 5	< 5	< 5	< 5	< 5	**4.8**	< 5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-34	12/12/2012	Shallow Gaspur	Duplicate	< 5	**64**	**630**	< 5	**28**	< 5	< 5	< 5	< 5	< 5	**5.3**	< 5
MW-34	03/26/2014	Shallow Gaspur	Primary	< 2.5	**45**	**470**	< 2.5	**25**	< 2.5	**1.6 J**	< 2.5	< 2.5	< 2.5	**1.3**	< 2.5
MW-34	03/26/2014	Shallow Gaspur	Duplicate	< 2	**38**	**450**	< 2	**20**	< 2	**1.3 J**	< 2	< 2	< 2	**1.5**	< 2
MW-34	07/12/2016	Shallow Gaspur	Primary	< 0.5	**4.5**	**170**	**0.94**	**9.9**	**0.81**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-34	11/30/2016	Shallow Gaspur	Primary	< 1	**22**	**390**	**1.6**	**17**	< 1	**0.82 J**	< 0.6	< 0.4	< 1	**1.6 J**	< 0.6
MW-34	06/06/2017	Shallow Gaspur	Primary	< 0.5	**14**	**290**	**1.4**	**18**	**1.1**	**0.48 J**	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-34	12/08/2017	Shallow Gaspur	Primary	< 2.5	**49**	**470**	**2 J**	**24**	< 2.5	< 1	< 1.5	< 1	< 2.5	**1.5 J**	< 1.5
MW-34	12/08/2017	Shallow Gaspur	Duplicate	< 2.5	**48**	**500**	**1.9 J**	**27**	< 2.5	< 1	< 1.5	< 1	< 2.5	**1.4 J**	< 1.5
MW-34	06/05/2018	Shallow Gaspur	Primary	< 2.5	**97**	**580**	< 1.5	**22**	< 2.5	**4.1**	< 1.5	< 1	< 2.5	**2.7**	< 1.5
MW-35	03/01/2008	Lower Gaspur	Primary	< 0.5	**120 D**	**78 D**	**2**	**12**	**0.43 J**	**0.92**	**10**	**0.41 J**	< 0.5	**7.8**	NA
MW-35	05/15/2009	Lower Gaspur	Primary	< 0.5	**120 D**	**19 D**	**1.1**	**8.1**	< 0.5	**0.44 J**	**9.2 J**	**0.31 J**	< 0.5	< 2	NA
MW-35	12/07/2011	Lower Gaspur	Primary	< 0.5	**17**	**45**	**0.67**	**4.2**	< 0.5	< 0.5	**6.5**	< 0.5	< 0.5	**6.3**	< 0.5
MW-35	06/08/2012	Lower Gaspur	Primary	< 0.5	**16**	**37**	**0.64**	**3.3**	< 0.5	< 0.5	**5.6**	< 0.5	< 0.5	**7.8**	< 0.5
MW-35	12/12/2012	Lower Gaspur	Primary	< 0.5	**4.6**	**26**	< 0.5	**3.5**	**20**	< 0.5	**8.6**	< 0.5	< 0.5	**7.4**	< 0.5
MW-35	03/26/2014	Lower Gaspur	Primary	< 0.5	**6.9**	**58**	< 0.5	**5.5**	< 0.5	**0.33 J**	**5.8**	< 0.5	< 0.5	**2.3**	< 0.5
MW-35	07/12/2016	Lower Gaspur	Primary	< 0.5	**3.5**	**330**	**4**	**15**	< 0.5	**3**	**6.8**	**0.7**	< 0.5	**19**	< 0.5
MW-35	11/30/2016	Lower Gaspur	Primary	< 2.5	**1.9 J**	**420**	**4.4**	**15**	< 2.5	**3.2**	**5.2**	< 1	< 2.5	**23**	< 1.5
MW-35	06/06/2017	Lower Gaspur	Primary	< 0.5	< 0.2	**0.61**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-35	12/06/2017	Lower Gaspur	Primary	< 0.5	< 0.2	**0.52**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-35	06/05/2018	Lower Gaspur	Primary	< 0.5	**3.7**	**650**	**7.5**	**24**	**10 J**	**5.1 J**	**40**	**1.3 J**	< 0.5	**15 J**	< 0.3
MW-36	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**7.6**	**4.9**	< 0.5	**0.61**	< 0.5	**0.24 J**	**1.6**	< 0.5	< 0.5	**0.82 J**	NA
MW-36	05/15/2009	Intermediate Gaspur	Primary	< 0.5	**7**	**6.7**	< 0.5	**1.4**	< 0.5	< 0.5 J	**2.4**	< 0.5	< 0.5	**2.2**	NA
MW-36	06/15/2011	Intermediate Gaspur	Primary	< 0.5	**7.8**	**12**	< 0.5	**2.4**	< 0.5	< 0.5	**3**	**0.61**	< 0.5	< 4	< 0.5
MW-36	06/15/2011	Intermediate Gaspur	Duplicate	< 0.5	**8.1**	**13**	< 0.5	**2.5**	< 0.5	< 0.5	**3.2**	**0.61**	< 0.5	< 4	< 0.5
MW-36	12/08/2011	Intermediate Gaspur	Primary	< 0.5	**9.8**	**13**	< 0.5	**2.7**	< 0.5	< 0.5	**2.9**	< 0.5	< 0.5	< 0.96	< 0.5
MW-36	06/08/2012	Intermediate Gaspur	Primary	< 0.5	**9.9**	**13**	< 0.5	**3.4**	< 0.5	< 0.5	**2.3**	< 0.5	< 0.5	< 0.94	< 0.5
MW-36	12/11/2012	Intermediate Gaspur	Primary	< 0.5	**4.4**	**5.3**	< 0.5	**0.75**	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	**0.98**	< 0.5
MW-36	06/20/2013	Intermediate Gaspur	Primary	< 0.5	**8.2**	**11**	< 0.3	**4.4**	< 0.5	< 0.2	**1.8**	< 0.2	< 0.5	< 1	< 0.3
MW-36	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**8.2**	**11**	< 0.3	**3.2**	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	< 1	< 0.3
MW-36	06/10/2014	Intermediate Gaspur	Primary	< 0.5	**5.9**	**8.8**	< 0.3	**2.7**	< 0.5	< 0.2	**0.97**	< 0.2	< 0.5	< 1	< 0.3
MW-36	12/18/2014	Intermediate Gaspur	Primary	< 0.5	**5.2**	**11**	< 0.3	**2.9**	< 0.5	< 0.2	**1.1**	< 0.2	< 0.5	< 1	< 0.3
MW-36	06/08/2015	Intermediate Gaspur	Primary	< 0.5	**5.6**	**9**	< 0.3	**2.6**	< 0.5	< 0.2	**1.6**	< 0.2	< 0.5	< 1	< 0.3
MW-36	12/10/2015	Intermediate Gaspur	Primary	< 0.5	**3.6**	**9.1**	< 0.3	**2.6**	< 0.5	< 0.2	**0.88**	< 0.2	< 0.5	< 1	< 0.3
MW-36	06/07/2016	Intermediate Gaspur	Primary	< 0.5	**3.7**	**7.3**	< 0.3	**2.1**	< 0.5	< 0.2	**0.85**	< 0.2	< 0.5	< 1	< 0.3
MW-36	11/29/2016	Intermediate Gaspur	Primary	< 0.5	**1.7**	**9**	< 0.3	**2.1**	< 0.5	< 0.2	**0.94**	< 0.2	< 0.5	< 1	< 0.3
MW-36	06/08/2017	Intermediate Gaspur	Primary	< 0.5	**0.53**	**2.8**	< 0.3	< 0.4	< 0.5	< 0.2	**0.38 J**	< 0.2	< 0.5	< 1	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-36	12/05/2017	Intermediate Gaspur	Primary	< 0.5	**0.58**	**2.8**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1 J**	< 0.3
MW-36	12/05/2018	Intermediate Gaspur	Primary	< 0.5	**1.1**	**2.9**	< 0.3	**0.71**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-37	03/01/2008	Lower Gaspur	Primary	< 0.5	**66 DJ**	**32 D**	**1.1**	**2.8**	**0.98**	**3**	**2.9**	**0.3 J**	< 0.5	**5.8**	NA
MW-37	05/15/2009	Lower Gaspur	Primary	< 0.5 J	**92 DJ**	**39 DJ**	**0.75 J**	**2.5 J**	< 0.5 J	**1.3 J**	**2 J**	< 0.5 J	< 0.5 J	< 2	NA
MW-37	06/15/2011	Lower Gaspur	Primary	< 0.5	**1.9**	**150**	**1.4**	**7.2**	< 0.5	**1.6**	**5.5**	< 0.5	< 0.5	**13**	< 0.5
MW-37	12/08/2011	Lower Gaspur	Primary	< 0.5	**1.2**	**94**	**0.74**	**4.2**	< 0.5	**1**	**4.9**	< 0.5	< 0.5	**9.5**	< 0.5
MW-37	06/12/2012	Lower Gaspur	Primary	< 0.5	**4.1**	**58**	**0.51**	**3.6**	< 0.5	**0.85**	**7**	**2**	< 0.5	**2.5**	< 0.5
MW-37	12/13/2012	Lower Gaspur	Primary	< 0.5	**5.8**	**53**	**0.52**	**3.9**	**0.5**	**0.63**	**7.4**	**3.1**	< 0.5	< 2	< 0.5
MW-37	06/20/2013	Lower Gaspur	Primary	< 0.5	**1.8**	**110**	**1.3**	**6.2**	< 0.5	**1.1**	**3.6**	**0.56**	< 0.5	**12**	< 0.3
MW-37	12/10/2013	Lower Gaspur	Primary	< 0.5	**2.4**	**100**	**0.9**	**5.7**	**0.51**	**0.81**	**4.9**	**2.1**	< 0.5	**9.1**	< 0.3
MW-37	06/10/2014	Lower Gaspur	Primary	< 0.5	**2.8**	**160**	**1.5**	**8.2**	< 0.5	**1**	**4.4**	**1.4**	< 0.5	**12**	< 0.3
MW-37	12/18/2014	Lower Gaspur	Primary	< 0.5	**2.6**	**84**	**0.85**	**5.9**	**0.73**	**0.7**	**2.6**	**1.5**	< 0.5	**10**	< 0.3
MW-37	12/18/2014	Lower Gaspur	Duplicate	< 0.5	**2.6**	**83**	**0.83**	**5.7**	**0.7**	**0.65**	**2.8**	**1.5**	< 0.5	**10**	< 0.3
MW-37	06/08/2015	Lower Gaspur	Primary	< 0.5	**3**	**81**	**0.81**	**9.5**	**2.3**	**0.77**	**5.3**	**5.7**	< 0.5	**7.8**	< 0.3
MW-37	12/10/2015	Lower Gaspur	Primary	< 0.5	**4.4**	**130**	**1.4**	**10**	**0.79**	**1.5**	**3.2**	**1**	< 0.5	**11**	< 0.3
MW-37	12/10/2015	Lower Gaspur	Duplicate	< 0.5	**4.9**	**130**	**1.5**	**11**	**0.68**	**1.4**	**3.4**	**1.2**	< 0.5	**11**	< 0.3
MW-37	06/08/2016	Lower Gaspur	Primary	< 0.5	**4.5**	**140**	**2.4**	**12**	**0.78**	**1.7**	**4.3**	**1.2**	< 0.5	**12**	< 0.3
MW-37	11/29/2016	Lower Gaspur	Primary	< 0.5	**2.5**	**100**	**1.2**	**13**	**1.2**	**0.97**	**4**	**6.4**	< 0.5	**10**	< 0.3
MW-37	06/08/2017	Lower Gaspur	Primary	< 0.5	**3.3**	**140**	**1.6**	**10**	< 0.5	**1.6**	**2.3**	**0.99**	< 0.5	**15**	< 0.3
MW-37	12/06/2017	Lower Gaspur	Primary	< 1	< 0.4	**62**	< 0.6	**9.5**	**2.7**	< 0.4	**2.7**	**6.2**	< 1	< 1	< 0.6
MW-37	06/07/2018	Lower Gaspur	Primary	< 0.5	**2.6**	**72**	**0.7**	**7.2**	< 0.5	**1.8**	**2.2**	**1.7**	< 0.5	**8.6**	< 0.3
MW-37	12/05/2018	Lower Gaspur	Primary	< 0.5	**2.8**	**68 J+**	**0.67 J+**	**6.4 J+**	< 0.5	**1.5 J+**	**3**	**1.5**	< 0.5	**11**	< 0.3
MW-37	12/05/2018	Lower Gaspur	Duplicate	< 0.5	**2.8**	**72 J+**	**0.87 J+**	**6.6 J+**	< 0.5	**1.4 J+**	**3.1**	**1.5**	< 0.5	**11**	< 0.3
MW-37	06/11/2019	Lower Gaspur	Primary	< 0.5	**2.2**	**99**	**0.96**	**9**	**3.3**	**1.6**	**2.4**	**0.76**	< 0.3	**10**	< 0.2
MW-38	03/01/2008	Shallow Gaspur	Primary	< 0.5	**1.1**	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-38	05/16/2009	Shallow Gaspur	Primary	< 0.5	**0.94**	**1.5**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-38	06/14/2011	Shallow Gaspur	Primary	< 0.5	**0.67**	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.7	< 0.5
MW-38	12/06/2011	Shallow Gaspur	Primary	< 0.5	**0.68**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-38	06/08/2012	Shallow Gaspur	Primary	< 0.5	**0.61**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.94	< 0.5
MW-38	12/13/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 25 J	< 0.5
MW-38	12/10/2013	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	12/16/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	**0.25 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	12/08/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	08/08/2016	Shallow Gaspur	Primary	< 0.5	< 0.2	**0.38 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	11/28/2016	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	06/09/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3

TABLE 9
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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-38	12/05/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	06/08/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	06/08/2018	Shallow Gaspur	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-38	12/05/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-39	03/01/2008	Intermediate Gaspur	Primary	< 0.5	**16**	**6.6**	**0.23 J**	**1.1**	< 0.5	< 0.5	**1.3**	< 0.5	< 0.5	**2.6**	NA
MW-39	05/16/2009	Intermediate Gaspur	Primary	< 0.5	**17**	**7.2**	**0.44 J**	**0.99**	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**1.9 J**	NA
MW-39	06/15/2011	Intermediate Gaspur	Primary	< 0.5	**57**	**28**	**1.5**	**2.4**	< 0.5	**1.3**	**0.79**	< 0.5	< 0.5	**36**	**4.3**
MW-39	12/08/2011	Intermediate Gaspur	Primary	< 0.5	**25**	**68**	**1.5**	**2.7**	< 0.5	**2.3**	**0.86**	< 0.5	< 0.5	**76**	**6.2**
MW-39	06/12/2012	Intermediate Gaspur	Split	< 0.5	**8**	**40 D**	**1**	**1.4**	**0.29 J**	**2**	< 0.5	< 0.5	**0.15 J**	**23**	NA
MW-39	06/12/2012	Intermediate Gaspur	Primary	< 0.5	**9.6**	**47**	**1.1**	**1.2**	< 0.5	**2.5**	< 0.5	< 0.5	< 0.5	**47**	**1.5**
MW-39	12/11/2012	Intermediate Gaspur	Primary	< 0.5	**3.8**	**29**	**0.66**	**0.89**	< 0.5	**1.3**	< 0.5	< 0.5	< 0.5	**19**	**0.61**
MW-39	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**14**	**68**	**2.4**	**3.7**	< 0.5	**6.5**	< 0.3	< 0.2	< 0.5	**47**	< 0.3
MW-39	12/16/2014	Intermediate Gaspur	Primary	< 0.5	**7.4**	**54**	**1.9**	**2.8**	< 0.5	**4.7**	**0.42 J**	< 0.2	< 0.5	**35**	< 0.3
MW-39	12/07/2015	Intermediate Gaspur	Primary	< 0.5	**10**	**76**	**3.1**	**3.7**	**0.77**	**6.4**	**0.74**	< 0.2	< 0.5	**47**	< 0.3
MW-39	08/08/2016	Intermediate Gaspur	Primary	< 0.5	**4.8**	**42**	**1.8**	**2.3**	< 0.5	**1.7**	< 0.3	< 0.2	< 0.5	**23**	**0.75**
MW-39	11/28/2016	Intermediate Gaspur	Primary	< 0.5	**5.4**	**85**	**3.3**	**5.2**	< 0.5	**3**	**0.44 J**	< 0.2	< 0.5	**48**	**1.8**
MW-39	06/09/2017	Intermediate Gaspur	Primary	< 0.5	**0.82**	**6.6**	< 0.3	< 0.4	< 0.5	**0.32 J**	< 0.3	< 0.2	< 0.5	**10**	< 0.3
MW-39	06/09/2017	Intermediate Gaspur	Duplicate	< 0.5	**0.87**	**7.1**	< 0.3	< 0.4	< 0.5	**0.34 J**	< 0.3	< 0.2	< 0.5	**10**	< 0.3
MW-39	12/05/2017	Intermediate Gaspur	Primary	< 0.5	**0.72**	**11**	< 0.3	**0.56**	< 0.5	**0.59**	< 0.3	< 0.2	< 0.5	**8.2**	< 0.3
MW-39	06/08/2018	Intermediate Gaspur	Primary	< 0.5	**6.4**	**79 J**	**2.7**	**5.6**	< 0.5	**3.6**	**0.66**	< 0.2	< 0.5	**22 J**	**1.3**
MW-39	12/05/2018	Intermediate Gaspur	Primary	< 0.5	**6**	**58**	**2.1**	**4.1**	< 0.5	**1.9**	**1.1**	< 0.2	< 0.5	**31**	< 0.3
MW-40	03/01/2008	Lower Gaspur	Primary	< 0.5	**44 D**	**9.8**	**0.89**	**3.5**	**0.27 J**	**0.56**	**3.6**	< 0.5	< 0.5	**5.1**	NA
MW-40	05/16/2009	Lower Gaspur	Primary	< 0.5	**54 DJ**	**9.9**	**0.76**	**2.6**	< 0.5	**0.56 J**	**2.8 J**	< 0.5	< 0.5	**2.1**	NA
MW-40	06/15/2011	Lower Gaspur	Primary	< 0.5	**22**	**65**	**0.93**	**4.5**	< 0.5	**1.1**	**2.3**	< 0.5	< 0.5	**9.9**	**0.71**
MW-40	12/07/2011	Lower Gaspur	Primary	< 0.5	**4.6**	**82**	**0.95**	**5.9**	< 0.5	**1.1**	**2.1**	< 0.5	< 0.5	**12**	**1.1**
MW-40	06/08/2012	Lower Gaspur	Primary	< 0.5	**1.2**	**60**	**0.64**	**4**	< 0.5	**0.83**	**1.7**	< 0.5	< 0.5	**10**	**0.51**
MW-40	12/12/2012	Lower Gaspur	Primary	< 0.5	**3.2**	**58**	**1**	**5.7**	< 0.5	**1.4**	**1.6**	< 0.5	< 0.5	**12 J**	**1.4**
MW-40	12/10/2013	Lower Gaspur	Primary	< 0.5	**4**	**57**	**1.3**	**6.7**	< 0.5	**1.8**	**1.5**	< 0.2	< 0.5	**19**	< 0.3
MW-40	12/16/2014	Lower Gaspur	Primary	< 0.5	**2.9**	**41**	**1.5**	**6.5**	< 0.5	**3.1**	**0.9**	< 0.2	< 0.5	**29**	< 0.3
MW-40	12/07/2015	Lower Gaspur	Primary	< 0.5	**3.3**	**49**	**1.7**	**6.9**	**0.6**	**3.1**	**1.2**	< 0.2	< 0.5	**19**	< 0.3
MW-40	08/08/2016	Lower Gaspur	Primary	< 0.5	**2**	**45**	**2.1**	**7**	**0.66**	**2.9**	**0.9**	< 0.2	< 0.5	**23**	< 0.3
MW-40	11/28/2016	Lower Gaspur	Primary	< 0.5	**2.3**	**43**	**1.6**	**7.5**	< 0.5	**2.1**	**0.96**	< 0.2	< 0.5	**20**	< 0.3
MW-40	06/09/2017	Lower Gaspur	Primary	< 0.5	**0.95**	**46**	**1.6**	**6.6**	**0.5**	**2.8**	**0.73**	< 0.2	< 0.5	**26**	< 0.3
MW-40	12/05/2017	Lower Gaspur	Primary	< 0.5	**0.46 J**	**60**	**2.1**	**7.2**	< 0.5	**3.7**	**0.91**	< 0.2	< 0.5	**23**	< 0.3
MW-40	06/08/2018	Lower Gaspur	Primary	< 0.5	**1.4**	**37**	**1.3**	**6.2**	< 0.5	**2.3**	**1.2**	< 0.2	< 0.5	**10**	< 0.3
MW-40	12/05/2018	Lower Gaspur	Primary	< 0.5	**0.83**	**28**	**1.2**	**4.6**	< 0.5	**1.4**	< 0.3	< 0.2	< 0.5	**12**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-41	03/01/2008	Lower Gaspur	Primary	< 0.5	**34 D**	**2.4**	**0.22 J**	**0.47 J**	< 0.5	< 0.5	**0.55**	< 0.5	< 0.5	< 2	NA
MW-41	05/14/2009	Lower Gaspur	Primary	< 2	**310 DJ**	**5.5**	< 2	**1.3 J**	< 2	**1.1 J**	< 2	< 2	< 2	< 2	NA
MW-41	06/16/2011	Lower Gaspur	Primary	< 0.5	**8.4**	**28**	< 0.5	**1.2**	< 0.5	**1.8**	**1.8**	< 0.5	< 0.5	**14**	< 0.5
MW-41	12/07/2011	Lower Gaspur	Primary	< 0.5	**8.1**	**53**	**0.99**	**2.6**	**5.6**	**6.8**	**2.8**	< 0.5	< 0.5	**23 J**	< 0.5
MW-41	06/13/2012	Lower Gaspur	Primary	< 0.5	**28**	**72**	< 0.5	**2.2**	< 0.5	**0.58**	**0.69**	< 0.5	< 0.5	**9.2**	< 0.5
MW-41	12/11/2012	Lower Gaspur	Primary	< 0.5	**6.8**	**45**	**0.85**	**2.2**	**5.8**	**6**	**3.1**	< 0.5	< 0.5	**26 J**	< 0.5
MW-41	06/21/2013	Lower Gaspur	Primary	< 0.5	**9.3**	**23**	**0.47 J**	**1.3**	**0.79**	**1.6**	**0.95**	< 0.2	< 0.5	**10**	< 0.3
MW-41	12/12/2013	Lower Gaspur	Primary	< 0.5	**14**	**46**	**0.64**	**2.5**	**0.56**	**1**	< 0.3	< 0.2	< 0.5	**7**	< 0.3
MW-41	06/11/2014	Lower Gaspur	Primary	< 0.5	**7.9**	**25**	**0.39 J**	**1.4**	< 0.5	**0.57**	**0.65**	< 0.2	< 0.5	**5.1**	< 0.3
MW-41	06/11/2014	Lower Gaspur	Duplicate	< 0.5	**7.7**	**23**	< 0.3	**1.1**	< 0.5	**0.25 J**	**0.58**	< 0.2	< 0.5	**5.3**	< 0.3
MW-41	12/15/2014	Lower Gaspur	Primary	< 0.5	**3**	**13**	< 0.3	**0.82**	< 0.5	**0.35 J**	**0.49 J**	< 0.2	< 0.5	**2.5**	< 0.3
MW-41	06/08/2015	Lower Gaspur	Primary	< 0.5	**4.3**	**17**	**0.34 J**	**1.1**	< 0.5	**0.41 J**	**0.58**	< 0.2	< 0.5	**1.7 J**	< 0.3
MW-41	12/08/2015	Lower Gaspur	Primary	< 0.5	**4.6**	**20**	**0.38 J**	**0.85**	< 0.5	**0.56**	**0.72**	< 0.2	< 0.5	**1.8 J**	< 0.3
MW-41	06/07/2016	Lower Gaspur	Primary	< 0.5	**3.4**	**17**	**0.51**	**0.79**	< 0.5	**0.84**	**0.63**	< 0.2	< 0.5	**3.7**	< 0.3
MW-41	12/01/2016	Lower Gaspur	Primary	< 0.5	**2.8**	**9.5**	**0.39 J**	**0.64**	< 0.5	**0.67**	**0.6**	< 0.2	< 0.5	**2.4**	< 0.3
MW-41	06/07/2017	Lower Gaspur	Primary	< 0.5	**1.3**	**16**	**0.31 J**	**0.65**	< 0.5	**2.6**	**0.8**	< 0.2	< 0.5	**30**	< 0.3
MW-41	12/05/2017	Lower Gaspur	Primary	< 0.5	**1.3**	**15**	< 0.3	**0.43 J**	< 0.5	**2.8**	**0.96**	< 0.2	< 0.5	**22**	< 0.3
MW-41	06/04/2018	Lower Gaspur	Primary	< 0.5	**4.2**	**28**	< 0.3	**1**	< 0.5	**0.59**	**2.6**	< 0.2	< 0.5	**2.2**	< 0.3
MW-41	12/03/2018	Lower Gaspur	Primary	< 0.5	**4.1**	**20**	**0.45 J**	**0.88**	< 0.5	**0.45 J**	**3.4**	< 0.2	< 0.5	**3**	< 0.3
MW-41	06/11/2019	Lower Gaspur	Primary	< 0.5	**2.3**	**33**	**0.4 J**	**1.1**	< 0.4	< 0.2	**7**	< 0.4	< 0.3	**3.2**	< 0.2
MW-42	05/14/2009	Shallow Gaspur	Primary	< 0.5 J	**30 EJ**	**410 EJ**	**1.5 J**	**14 J**	**0.96 J**	**3.4 J**	< 0.5 J	< 0.5 J	< 0.5 J	**1.9 J**	NA
MW-42	03/26/2014	Shallow Gaspur	Primary	< 10	**390**	**4000**	< 10	**75**	< 10	**25**	< 10	< 10	< 10	**24**	< 10
MW-42	07/12/2016	Shallow Gaspur	Primary	< 2.5	**32**	**1100 J**	**3.7 J**	**40 J**	< 2.5	**18**	< 2.5	< 2.5	< 2.5	**47**	< 2.5
MW-43	05/15/2009	Intermediate Gaspur	Primary	< 0.5 J	**38 DJ**	**11 DJ**	**0.89 J**	**1.2 J**	< 0.5 J	< 0.5 J	**11 J**	< 0.5 J	< 0.5 J	< 2	NA
MW-43	03/26/2014	Intermediate Gaspur	Primary	< 0.5	**8.6**	**25**	< 0.5	**1.4**	< 0.5	**0.22 J**	**7.6**	< 0.5	< 0.5	**2.8**	< 0.5
MW-43	07/12/2016	Intermediate Gaspur	Primary	< 0.5	**5.4**	**42**	**3.4**	**3**	**1**	**1**	**44**	< 0.5	< 0.5	**4**	< 0.5
MW-44	05/15/2009	Lower Gaspur	Primary	< 0.5 J	**31 DJ**	**38 DJ**	**0.61 J**	**3.8 J**	< 0.5 J	**0.32 J**	**3 J**	< 0.5 J	< 0.5 J	< 2	NA
MW-44	12/07/2011	Lower Gaspur	Primary	< 0.5	**16**	**43**	< 0.5	**5.2**	< 0.5	< 0.5	**3.7**	< 0.5	< 0.5	**4.8**	< 0.5
MW-44	03/26/2014	Lower Gaspur	Primary	< 0.5	**2.9**	**21**	< 0.5	**1.5**	< 0.5	**0.2 J**	**4**	< 0.5	< 0.5	**2.8**	< 0.5
MW-44	07/12/2016	Lower Gaspur	Primary	< 0.5	< 0.5	**0.37 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**8.2**	< 0.5
MW-45	05/15/2009	Intermediate Gaspur	Primary	< 0.5	**2.1**	**19**	< 0.5	**1.3**	< 0.5	< 0.5	**1**	< 0.5	< 0.5	< 2	NA
MW-45	03/25/2014	Intermediate Gaspur	Primary	< 0.5	**2.2**	**39**	< 0.5	**3.7**	< 0.5	**0.21**	**0.84**	< 0.5	< 0.5	**2.1**	< 0.5
MW-45	07/14/2016	Intermediate Gaspur	Primary	< 0.5	**1.6**	**76**	**0.99**	**5.8**	< 0.5	**0.45 J**	**5.4**	**0.43 J**	< 0.5	**3.5**	< 0.5
MW-46	05/15/2009	Shallow Gaspur	Primary	< 0.5 J	**56 DJ**	**95 DJ**	**0.38 J**	**5.4 J**	< 0.5 J	< 0.5 J	< 0.5 J	< 0.5 J	< 0.5 J	< 2	NA
MW-46	03/24/2014	Shallow Gaspur	Primary	< 0.5	**8.6 J**	**47 J**	< 0.5	**3.7 J**	< 0.5	**0.097 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-46	07/19/2016	Shallow Gaspur	Primary	< 1	**57**	**460**	**2.2**	**37**	< 1	**7.5**	< 1	< 1	< 1	**3.5**	< 1

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-47	05/15/2009	Intermediate Gaspur	Primary	< 2.5 J	**99 J**	**470 DJ**	< 2.5 J	**14 J**	< 2.5 J	< 2.5 J	< 2.5 J	< 2.5 J	< 2.5 J	< 2	NA
MW-47	03/24/2014	Intermediate Gaspur	Primary	< 4	**14**	**700**	< 4	**47**	< 4	**1.3 J**	< 4	< 4	< 4	**1.8**	< 4
MW-47	07/19/2016	Intermediate Gaspur	Primary	< 5	**5.4**	**490**	< 5	**30**	< 5	**6.1**	< 5	< 5	< 5	**6.2**	< 5
MW-48	05/15/2009	Lower Gaspur	Primary	< 0.5 J	**25 DJ**	**52 DJ**	**0.3 J**	**3.8 J**	< 0.5 J	< 0.5 J	**1.2 J**	< 0.5 J	< 0.5 J	< 2	NA
MW-48	03/24/2014	Lower Gaspur	Primary	< 0.5	**29**	**82**	**2.1**	**5.5**	< 0.5	**1.6**	**6.9**	< 0.5	**0.12**	**8.7**	< 0.5
MW-48	07/19/2016	Lower Gaspur	Primary	< 0.5	**1.3**	**100**	**1.9**	**6.3**	**1.1**	**1.3**	**15**	< 0.5	< 0.5	**13**	< 0.5
MW-49	05/15/2009	Shallow Gaspur	Primary	< 0.5	**29 D**	**99 D**	< 0.5	**4.2**	< 0.5	< 0.5 J	< 0.5 J	< 0.5	< 0.5	< 2	NA
MW-49	03/26/2014	Shallow Gaspur	Primary	< 0.5	**2.9**	**41**	< 0.5	**3.4**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-49	07/15/2016	Shallow Gaspur	Primary	< 0.5	**1.6**	**49**	< 0.5	**6.3**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-49	07/15/2016	Shallow Gaspur	Duplicate	< 0.5	**1.6**	**55**	< 0.5	**5.9**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-50	05/15/2009	Intermediate Gaspur	Primary	< 5	**480 D**	**970 D**	< 5	**20**	< 5	< 5	< 5	< 5	< 5	**2.1**	NA
MW-50	06/16/2011	Intermediate Gaspur	Primary	< 5	**7.3**	**540**	< 5	**28**	< 5	< 5	< 5	< 5	< 5	**2.1 J**	< 5
MW-50	12/08/2011	Intermediate Gaspur	Primary	< 2.5	**3.4**	**590**	< 2.5	**34**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	**1.5**	< 2.5
MW-50	12/12/2012	Intermediate Gaspur	Primary	< 0.5	**2.1**	**500**	**1.4**	**30**	**5.2**	< 0.5	< 0.5	< 0.5	< 0.5	**1.8**	< 0.5
MW-50	12/10/2013	Intermediate Gaspur	Primary	< 0.5	**2.7**	**590**	**1.7**	**33**	**2.2**	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-50	12/16/2014	Intermediate Gaspur	Primary	< 2.5	< 1	**390**	< 1.5	**27**	**3.8**	< 1	< 1.5	< 1	< 2.5	**1.5 J**	< 1.5
MW-50	12/10/2015	Intermediate Gaspur	Primary	< 2.5	< 1	**370**	< 1.5	**27**	**3.3**	< 1	**2.1 J**	< 1	< 2.5	**1.4 J**	< 1.5
MW-50	11/29/2016	Intermediate Gaspur	Primary	< 2.5	**1.6 J**	**460**	**2.4 J**	**32**	**5.4**	< 1	< 1.5	< 1	< 2.5	**2.4**	< 1.5
MW-50	12/05/2017	Intermediate Gaspur	Primary	< 2.5	**3.4**	**480**	**1.8 J**	**28**	**6.9**	< 1	< 1.5	< 1	< 2.5	**3.2**	< 1.5
MW-50	12/06/2018	Intermediate Gaspur	Primary	< 5	**4.9 J**	**460 J**	< 3	**25**	< 5	< 2	< 3	< 2	< 5	**3.4**	< 3
MW-51	05/15/2009	Lower Gaspur	Primary	< 0.5	**5.7**	**27 D**	< 0.5	**1.8**	< 0.5	< 0.5	**1.3**	< 0.5	< 0.5	< 2	NA
MW-51	06/15/2011	Lower Gaspur	Primary	< 0.5	**12**	**25**	< 0.5	**2.6**	< 0.5	< 0.5	**2.1**	< 0.5	< 0.5	**5.1**	< 0.5
MW-51	12/08/2011	Lower Gaspur	Primary	< 0.5	**13**	**30**	< 0.5	**3**	< 0.5	< 0.5	**2.4**	< 0.5	< 0.5	**3.7**	< 0.5
MW-51	12/12/2012	Lower Gaspur	Primary	< 0.5	**7.9**	**73**	**0.77**	**6**	< 0.5	< 0.5	**5.4**	< 0.5	< 0.5	**6.4**	< 0.5
MW-51	12/10/2013	Lower Gaspur	Primary	< 0.5	**13**	**82**	**1**	**7.8**	< 0.5	< 0.2	**5.8**	**0.6**	< 0.5	**10**	< 0.3
MW-51	12/16/2014	Lower Gaspur	Primary	< 0.5	**6.6**	**58**	**1.2**	**5.3**	**0.58**	**0.7**	**9.2**	**0.81**	< 0.5	**16**	< 0.3
MW-51	12/10/2015	Lower Gaspur	Primary	< 0.5	**3.8**	**89**	**1.8**	**7.8**	**2.3**	**1.2**	**14**	**0.81**	< 0.5	**13**	< 0.3
MW-51	11/29/2016	Lower Gaspur	Primary	< 0.5	**2.1**	**130**	**2.7**	**11**	**1.3**	**1.2**	**21**	**1.1**	< 0.5	**19**	< 0.3
MW-51	12/05/2017	Lower Gaspur	Primary	< 0.5	**1.7**	**190**	**2.1**	**10**	**1.5**	**1.2**	**23**	**1**	< 0.5	**12**	< 0.3
MW-51	12/06/2018	Lower Gaspur	Primary	< 1	**1.6**	**88**	< 0.6	**7.3**	< 1	< 0.4	**37**	**1.7**	< 1	**8.7**	< 0.6
MW-52	05/15/2009	Shallow Gaspur	Primary	< 0.5	**8.2**	**6.5**	< 0.5	**0.78**	< 0.5	< 0.5	**2.2**	< 0.5	< 0.5	< 2	NA
MW-52	03/25/2014	Shallow Gaspur	Primary	< 0.5	**6.1**	**18**	< 0.5	**5**	< 0.5	< 0.5	< 0.5	**2.4**	< 0.5	< 0.5	< 0.5
MW-52	03/25/2014	Shallow Gaspur	Duplicate	< 0.5	**5.6**	**16**	< 0.5	**4.2**	< 0.5	< 0.5	< 0.5	**2.1**	< 0.5	< 0.5	< 0.5
MW-52	07/19/2016	Shallow Gaspur	Primary	< 0.5	**5.6**	**15**	< 0.5	**6.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-53	05/15/2009	Lower Gaspur	Primary	< 0.5	**19 J**	**19**	**0.48 J**	**1.2**	< 0.5	**1.2**	**1.8**	< 0.5	< 0.5	**2.6**	NA
MW-53	06/15/2011	Lower Gaspur	Primary	< 0.5	**12**	**17**	< 0.5	**2**	**0.7**	**1**	**1.9**	< 0.5	< 0.5	**8.3**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-53	12/13/2011	Lower Gaspur	Primary	< 0.5	**17**	**23**	**0.94**	**2.1**	< 0.5	**3.1**	**2**	< 0.5	< 0.5	**18 J**	< 0.5
MW-53	12/13/2012	Lower Gaspur	Primary	< 0.5	**8.5**	**13**	< 0.5	**1.8**	< 0.5	< 0.5	**1.8**	< 0.5	< 0.5	< 9.3	< 0.5
MW-53	12/10/2013	Lower Gaspur	Primary	< 0.5	**11**	**36**	**1.4**	**3.3**	< 0.5	**4.2**	**2.1**	< 0.2	< 0.5	**18**	< 0.3
MW-53	12/15/2014	Lower Gaspur	Primary	< 0.5	**3.5**	**22**	**0.6**	**2**	< 0.5	**1.3**	**1**	< 0.2	< 0.5	**11**	< 0.3
MW-53	12/10/2015	Lower Gaspur	Primary	< 0.5	**4.9**	**49**	**1.3**	**5.4**	**0.87**	**3**	**2.4**	< 0.2	< 0.5	**11**	< 0.3
MW-53	11/29/2016	Lower Gaspur	Primary	< 0.5	**3.7**	**38**	**0.85**	**4.8**	**0.56**	**1.3**	**1.4**	< 0.2	< 0.5	**9.1**	< 0.3
MW-53	11/29/2016	Lower Gaspur	Duplicate	< 0.5	**3.5**	**36**	**0.83**	**4.9**	**0.53**	**1.1**	**1.4**	< 0.2	< 0.5	**9.2**	< 0.3
MW-53	12/07/2017	Lower Gaspur	Primary	< 0.5	**3.5**	**29**	**0.44 J**	**3.9**	< 0.5	**0.58**	**0.83**	< 0.2	< 0.5	**3.1**	< 0.3
MW-53	12/06/2018	Lower Gaspur	Primary	< 0.5	**2.5**	**23 J+**	< 0.3	**2.9 J+**	< 0.5	< 0.2	**0.81**	< 0.2	< 0.5	**3.8**	< 0.3
MW-53	12/06/2018	Lower Gaspur	Duplicate	< 0.5	**1.9**	**19**	< 0.3	**2.2**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**3.7**	< 0.3
MW-54	05/15/2009	Lower Gaspur	Primary	< 0.5	**15 D**	**10**	**0.57**	**3.5**	< 0.5	**0.45 J**	**4**	< 0.5	< 0.5	< 2	NA
MW-54	06/15/2011	Lower Gaspur	Primary	< 0.5	**24**	**15**	**0.52**	**4.4**	< 0.5	**1.1**	**2.9**	< 0.5	< 0.5	**10**	< 0.5
MW-54	12/13/2011	Lower Gaspur	Primary	< 0.5	**62**	**19**	**1**	**5.5**	< 0.5	**1.6**	**3.6**	< 0.5	< 0.5	**13**	< 0.5
MW-54	12/13/2012	Lower Gaspur	Primary	< 0.5	**6.1**	**9.4**	< 0.5	**1.3**	**0.51**	**0.55**	**2.8**	< 0.5	< 0.5	< 1.8	< 0.5
MW-54	12/10/2013	Lower Gaspur	Primary	< 0.5	**3.8**	**58**	**1.5**	**8.2**	< 0.5	**2**	**1.8**	< 0.2	< 0.5	**10**	< 0.3
MW-54	12/15/2014	Lower Gaspur	Primary	< 0.5	**3**	**44**	**1.3**	**6**	< 0.5	**2**	**1.1**	< 0.2	< 0.5	**16**	< 0.3
MW-54	12/10/2015	Lower Gaspur	Primary	< 0.5	**3.2**	**46**	**1.9**	**9.8**	**1.1**	**3.4**	**1.6**	< 0.2	< 0.5	**15**	< 0.3
MW-54	12/01/2016	Lower Gaspur	Primary	< 0.5	**2.3**	**57**	**1.9**	**9**	**1.1**	**2.9**	**1.5**	< 0.2	< 0.5	**18**	< 0.3
MW-54	12/07/2017	Lower Gaspur	Primary	< 0.5	**1.8**	**63**	**1.3**	**7.2**	**0.96**	**3.1**	**1.3**	< 0.2	< 0.5	**13**	< 0.3
MW-54	12/06/2018	Lower Gaspur	Primary	< 0.5	**1.5**	**55**	< 0.3	**6.4**	< 0.5	**2.2**	**1.2**	< 0.2	< 0.5	**12**	< 0.3
MW-55	05/15/2009	Exposition	Primary	< 0.5	**2.5**	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 2	NA
MW-55	06/14/2011	Exposition	Primary	< 0.5	**8.4**	**13**	< 0.5	**1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.7	< 0.5
MW-55	12/06/2011	Exposition	Primary	< 0.5	**5.8**	**24**	< 0.5	**1.5**	< 0.5	< 0.5	**0.71**	< 0.5	< 0.5	**1.9**	< 0.5
MW-55	06/08/2012	Exposition	Primary	< 0.5	**5.8**	**23**	< 0.5	**1.6**	< 0.5	< 0.5	**0.88**	< 0.5	< 0.5	**1.9**	< 0.5
MW-55	11/26/2012	Exposition	Primary	< 0.5	**1**	**24**	< 0.5	**1.7**	< 0.5	< 0.5	**0.99**	< 0.5	< 0.5	**3.1**	< 0.5
MW-55	11/26/2012	Exposition	Primary	< 0.5	**1.4**	**25**	< 0.5	**1.7**	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**2.9**	< 0.5
MW-55	11/26/2012	Exposition	Primary	< 0.5	**1.6**	**27**	< 0.5	**1.9**	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**2.7**	< 0.5
MW-55	11/26/2012	Exposition	Primary	< 0.5	**1.5**	**26**	< 0.5	**1.8**	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**2.9**	< 0.5
MW-55	12/11/2012	Exposition	Primary	< 0.5	**2**	**21**	< 0.5	**1.1**	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**2.4**	< 0.5
MW-55	06/20/2013	Exposition	Primary	< 0.5	< 0.2	**6.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.4**	< 0.3
MW-55	06/20/2013	Exposition	Duplicate	< 0.5	< 0.2	**5.7**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.5 J**	< 0.3
MW-55	12/09/2013	Exposition	Primary	< 0.5	**1.6**	**52**	**0.58**	**4.4**	< 0.5	< 0.2	**1.5**	< 0.2	< 0.5	**4**	< 0.3
MW-55	12/09/2013	Exposition	Duplicate	< 0.5	**1.6**	**39**	**0.52**	**3.2**	< 0.5	< 0.2	**1.3**	< 0.2	< 0.5	**3.6**	< 0.3
MW-55	06/10/2014	Exposition	Primary	< 0.5	**1.6**	**31**	< 0.3	**2.8**	< 0.5	< 0.2	**1.2**	< 0.2	< 0.5	**4.8**	< 0.3
MW-55	06/10/2014	Exposition	Duplicate	< 0.5	**1.6**	**29**	< 0.3	**2.5**	< 0.5	< 0.2	**1.2**	< 0.2	< 0.5	**4.9**	< 0.3
MW-55	12/18/2014	Exposition	Primary	< 0.5	**2.2**	**32**	**0.34 J**	**3.2**	< 0.5	< 0.2	**1.1**	**0.21 J**	< 0.5	**4.6**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-55	06/08/2015	Exposition	Primary	< 0.5	**2**	**30**	**0.41 J**	**3.7**	**0.86**	**0.32 J**	**1.8**	< 0.2	< 0.5	**6**	< 0.3
MW-55	06/08/2015	Exposition	Duplicate	< 0.5	**2**	**31**	**0.4 J**	**3.5**	**1.1**	< 0.2	**2**	< 0.2	< 0.5	**5.4**	< 0.3
MW-55	12/10/2015	Exposition	Primary	< 0.5	**1.1**	**49**	**0.44 J**	**4.1**	< 0.5	**0.37 J**	**1.7**	**0.27 J**	< 0.5	**3.1**	< 0.3
MW-55	08/08/2016	Exposition	Primary	< 0.5	**0.98**	**54**	**0.59**	**4.5**	**5.8**	**0.58**	**1.8**	< 0.2	< 0.5	**5.9**	< 0.3
MW-55	11/28/2016	Exposition	Primary	< 0.5	**1.4**	**73**	**0.95**	**5.4**	< 0.5	**0.63**	**1.6**	**0.43 J**	< 0.5	**6.7**	< 0.3
MW-55	11/28/2016	Exposition	Duplicate	< 0.5	**1.5**	**79**	**0.94**	**5.4**	**0.51**	**0.61**	**1.9**	**0.7 J**	< 0.5	**6.1**	< 0.3
MW-55	06/09/2017	Exposition	Primary	< 0.5	**1.5**	**67**	**0.53**	**5.3**	**0.62**	**0.64**	**1.3**	**0.41 J**	< 0.5	**6.9**	< 0.3
MW-55	12/05/2017	Exposition	Primary	< 0.5	< 0.2	**4.7**	< 0.3	**0.54**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**1.2 J**	< 0.3
MW-55	06/08/2018	Exposition	Primary	< 0.5	**0.9**	**54**	**0.59**	**5.5**	**40**	**0.95**	**1.7**	**0.42 J**	< 0.5	**4.4**	< 0.3
MW-55	12/06/2018	Exposition	Primary	< 0.5	**1.6**	**33**	**0.38 J**	**4.8**	**41**	**0.68**	**1.6**	**0.43 J**	< 0.5	**4.9**	< 0.3
MW-55	06/14/2019	Exposition	Primary	< 0.5	**1.4**	**78**	**0.62**	**4.7**	**3.4**	< 0.2	**1.4**	< 0.4	< 0.3	**4.1**	< 0.2
MW-56	05/17/2009	Shallow Gaspur	Primary	< 2.5	**3900 D**	**290 D**	**2.2 J**	**11**	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2	NA
MW-56	03/26/2014	Shallow Gaspur	Primary	< 2	**290**	**450**	< 2	**15**	< 2	< 2	< 2	< 2	< 2	< 0.5	< 2
MW-56	07/18/2016	Shallow Gaspur	Primary	< 1	**74**	**260**	< 1	**15**	< 1	< 1	< 1	< 1	< 1	< 0.5	< 1
MW-57A	09/27/2011	Shallow Gaspur	Primary	< 0.5	**10**	**17**	< 0.5	**0.99**	< 0.5	< 0.5	< 0.5	**9.9**	< 0.5	< 2.5	< 0.5
MW-57A	12/07/2011	Shallow Gaspur	Primary	< 0.5	**8.7**	**18**	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	**5.4**	< 0.5	**1.7**	< 0.5
MW-57A	03/27/2012	Shallow Gaspur	Primary	< 0.5	**11**	**16**	< 0.5	**0.91**	< 0.5	< 0.5	< 0.5	**7.5**	< 0.5	**1.2 J**	< 0.5
MW-57A	06/13/2012	Shallow Gaspur	Primary	< 0.5	**11**	**17**	< 0.5	**1**	< 0.5	< 0.5	< 0.5	**8.9**	< 0.5	**1.3**	< 0.5
MW-57A	12/13/2012	Shallow Gaspur	Primary	< 0.5	**4.5**	**20**	< 0.5	**1**	< 0.5	< 0.5	< 0.5	**4.4**	< 0.5	< 0.95	< 0.5
MW-57A	06/20/2013	Shallow Gaspur	Primary	< 0.5	**3.4**	**16**	**0.5**	**1.3**	< 0.5	< 0.2	< 0.3	**3.2**	< 0.5	**1.2 J**	< 0.3
MW-57A	12/12/2013	Shallow Gaspur	Primary	< 0.5	**4.4**	**24**	**0.46 J**	**1.1**	**1.1**	< 0.2	< 0.3	**35**	< 0.5	**4.6**	< 0.3
MW-57A	06/12/2014	Shallow Gaspur	Primary	< 0.5	**0.7**	**16**	< 0.3	**0.58**	**1**	< 0.2	**0.5**	**47**	< 0.5	**17**	< 0.3
MW-57A	12/16/2014	Shallow Gaspur	Primary	< 0.5	**0.65**	**12**	< 0.3	**0.77**	**0.61**	< 0.2	**0.35 J**	**27**	< 0.5	**12**	< 0.3
MW-57A	06/10/2015	Shallow Gaspur	Primary	< 0.5	**1.1**	**16**	**0.34 J**	**1.2**	< 0.5	< 0.2	< 0.3	**5.6**	< 0.5	**2.2**	< 0.3
MW-57A	12/09/2015	Shallow Gaspur	Primary	< 0.5	< 0.2	**8.6**	< 0.3	**0.53**	**1.2**	**0.34 J**	**2**	**35**	< 0.5	**9.4**	< 0.3
MW-57A	06/09/2016	Shallow Gaspur	Primary	< 0.5	**0.4 J**	**7.6**	< 0.3	**0.48 J**	**0.5**	< 0.2	**1.2**	**21**	< 0.5	**3.9**	< 0.3
MW-57A	12/02/2016	Shallow Gaspur	Primary	< 0.5	< 0.2	**6.6**	< 0.3	**0.44 J**	**0.57**	**0.39 J**	**1.4**	**32**	< 0.5	**5.8**	< 0.3
MW-57A	06/08/2017	Shallow Gaspur	Primary	< 0.5	**0.8**	**7.4**	< 0.3	**0.63**	< 0.5	< 0.2	< 0.3	**1.5**	< 0.5	< 1	< 0.3
MW-57A	12/07/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**6.5**	< 0.3	**0.52**	< 0.5	**0.6**	**1.9**	**33**	< 0.5	**4.2**	< 0.3
MW-57A	06/08/2018	Shallow Gaspur	Primary	< 0.5	< 0.2	**2.9**	< 0.3	< 0.4	< 0.5	**0.89**	**2.8**	**50**	< 0.5	**3.8**	< 0.3
MW-57A	12/04/2018	Shallow Gaspur	Primary	< 1	< 0.4	**1.8**	< 0.6	< 0.8	< 1	**0.86 J**	**3.3**	**48**	< 1	**7**	< 0.6
MW-57A	06/12/2019	Shallow Gaspur	Primary	< 0.5	< 0.3	**2.5**	< 0.4	< 0.3	**1.1**	< 0.2	**3.6**	**48**	< 0.3	**9.1**	< 0.2
MW-57B	09/27/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5 J	< 0.5	**1.8**	**1.8**	< 0.5	< 0.95	< 0.5
MW-57B	12/08/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.4 J**	**2**	< 0.5	**2**	< 0.5
MW-57B	03/26/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.7**	**1.5**	< 0.5	**1.7 J**	< 0.5
MW-57B	06/13/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.2**	**1.7**	< 0.5	**2**	< 0.5

TABLE 9
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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-57B	12/13/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.9**	**0.98**	< 0.5	**1.8**	< 0.5
MW-57B	06/20/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.32 J**	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	**0.71**	< 0.5	**1.8 J**	< 0.3
MW-57B	12/12/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	**0.7**	< 0.5	**2.1**	< 0.3
MW-57B	06/12/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.4**	**0.25 J**	< 0.5	**1.3 J**	< 0.3
MW-57B	12/16/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.2**	**0.21 J**	< 0.5	< 1	< 0.3
MW-57B	06/10/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**3**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	12/11/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.4**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	06/09/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**3.5**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	12/02/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.5**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	06/07/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	12/07/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.39 J**	< 0.3	< 0.4	< 0.5	< 0.2	**3.3**	< 0.2	< 0.5	**1.1 J**	< 0.3
MW-57B	06/08/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**3.3**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	12/04/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**3.2**	< 0.2	< 0.5	< 1	< 0.3
MW-57B	06/12/2019	Intermediate Gaspur	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	**2.6**	< 0.4	< 0.3	< 1	< 0.2
MW-58	09/28/2011	Shallow Gaspur	Primary	< 0.5	**8.2**	**13**	< 0.5	**2.3**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 3.3	< 0.5
MW-58	12/08/2011	Shallow Gaspur	Primary	< 0.5	**14**	**22**	**0.71**	**3.7**	< 0.5	< 0.5	< 0.5	< 0.5	**0.64**	**2.4**	< 0.5
MW-58	03/27/2012	Shallow Gaspur	Primary	< 0.5	**12**	**23**	**0.66**	**3.9**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.2 J**	< 0.5
MW-58	03/27/2012	Shallow Gaspur	Duplicate	< 0.5	**13**	**21**	**0.77**	**3.6**	< 0.5	< 0.5	< 0.5	< 0.5	**0.61**	**2.2 J**	< 0.5
MW-58	06/13/2012	Shallow Gaspur	Primary	< 0.5	**15**	**28**	**0.7**	**4.7**	< 0.5	< 0.5	< 0.5	< 0.5	**0.8**	**2.1**	< 0.5
MW-58	12/13/2012	Shallow Gaspur	Primary	< 0.5	**8.6**	**45**	**0.82**	**5.3**	< 0.5	< 0.5	< 0.5	< 0.5	**1.4**	**1.8**	< 0.5
MW-58	06/21/2013	Shallow Gaspur	Primary	< 0.5	**3.6**	**26**	**1.6**	**3.8**	< 0.5	**0.32 J**	< 0.3	**0.62**	**0.89**	**2.7**	< 0.3
MW-58	06/21/2013	Shallow Gaspur	Duplicate	< 0.5	**3.4**	**25**	**1.5**	**3.7**	< 0.5	**0.26 J**	< 0.3	**0.6**	**0.73**	**2.8**	< 0.3
MW-58	12/12/2013	Shallow Gaspur	Primary	< 0.5	**7.2**	**28**	**2.6**	**4**	< 0.5	< 0.2	< 0.3	**0.37 J**	< 0.5	**8.1**	< 0.3
MW-58	06/12/2014	Shallow Gaspur	Primary	< 0.5	**2.7**	**13**	**7.5**	**1.9**	**0.5**	**0.74**	< 0.3	**1**	< 0.5	**21**	< 0.3
MW-58	06/12/2014	Shallow Gaspur	Duplicate	< 0.5	**2.7**	**13**	**7.5**	**1.8**	< 0.5	**0.74**	< 0.3	**1**	< 0.5	**22**	< 0.3
MW-58	12/18/2014	Shallow Gaspur	Primary	< 0.5	**2.1**	**18**	**3**	**2.4**	< 0.5	**0.27 J**	< 0.3	**0.64**	< 0.5	**11**	< 0.3
MW-58	06/10/2015	Shallow Gaspur	Primary	< 0.5	**2.9**	**29**	**1**	**4.1**	< 0.5	< 0.2	< 0.3	< 0.2	**1.4**	**2.3**	< 0.3
MW-58	12/09/2015	Shallow Gaspur	Primary	< 0.5	**0.76**	**21**	**3.6**	**2.5**	< 0.5	**0.4 J**	< 0.3	**1.5**	**0.74**	**6.3**	< 0.3
MW-58	06/09/2016	Shallow Gaspur	Primary	< 0.5	**0.56**	**23**	**2.1**	**2.7**	< 0.5	< 0.2	< 0.3	**3**	< 0.5	**1.3 J**	< 0.3
MW-58	12/02/2016	Shallow Gaspur	Primary	< 0.5	**0.37 J**	**20**	**1.8**	**2.2**	< 0.5	< 0.2	< 0.3	**4.1**	< 0.5	**1.7 J**	< 0.3
MW-58	12/02/2016	Shallow Gaspur	Duplicate	< 0.5	**0.41 J**	**21**	**1.8**	**2.4**	< 0.5	< 0.2	< 0.3	**4.7**	< 0.5	**1.8 J**	< 0.3
MW-58	06/09/2017	Shallow Gaspur	Primary	< 0.5	**0.82**	**22**	**0.65**	**3.8**	< 0.5	< 0.2	< 0.3	**1.7**	< 0.5	< 1	< 0.3
MW-58	12/07/2017	Shallow Gaspur	Primary	< 0.5	< 0.2	**20**	**0.71**	**2.9**	< 0.5	< 0.2	< 0.3	**1.7**	< 0.5	**1.3 J**	< 0.3
MW-58	12/04/2018	Shallow Gaspur	Primary	< 0.5	**1.4**	**9.2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**2.6**	< 0.5	< 1	< 0.3
MW-58	06/12/2019	Shallow Gaspur	Primary	< 0.5	< 0.3	**3.4**	**0.4 J**	< 0.3	< 0.4	< 0.2	< 0.2	**5.7**	< 0.3	**1.7 J**	< 0.2
MW-59A	06/13/2011	Shallow Gaspur	Primary	< 5	**190**	**660**	**30**	**29**	**7.7**	**58**	< 5	< 5	< 5	**30**	< 5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-59A	09/28/2011	Shallow Gaspur	Primary	< 5	**200**	**740**	**29**	**33**	< 5 J	**61**	< 5	< 5	< 5	**38 J**	< 5
MW-59A	09/28/2011	Shallow Gaspur	Duplicate	< 0.5	**250**	**810**	**34**	**36**	**6 J**	**69**	**1.8**	**0.94**	**2.5**	**20 J**	**2**
MW-59A	12/09/2011	Shallow Gaspur	Primary	< 5	**140**	**620**	**15**	**21**	< 5	**52**	< 5	< 5	< 5	**23 J**	< 5
MW-59A	03/28/2012	Shallow Gaspur	Primary	< 5	**140**	**620**	**18**	**24**	< 5	**48**	< 5	< 5	< 5	**17**	< 5
MW-59A	06/13/2012	Shallow Gaspur	Primary	< 5	**98**	**840**	**22**	**28**	**6.7**	**63**	< 5	< 5	< 5	**37**	< 5
MW-59A	12/14/2012	Shallow Gaspur	Primary	< 2.5	**66**	**450**	**9.9**	**18**	**9.7**	**37**	< 2.5	< 2.5	< 2.5	**21 J**	< 2.5
MW-59A	06/21/2013	Shallow Gaspur	Primary	< 2.5	**75**	**430**	**13**	**19**	**6**	**39**	< 1.5	< 1	< 2.5	**44**	< 1.5
MW-59A	12/13/2013	Shallow Gaspur	Primary	< 0.5	**92**	**220**	**8.8**	**13**	**7.5**	**23**	< 0.3	< 0.2	< 0.5	**41**	< 0.3
MW-59A	06/12/2014	Shallow Gaspur	Primary	< 1	**69**	**320**	**6.5**	**13**	**5.4**	**20**	< 0.6	**0.52 J**	< 1	**41**	< 0.6
MW-59A	12/18/2014	Shallow Gaspur	Primary	< 1	**91**	**400**	**9.5**	**16**	**5.1**	**39**	**1.4**	**0.8 J**	< 1	**62**	**3.4**
MW-59A	06/08/2015	Shallow Gaspur	Primary	< 2.5	**22**	**450**	**11**	**23**	**25**	**55**	**2.3 J**	< 1	< 2.5	**68**	< 1.5
MW-59A	12/10/2015	Shallow Gaspur	Primary	< 2.5	**26**	**330**	**6.3**	**13**	**36**	**36**	< 1.5	< 1	< 2.5	**69**	< 1.5
MW-59A	06/07/2016	Shallow Gaspur	Primary	< 2.5	**29**	**300**	**8.7**	**14**	**11**	**32**	< 1.5	< 1	< 2.5	**59**	< 1.5
MW-59A	12/02/2016	Shallow Gaspur	Primary	< 2.5	**5.4**	**91**	**1.8 J**	**4.6**	**6**	**9.8**	< 1.5	< 1	< 2.5	**34**	< 1.5
MW-59B	06/13/2011	Intermediate Gaspur	Primary	< 0.5	**0.57**	**0.88**	**0.62**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**5.2**	< 0.5
MW-59B	09/27/2011	Intermediate Gaspur	Primary	< 0.5	**1.3**	**5.8**	**0.6**	< 0.5	**1.9**	**2.3**	< 0.5	< 0.5	< 0.5	**7.8**	< 0.5
MW-59B	12/06/2011	Intermediate Gaspur	Primary	< 0.5	**0.54**	**1.1**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**12**	< 0.5
MW-59B	03/27/2012	Intermediate Gaspur	Primary	< 0.5	**0.63**	**2.2**	**2.4**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**13 J**	< 0.5
MW-59B	06/13/2012	Intermediate Gaspur	Primary	< 0.5	**0.78**	**2.9**	**2.7**	< 0.5	< 0.5	**0.56**	< 0.5	< 0.5	< 0.5	**15**	< 0.5
MW-59B	12/14/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	**0.91**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**6.6**	< 0.5
MW-59B	06/21/2013	Intermediate Gaspur	Primary	< 0.5	**0.28 J**	**0.77**	**2.6**	< 0.4	< 0.5	**0.38 J**	< 0.3	< 0.2	< 0.5	**14**	< 0.3
MW-59B	12/13/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**2.1**	**1.1**	< 0.4	< 0.5	**0.71**	< 0.3	< 0.2	< 0.5	**4.8**	< 0.3
MW-59B	06/12/2014	Intermediate Gaspur	Primary	< 0.5	**0.43 J**	**1.7**	**0.94**	< 0.4	< 0.5	**0.88**	**0.32 J**	< 0.2	< 0.5	**5.8**	< 0.3
MW-59B	12/18/2014	Intermediate Gaspur	Primary	< 0.5	**0.57**	**1.5**	**1.3**	< 0.4	< 0.5	**0.78**	**0.38 J**	< 0.2	< 0.5	**7.1**	< 0.3
MW-59B	06/09/2015	Intermediate Gaspur	Primary	< 0.5	**1.1**	**3**	**1.4**	< 0.4	< 0.5	**1.1**	**1.1**	< 0.2	< 0.5	**6.2**	< 0.3
MW-59B	12/09/2015	Intermediate Gaspur	Primary	< 0.5	**1**	**1.7**	**1.6**	< 0.4	< 0.5	**0.62**	**0.83**	< 0.2	< 0.5	**5.9**	< 0.3
MW-59B	06/09/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.94**	**3.3**	< 0.4	< 0.5	**0.47 J**	**0.61**	< 0.2	< 0.5	**6.4**	< 0.3
MW-59B	12/02/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.79**	**2.3**	< 0.4	< 0.5	< 0.2	**0.41 J**	< 0.2	< 0.5	**8.2**	< 0.3
MW-59B	06/06/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.7**	**4.2**	< 0.4	< 0.5	**0.42 J**	< 0.3	< 0.2	< 0.5	**9.4**	< 0.3
MW-59B	12/08/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.1**	< 0.3
MW-59B	12/08/2017	Intermediate Gaspur	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**2.3**	< 0.3
MW-59B	06/06/2018	Intermediate Gaspur	Primary	< 0.5	**0.6**	**0.95**	**2.4**	< 0.4	< 0.5	**0.52**	< 0.3	< 0.2	< 0.5	**4.9**	< 0.3
MW-59B	12/06/2018	Intermediate Gaspur	Primary	< 0.5	**0.36 J**	**0.41 J**	**1.3 J**	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**3.3**	< 0.3
MW-59B	12/06/2018	Intermediate Gaspur	Duplicate	< 0.5	**0.34 J**	**0.42 J**	**1.2 J**	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**3.4**	< 0.3
MW-59B	06/13/2019	Intermediate Gaspur	Primary	< 0.5	**1**	**0.99**	**2.2**	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**6.9**	< 0.2
MW-59C	06/13/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	**0.72**	< 0.5	< 0.5	< 0.5	< 0.5	**2.3**	< 0.5	< 0.5	< 4	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-59C	09/28/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 0.94	< 0.5
MW-59C	12/06/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 0.95	< 0.5
MW-59C	03/26/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.8**	< 0.5	< 0.5	< 0.94 J	< 0.5
MW-59C	06/13/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	< 0.94	< 0.5
MW-59C	12/11/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**3.1**	< 0.5	< 0.5	< 0.95 J	< 0.5
MW-59C	06/21/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.2**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/13/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/12/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.5**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/18/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**0.98**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/09/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.2**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/11/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.35 J**	< 0.3	< 0.4	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/09/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/02/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.7**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/06/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.2**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/08/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**0.96**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/06/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/06/2018	Intermediate Gaspur	Duplicate	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**1.8**	< 0.2	< 0.5	< 1	< 0.3
MW-59C	12/06/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-59C	06/12/2019	Intermediate Gaspur	Primary	< 0.5	< 0.3	< 0.3	< 0.4	< 0.3	< 0.4	< 0.2	**1.7**	< 0.4	< 0.3	< 1	< 0.2
MW-60A	07/27/2011	Shallow Gaspur	Primary	< 0.5	**56**	**94**	**7.5**	**5.4**	**0.68**	**10**	**0.69**	< 0.5	< 0.5	**11**	**1.7**
MW-60A	09/28/2011	Shallow Gaspur	Primary	< 0.5	**28**	**52**	**4.9**	**3.4**	< 0.5	**4.4**	< 0.5	< 0.5	< 0.5	**13**	**0.85**
MW-60A	12/08/2011	Shallow Gaspur	Primary	< 0.5	**20**	**49**	**4.7**	**3.1**	**0.63**	**5.2**	< 0.5	< 0.5	< 0.5	**13**	< 0.5
MW-60A	03/27/2012	Shallow Gaspur	Primary	< 0.5	**26**	**67**	**8.4**	**4.5**	**0.97**	**7.9**	< 0.5	< 0.5	< 0.5	**21 J**	< 0.5
MW-60A	06/12/2012	Shallow Gaspur	Primary	< 0.5	**22**	**74**	**7.8**	**4.3**	**1.3**	**8.8**	**0.6**	< 0.5	< 0.5	**32**	**0.66**
MW-60A	12/14/2012	Shallow Gaspur	Primary	< 0.5	**20**	**87**	**8.1**	**4.5**	**2**	**12**	**0.73**	< 0.5	**0.54**	**22 J**	**0.87**
MW-60A	06/19/2013	Shallow Gaspur	Primary	< 0.5	**12**	**77**	**4.6**	**4**	**0.58**	**9.6**	**0.56**	< 0.2	< 0.5	**19**	**0.95**
MW-60A	12/11/2013	Shallow Gaspur	Primary	< 0.5	**3.5**	**12**	**2.4**	**1.3**	**0.58**	**0.6**	< 0.3	< 0.2	< 0.5	**10**	< 0.3
MW-60A	06/11/2014	Shallow Gaspur	Primary	< 0.5	**1.3**	**6.6**	**1.2**	**0.77**	< 0.5	**0.44 J**	**0.34 J**	< 0.2	< 0.5	**5.4**	< 0.3
MW-60A	12/17/2014	Shallow Gaspur	Primary	< 0.5	**1.3**	**4.8**	**0.9**	**0.52**	< 0.5	**0.66**	**0.56**	< 0.2	< 0.5	**5.8**	< 0.3
MW-60A	06/10/2015	Shallow Gaspur	Primary	< 0.5	**2.6**	**6.4**	**0.65**	**0.45 J**	**0.7**	**0.62**	**2.2**	< 0.2	< 0.5	**4.8**	< 0.3
MW-60A	12/08/2015	Shallow Gaspur	Primary	< 0.5	**1.3**	**5.1**	**0.48 J**	< 0.4	< 0.5	**0.29 J**	**1.6**	< 0.2	< 0.5	**2.4**	< 0.3
MW-60A	06/07/2016	Shallow Gaspur	Primary	< 0.5	**3.3**	**3.6**	**0.59**	< 0.4	< 0.5	**0.36 J**	**0.94**	< 0.2	< 0.5	**2.6**	< 0.3
MW-60A	11/29/2016	Shallow Gaspur	Primary	< 0.5	**0.57**	**5.9**	**1.5**	< 0.4	< 0.5	**0.83**	**0.78**	< 0.2	< 0.5	**5.2**	< 0.3
MW-60A	06/07/2017	Shallow Gaspur	Primary	< 0.5	**1.4**	**4.6**	**1.3**	**0.41 J**	< 0.5	**0.53**	**0.52**	< 0.2	< 0.5	**7.4**	< 0.3
MW-60A	06/07/2017	Shallow Gaspur	Duplicate	< 0.5	**1.4**	**4.4**	**1.4**	< 0.4	< 0.5	**0.47 J**	**0.42 J**	< 0.2	< 0.5	**7.4**	< 0.3
MW-60A	12/06/2017	Shallow Gaspur	Primary	< 0.5	**0.65**	**2**	**1.2**	< 0.4	< 0.5	**0.4 J**	**0.6**	< 0.2	< 0.5	**6.2**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-60A	06/06/2018	Shallow Gaspur	Primary	< 0.5	**0.95**	**3**	**1.8**	**0.51**	< 0.5	**0.63**	< 0.3	< 0.2	< 0.5	**5.6**	< 0.3
MW-60A	12/05/2018	Shallow Gaspur	Primary	< 0.5	**1.5**	**2.5**	**2**	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	**7.9**	< 0.3
MW-60A	06/12/2019	Shallow Gaspur	Primary	< 0.5	**0.66**	**1.9**	**3.7**	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	**9.5**	< 0.2
MW-60B	07/27/2011	Lower Gaspur	Primary	< 0.5	**7.7**	**76 J**	**3.1**	**4.6**	**1.1**	**6.2**	**0.78**	< 0.5	< 0.5	**19**	< 0.5
MW-60B	09/28/2011	Lower Gaspur	Primary	< 0.5	**5.1**	**56**	**2**	**2.9**	**1.4**	**4.6**	**0.87**	< 0.5	< 0.5	**15**	< 0.5
MW-60B	12/08/2011	Lower Gaspur	Primary	< 0.5	**5.3**	**60**	**2**	**3**	**1.9**	**5.2**	**1.1**	< 0.5	< 0.5	**31 J**	< 0.5
MW-60B	12/08/2011	Lower Gaspur	Primary	< 0.5	**5.7**	**62**	**2**	**3.1**	**1.8**	**5.4**	**1.2**	< 0.5	< 0.5	**16 J**	< 0.5
MW-60B	03/27/2012	Lower Gaspur	Primary	< 0.5	**5.7**	**68**	**2.4**	**3.6**	**1.8**	**5.3**	**1.3**	< 0.5	< 0.5	**15 J**	< 0.5
MW-60B	06/12/2012	Lower Gaspur	Split	< 0.5	**4.6**	**55 D**	**2.3**	**3.4**	**3.2**	**5.2**	**1.5**	< 0.5	**0.3 J**	**12**	NA
MW-60B	06/12/2012	Lower Gaspur	Primary	< 0.5	**4.9**	**64**	**2.2**	**3.2**	**2.5**	**5.3**	**1.6**	< 0.5	< 0.5	**25**	< 0.5
MW-60B	12/12/2012	Lower Gaspur	Primary	< 0.5	**4.6**	**59**	**2.8**	**3.5**	**2**	**4.6**	**1.2**	< 0.5	< 0.5	**25**	< 0.5
MW-60B	12/12/2012	Lower Gaspur	Primary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**25**	NA
MW-60B	06/19/2013	Lower Gaspur	Primary	< 0.5	**2.3**	**33**	**1.6**	**2.3**	**0.96**	**3.3**	**0.79**	< 0.2	< 0.5	**15**	< 0.3
MW-60B	12/11/2013	Lower Gaspur	Primary	< 0.5	**3**	**36**	**1.9**	**2.8**	**0.93**	**3.2**	**0.98**	< 0.2	< 0.5	**15**	< 0.3
MW-60B	06/11/2014	Lower Gaspur	Primary	< 0.5	**2.8**	**23**	**1**	**1.5**	**0.5**	**1.9**	**0.69**	< 0.2	< 0.5	**12**	< 0.3
MW-60B	12/17/2014	Lower Gaspur	Primary	< 0.5	**1.7**	**22**	**1.2**	**2.1**	**1.2**	**1.6**	**1.2**	< 0.2	< 0.5	**12**	< 0.3
MW-60B	06/10/2015	Lower Gaspur	Primary	< 0.5	**2.3**	**35**	**2.3**	**3.5**	**2**	**4**	**2**	< 0.2	< 0.5	**16**	< 0.3
MW-60B	12/08/2015	Lower Gaspur	Primary	< 0.5	**3.1**	**50**	**3**	**3.8**	**1.2**	**5.2**	**1.1**	< 0.2	< 0.5	**13**	< 0.3
MW-60B	06/07/2016	Lower Gaspur	Primary	< 0.5	**2.1**	**17**	**1.4**	**1.5**	**0.59**	**1.7**	**0.6**	< 0.2	< 0.5	**8.5**	< 0.3
MW-60B	06/07/2016	Lower Gaspur	Duplicate	< 0.5	**2**	**17**	**1.6**	**1.4**	**0.53**	**1.7**	**0.54**	< 0.2	< 0.5	**8.2**	< 0.3
MW-60B	11/29/2016	Lower Gaspur	Primary	< 0.5	**1.7**	**20**	**1.5**	**1.7**	**0.5**	**1.7**	**0.41 J**	< 0.2	< 0.5	**9.7**	< 0.3
MW-60B	06/07/2017	Lower Gaspur	Primary	< 0.5	**0.32 J**	**9**	< 0.3	**0.53**	< 0.5	**1**	**1**	< 0.2	< 0.5	**8.9**	< 0.3
MW-60B	12/06/2017	Lower Gaspur	Primary	< 0.5	**1.1**	**21**	**1.4**	**2.4**	< 0.5	**1.8**	**0.65**	< 0.2	< 0.5	**4.8**	< 0.3
MW-60B	06/06/2018	Lower Gaspur	Primary	< 0.5	**1.2**	**20**	**1.3**	**2.7**	< 0.5	**1.9**	< 0.3	< 0.2	< 0.5	**4.2**	< 0.3
MW-60B	12/05/2018	Lower Gaspur	Primary	< 0.5	**0.73**	**14**	**1.1**	**1.7**	< 0.5	**1.1**	< 0.3	< 0.2	< 0.5	**5.6**	< 0.3
MW-60B	06/12/2019	Lower Gaspur	Primary	< 0.5	**0.6**	**18**	**1.7**	**2.5**	< 0.4	**1.2**	< 0.2	< 0.4	< 0.3	**6.6**	< 0.2
MW-61A	09/26/2011	Shallow Gaspur	Primary	< 0.5	**4.6**	**58**	**1.4**	**3.5**	**9**	**4.2**	**4.8**	**2.4**	< 0.5	**15 J**	< 0.5
MW-61A	12/08/2011	Shallow Gaspur	Primary	< 0.5	**1.2**	**80**	**1.5**	**3.9**	**4.2**	**4.3**	**6.6**	**3.4**	**0.57**	**15**	< 0.5
MW-61A	03/28/2012	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.99**	< 0.5	< 0.5	< 0.5	< 0.5	**2.7**	< 0.5	< 0.5	**3.9 J**	< 0.5
MW-61A	06/08/2012	Shallow Gaspur	Primary	< 0.5	**0.88**	**86**	**1.6**	**4.1**	**4.1**	**4.3**	**6**	**5.4**	**0.62**	**12 J**	< 0.5
MW-61A	12/12/2012	Shallow Gaspur	Primary	< 0.5	**2.5**	**46**	**0.93**	**2.9**	**10**	**3.9**	**4**	**4.9**	**0.54**	**11**	< 0.5
MW-61A	06/21/2013	Shallow Gaspur	Primary	< 0.5	**1.2**	**38**	**1.1**	**2.2**	**3.1**	**3.3**	**2.4**	**3.4**	< 0.5	**11**	< 0.3
MW-61A	12/12/2013	Shallow Gaspur	Primary	< 0.5	**0.43 J**	**50**	**1.6**	**2.7**	**3**	**3.1**	**2.4**	**3.7**	< 0.5	**12**	< 0.3
MW-61A	12/12/2013	Shallow Gaspur	Duplicate	< 0.5	**0.34 J**	**48**	**1.5**	**2.3**	**2.8**	**2.9**	**2.4**	**3.6**	< 0.5	**13**	< 0.3
MW-61A	06/09/2014	Shallow Gaspur	Primary	< 0.5	< 0.2	**24**	< 0.3	**4.4**	**1.4**	**0.57**	**1.6**	**2.4**	< 0.5	**3.7**	< 0.3
MW-61A	12/17/2014	Shallow Gaspur	Primary	< 0.5	**1.2**	**59**	**3.5**	**3**	**2.8**	**5**	**0.96**	**0.43 J**	< 0.5	**24**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-61A	06/09/2015	Shallow Gaspur	Primary	< 0.5	**2.1**	**34**	**2**	**1.6**	**1.8**	**2.4**	**2.9**	< 0.2	< 0.5	**16**	< 0.3
MW-61A	12/10/2015	Shallow Gaspur	Primary	< 0.5	**26**	**72**	**4.4**	**3.1**	**2.2**	**8.4**	**2.2**	< 0.2	**0.57**	**46**	< 0.3
MW-61A	06/09/2016	Shallow Gaspur	Primary	< 0.5	**0.57**	**43**	**2.4**	**3.1**	**2**	**3.2**	**3.5**	**3.3**	< 0.5	**9.4**	< 0.3
MW-61A	12/01/2016	Shallow Gaspur	Primary	< 0.5	**0.53**	**73**	**2.1**	**4.9**	**2.4**	**4.4**	**4.9**	**3**	< 0.5	**14**	< 0.3
MW-61A	06/06/2017	Shallow Gaspur	Primary	< 0.5	**0.58**	**110**	**2.8**	**5.4**	**6.2**	**7.6**	**3.9**	**4.2**	< 0.5	**26**	< 0.3
MW-61A	12/08/2017	Shallow Gaspur	Primary	< 1	< 0.4	**100**	**2.4**	**6.1**	**1.6**	**8.2**	**4.2**	**5.1**	< 1	**20**	< 0.6
MW-61A	12/08/2017	Shallow Gaspur	Duplicate	< 1	< 0.4	**110**	**3.3**	**7**	**2**	**9.2**	**4.2**	**5.6**	< 1	**21**	< 0.6
MW-61A	06/05/2018	Shallow Gaspur	Primary	< 0.5	**0.66**	**84**	**2.3**	**4.9**	**2.1**	**9.8**	**4.8**	**3.7**	< 0.5	**14**	< 0.3
MW-61A	12/07/2018	Shallow Gaspur	Primary	< 2	< 0.8	**140**	**4.2**	**6.1**	**5.3**	**16**	< 1.2	**3.2**	< 2	**55**	< 1.2
MW-61A	06/13/2019	Shallow Gaspur	Primary	< 0.5	< 0.3	**40**	**0.98**	**2.1**	**0.74**	**3.2**	**2.7**	**2.8**	< 0.3	**5**	< 0.2
MW-61A	06/13/2019	Shallow Gaspur	Duplicate	< 0.5	< 0.3	**42**	**0.89**	**2.1**	**0.71**	**3.2**	**2.8**	**2.8**	< 0.3	**4.9**	< 0.2
MW-61B	09/26/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	**1.4**	< 0.5	< 0.5	< 0.5	< 0.5	**2.6**	< 0.5	< 0.5	< 4.5 J	< 0.5
MW-61B	12/06/2011	Intermediate Gaspur	Primary	< 0.5	< 0.5	**1.3**	< 0.5	< 0.5	< 0.5	< 0.5	**3**	< 0.5	< 0.5	**4.1**	< 0.5
MW-61B	03/26/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	**0.94**	< 0.5	< 0.5	**0.56**	< 0.5	**2.9**	< 0.5	< 0.5	**3.6 J**	< 0.5
MW-61B	03/26/2012	Intermediate Gaspur	Duplicate	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	**0.59**	< 0.5	**2.9**	< 0.5	< 0.5	**3.6 J**	< 0.5
MW-61B	06/08/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	**0.9**	< 0.5	< 0.5	**0.85**	< 0.5	**3.3**	< 0.5	< 0.5	**4 J**	< 0.5
MW-61B	12/13/2012	Intermediate Gaspur	Primary	< 0.5	< 0.5	**0.55**	< 0.5	< 0.5	**0.57**	< 0.5	**2.5**	< 0.5	< 0.5	**4**	< 0.5
MW-61B	06/21/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.34 J**	< 0.3	< 0.4	< 0.5	< 0.2	**2.5**	< 0.2	< 0.5	**3.5**	< 0.3
MW-61B	12/12/2013	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.38 J**	< 0.3	< 0.4	< 0.5	< 0.2	**2.7**	< 0.2	< 0.5	**2.9**	< 0.3
MW-61B	06/09/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	**2.6**	< 0.2	< 0.5	**1.2 J**	< 0.3
MW-61B	12/17/2014	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.59**	< 0.3	< 0.4	< 0.5	< 0.2	**2.2**	< 0.2	< 0.5	**1.3 J**	< 0.3
MW-61B	06/08/2015	Intermediate Gaspur	Primary	< 0.5	< 0.2	**1.4**	< 0.3	< 0.4	< 0.5	< 0.2	**3.3**	< 0.2	< 0.5	**2.5**	< 0.3
MW-61B	12/09/2015	Intermediate Gaspur	Primary	< 0.5	**0.26 J**	**2.1**	< 0.3	< 0.4	< 0.5	**0.29 J**	**3.4**	< 0.2	< 0.5	< 1	< 0.3
MW-61B	06/09/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	**2**	< 0.3	< 0.4	< 0.5	< 0.2	**2.7**	< 0.2	< 0.5	< 1	< 0.3
MW-61B	12/01/2016	Intermediate Gaspur	Primary	< 0.5	< 0.2	**2.9**	< 0.3	< 0.4	< 0.5	< 0.2	**2.9**	< 0.2	< 0.5	**1.6 J**	< 0.3
MW-61B	06/06/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**2.8**	< 0.3	< 0.4	**0.6**	< 0.2	< 0.3	< 0.2	**1.2**	**2.3**	< 0.3
MW-61B	12/08/2017	Intermediate Gaspur	Primary	< 0.5	< 0.2	**0.56**	< 0.3	< 0.4	< 0.5	< 0.2	**1.6**	< 0.2	< 0.5	**1.4 J**	< 0.3
MW-61B	06/05/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	**5.2**	< 0.3	< 0.4	< 0.5	**0.32 J**	**3.4 J**	< 0.2	< 0.5	< 1	< 0.3
MW-61B	06/05/2018	Intermediate Gaspur	Duplicate	< 0.5	< 0.2	**6**	< 0.3	< 0.4	< 0.5	**0.33 J**	**5.3 J**	< 0.2	< 0.5	< 1	< 0.3
MW-61B	12/07/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	**2**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-61B	06/13/2019	Intermediate Gaspur	Primary	< 0.5	< 0.3	**7.8**	< 0.4	**0.45 J**	< 0.4	< 0.2	**5.2**	< 0.4	< 0.3	< 1	< 0.2
MW-62A	07/26/2011	Shallow Gaspur	Primary	< 0.5	**4.7**	**32**	< 0.5	**6.4**	< 0.5	< 0.5	**2.5**	**3.2**	< 0.5	**1.1**	< 0.5
MW-62A	07/26/2011	Shallow Gaspur	Duplicate	< 0.5	**4.2**	**29**	< 0.5	**5.8**	< 0.5	< 0.5	**2.3**	**3**	< 0.5	**1**	< 0.5
MW-62A	09/27/2011	Shallow Gaspur	Primary	< 0.5	**3.4**	**33**	< 0.5	**6.2**	< 0.5	< 0.5	**2.3**	**3**	< 0.5	< 1.2	< 0.5
MW-62A	12/07/2011	Shallow Gaspur	Primary	< 0.5	**3.1**	**31**	< 0.5	**6.1**	< 0.5	< 0.5	**2.2**	**2.5**	< 0.5	**1.4**	< 0.5
MW-62A	03/27/2012	Shallow Gaspur	Primary	< 0.5	**3.1**	**26**	< 0.5	**5**	< 0.5	< 0.5	**2.2**	**2.4**	< 0.5	**1.2 J**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-62A	06/12/2012	Shallow Gaspur	Primary	< 0.5	**2.2**	**25**	< 0.5	**4.2**	< 0.5	< 0.5	**2.2**	**2.5**	< 0.5	**1.2**	< 0.5
MW-62A	12/14/2012	Shallow Gaspur	Primary	< 0.5	**2.3**	**30**	< 0.5	**6.2**	**0.52**	< 0.5	**1.6**	**2.7**	< 0.5	**1.6**	< 0.5
MW-62A	06/19/2013	Shallow Gaspur	Primary	< 0.5	**1.2**	**23**	< 0.3	**4.6**	< 0.5	**0.3 J**	**1.4**	**1.8**	< 0.5	**1.5 J**	< 0.3
MW-62A	12/11/2013	Shallow Gaspur	Primary	< 0.5	**1.1**	**23**	< 0.3	**4.4**	< 0.5	< 0.2	**1.3**	**1.3**	< 0.5	**1.5 J**	< 0.3
MW-62A	06/11/2014	Shallow Gaspur	Primary	< 0.5	**3.5**	**22**	< 0.3	**6.3**	< 0.5	< 0.2	**1.5**	**1.4**	< 0.5	**1.6 J**	< 0.3
MW-62A	12/17/2014	Shallow Gaspur	Primary	< 0.5	**3.5**	**23**	< 0.3	**8.8**	< 0.5	< 0.2	**1.7**	**1.1**	< 0.5	< 1	< 0.3
MW-62A	06/10/2015	Shallow Gaspur	Primary	< 0.5	**4**	**23**	**0.31 J**	**10**	< 0.5	< 0.2	**3.4**	**1.4**	< 0.5	< 1	< 0.3
MW-62A	12/08/2015	Shallow Gaspur	Primary	< 0.5	**3.3**	**27**	< 0.3	**11**	< 0.5	< 0.2	**2.3**	**1.1**	< 0.5	< 1	< 0.3
MW-62A	12/08/2015	Shallow Gaspur	Duplicate	< 0.5	**3.3**	**27**	< 0.3	**11**	< 0.5	< 0.2	**2.4**	**1.1**	< 0.5	< 1	< 0.3
MW-62A	06/07/2016	Shallow Gaspur	Primary	< 0.5	**1.8**	**21**	< 0.3	**8.6**	< 0.5	< 0.2	**1.9**	< 0.2	< 0.5	< 1	< 0.3
MW-62A	11/29/2016	Shallow Gaspur	Primary	< 0.5	**1.3**	**20**	< 0.3	**7.9**	< 0.5	**0.69**	**1.9**	**0.42 J**	< 0.5	**1.2 J**	< 0.3
MW-62A	06/07/2017	Shallow Gaspur	Primary	< 0.5	**0.34 J**	**2.7**	< 0.3	**0.85**	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
MW-62A	12/06/2017	Shallow Gaspur	Primary	< 0.5	**0.65**	**22**	< 0.3	**7.8**	< 0.5	**1.5**	**1.5**	< 0.2	< 0.5	**3.6**	< 0.3
MW-62A	06/06/2018	Shallow Gaspur	Primary	< 0.5	**0.54**	**20**	< 0.3	**7.7**	< 0.5	**1.3**	**1.3**	< 0.2	< 0.5	**2.3**	< 0.3
MW-62A	12/05/2018	Shallow Gaspur	Primary	< 0.5	**0.41 J**	**19**	< 0.3	**6.4**	< 0.5	**0.82**	**1.6**	< 0.2	< 0.5	**2.6**	< 0.3
MW-62A	06/12/2019	Shallow Gaspur	Primary	< 0.5	< 0.3	**19**	< 0.4	**8.1**	**1.2**	**0.88**	**1.6**	< 0.4	< 0.3	**2.8**	< 0.2
MW-62B	09/28/2011	Lower Gaspur	Primary	< 0.5	**44**	**62**	< 0.5	**27**	< 0.5	< 0.5	**7.6**	**20**	< 0.5	< 0.95	< 0.5
MW-62B	12/08/2011	Lower Gaspur	Primary	< 0.5	**44**	**61**	**0.5**	**25**	< 0.5	< 0.5	**8.3**	**20**	< 0.5	< 0.95	< 0.5
MW-62B	03/28/2012	Lower Gaspur	Primary	< 0.5	**45**	**72**	**0.52**	**28**	**0.63**	< 0.5	**7.7**	**21**	< 0.5	< 0.94 J	< 0.5
MW-62B	06/12/2012	Lower Gaspur	Primary	< 0.5	**15**	**90**	**0.57**	**25**	< 0.5	< 0.5	**7.5**	**20**	< 0.5	< 0.94	< 0.5
MW-62B	12/11/2012	Lower Gaspur	Primary	< 0.5	**0.74**	**76**	**0.52**	**19**	**1.3**	< 0.5	**6.7**	**13**	< 0.5	< 0.95	< 0.5
MW-62B	06/19/2013	Lower Gaspur	Primary	< 0.5	**11**	**41**	**0.36 J**	**13**	**1.3**	< 0.2	**3.6**	**9.7**	< 0.5	< 1 J	< 0.3
MW-62B	12/11/2013	Lower Gaspur	Primary	< 0.5	**1.5**	**46**	**0.51**	**14**	**1.7**	< 0.2	**3.4**	**10**	< 0.5	< 1	< 0.3
MW-62B	06/11/2014	Lower Gaspur	Primary	< 0.5	**6.4**	**30**	< 0.3	**7.5**	**0.75**	< 0.2	**2.1**	**5.6**	< 0.5	< 1	< 0.3
MW-62B	12/17/2014	Lower Gaspur	Primary	< 0.5	**3.1**	**20**	< 0.3	**3.8**	**0.56**	< 0.2	**2**	**2**	< 0.5	< 1	< 0.3
MW-62B	06/10/2015	Lower Gaspur	Primary	< 0.5	**6.6**	**18**	< 0.3	**4.2**	**0.82**	< 0.2	**3.7**	**1.6**	< 0.5	< 1	< 0.3
MW-62B	12/08/2015	Lower Gaspur	Primary	< 0.5	**7.3**	**13**	< 0.3	**2.7**	**0.73**	< 0.2	**2.9**	**0.51**	< 0.5	< 1	< 0.3
MW-62B	06/07/2016	Lower Gaspur	Primary	< 0.5	**6.7**	**10**	< 0.3	**2.4**	**0.76**	< 0.2	**1.9**	**0.86**	< 0.5	< 1	< 0.3
MW-62B	11/29/2016	Lower Gaspur	Primary	< 0.5	**4.9**	**8.7**	< 0.3	**2.6**	**1.3**	< 0.2	**2.5**	**0.66**	< 0.5	< 1	< 0.3
MW-62B	06/07/2017	Lower Gaspur	Primary	< 0.5	**4.2**	**9.6**	< 0.3	**1.7**	**0.89**	< 0.2	**2.5**	< 0.2	< 0.5	< 1	< 0.3
MW-62B	12/06/2017	Lower Gaspur	Primary	< 0.5	**3.8**	**9.5**	< 0.3	**1.8**	**0.64**	< 0.2	**2.5**	< 0.2	< 0.5	< 1.7	< 0.3
MW-62B	06/06/2018	Lower Gaspur	Primary	< 0.5	**4.4**	**11**	< 0.3	**1.8**	< 0.5	< 0.2	**2.4**	< 0.2	< 0.5	< 1	< 0.3
MW-62B	12/05/2018	Lower Gaspur	Primary	< 0.5	**1.8**	**9**	< 0.3	**1.3**	< 0.5	< 0.2	**1.4**	< 0.2	< 0.5	< 1	< 0.3
MW-62B	06/12/2019	Lower Gaspur	Primary	< 0.5	**1.7**	**7.7**	< 0.4	**1.1**	**1.6**	< 0.2	**1.9**	< 0.4	< 0.3	< 1	< 0.2
MW-63	06/05/2018	Shallow Gaspur	Primary	< 0.5	**0.48 J**	**3**	**10**	< 0.4	**0.88**	**1.1**	< 0.3	**3.3**	< 0.5	**22**	< 0.3
MW-63	09/17/2018	Shallow Gaspur	Primary	< 0.5	**0.5**	**3.2**	**7.2**	< 0.4	**0.74**	**0.55**	< 0.3	**3.9**	< 0.5	**28**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
MW-63	09/17/2018	Shallow Gaspur	Duplicate	< 0.5	**0.54**	**3.5**	**7.5**	< 0.4	**0.67**	**0.63**	< 0.3	**4.5**	< 0.5	**32**	< 0.3
MW-63	12/04/2018	Shallow Gaspur	Primary	< 0.5	**0.58**	**1.4**	**3.5**	< 0.4	< 0.5	< 0.2	< 0.3	**1.8**	< 0.5	**7.3**	< 0.3
MW-63	03/13/2019	Shallow Gaspur	Primary	< 0.5	**0.44 J**	**3.3**	**5.2**	< 0.4	< 0.5 J	< 0.2	< 0.3	**4.4**	< 0.5	**25**	< 0.3
MW-63	03/13/2019	Shallow Gaspur	Duplicate	< 0.5	**0.43 J**	**3.2**	**5**	< 0.4	< 0.5 J	< 0.2	< 0.3	**4.2**	< 0.5	**25**	< 0.3
MW-63	06/11/2019	Shallow Gaspur	Primary	< 0.5	**0.54**	**4**	**4.3**	< 0.3	< 0.4	< 0.2	< 0.2	**4.7**	< 0.3	**14**	< 0.2
MW-64A	06/05/2018	Intermediate Gaspur	Primary	< 50	< 20	< 20	< 30	< 40	< 50	< 20	< 30	**43 J**	< 50	**5.6**	< 30
MW-64A	09/17/2018	Intermediate Gaspur	Primary	< 0.5	< 0.2	**3.9**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	**22**	< 0.5	**7.4**	< 0.3
MW-64A	12/04/2018	Intermediate Gaspur	Primary	< 50	< 20	< 20	< 30	< 40	< 50	< 20	< 30	**42 J**	< 50	**7.1**	< 30
MW-64A	03/13/2019	Intermediate Gaspur	Primary	< 50	< 20	< 20	< 30	< 40	< 50 J	< 20	< 30	< 20	< 50	**7**	< 30
MW-64A	06/11/2019	Intermediate Gaspur	Primary	< 100	< 60	< 60	< 80	< 60	< 80	< 40	< 40	< 80	< 60	**6.4**	< 40
MW-64B	06/05/2018	Lower Gaspur	Primary	< 0.5	**0.38 J**	**3**	< 0.3	< 0.4	< 0.5	< 0.2	**3.3**	< 0.2	< 0.5	< 1	< 0.3
MW-64B	09/17/2018	Lower Gaspur	Primary	< 0.5	**0.33 J**	**4.1**	< 0.3	< 0.4	< 0.5	< 0.2	**2.8**	< 0.2	< 0.5	< 1	< 0.3
MW-64B	12/04/2018	Lower Gaspur	Primary	< 0.5	**0.48 J**	**4.1**	< 0.3	**0.48 J**	< 0.5	< 0.2	**2.7**	< 0.2	< 0.5	< 1	< 0.3
MW-64B	03/13/2019	Lower Gaspur	Primary	< 0.5	**0.31 J**	**3.6**	< 0.3	< 0.4	< 0.5 J	< 0.2	**1.3 J**	< 0.2	< 0.5	< 1	< 0.3
MW-64B	06/11/2019	Lower Gaspur	Primary	< 0.5	< 0.3	**3.1**	< 0.4	< 0.3	< 0.4	< 0.2	**2.1**	< 0.4	< 0.3	< 1	< 0.2
EW-2	12/01/2000	Shallow Gaspur	Primary	< 1	**150**	**170**	**9**	**10**	**1.7**	**20**	**5.4**	**2**	**3**	NA	NA
EW-2	03/01/2001	Shallow Gaspur	Primary	**0.6 J**	**130**	**110**	**10 J**	**12**	**2.4**	**20**	< 0.5	**2**	**4**	NA	NA
EW-2	05/01/2003	Shallow Gaspur	Primary	< 50	**86**	**1300 J**	**46 J**	**39 J**	**12 J**	**260**	**46 J**	**20**	< 50 *	NA	NA
EW-2	12/01/2003	Shallow Gaspur	Primary	< 1	**16**	**1200**	**72**	**55**	**13**	**320**	**36**	**15**	**11**	NA	NA
EW-2	02/01/2004	Shallow Gaspur	Primary	< 5	**140**	**1000**	**56**	**44**	**12**	**230**	**39**	**14**	**13**	NA	NA
EW-2	04/04/2004	Shallow Gaspur	Primary	< 0.5	**270**	**1200**	**54 E**	**63 J**	**84 J**	**280**	**48 E**	**20**	**15**	**710**	NA
EW-2	07/01/2004	Shallow Gaspur	Primary	< 2	**130 D**	**390 D**	**27**	**51**	**460 D**	**250 D**	**39**	**14**	**11**	NA	NA
EW-2	11/01/2004	Shallow Gaspur	Primary	< 0.5	**130 D**	**210 D**	**34 E**	**72 JD**	**1100 D**	**240 D**	**41 E**	**20**	**15 J**	**700**	NA
EW-2	04/01/2005	Shallow Gaspur	Primary	< 0.5	**59 D**	**94 D**	**12**	**48 D**	**310 D**	**220 D**	**24**	**20**	**12**	**530**	NA
EW-2	11/01/2005	Shallow Gaspur	Primary	< 0.5	**190**	**120**	**25**	**59**	**430**	**250**	**22**	**16**	**11**	**510**	NA
EW-2	03/01/2006	Shallow Gaspur	Primary	< 0.5	**42 D**	**20**	**4.1**	**42 D**	**190 D**	**200 D**	**16**	**12**	**11**	**550**	NA
EW-2	08/01/2006	Shallow Gaspur	Primary	< 0.5	**30 D**	**46 D**	**5.4**	**40 D**	**110 D**	**200 D**	**21**	**13**	**9.1**	**430**	NA
EW-2	03/01/2008	Shallow Gaspur	Primary	< 0.5	**11**	**10**	**0.69**	**32 D**	**29 D**	**130 D**	**13**	**10**	**6**	**290 D**	NA
EW-2	05/14/2009	Shallow Gaspur	Primary	< 0.5	**29 D**	**94 D**	**2.4 J**	**23 D**	**58 D**	**120 D**	**16**	**10**	**8.1**	**160 D**	NA
EW-2	07/15/2010	Shallow Gaspur	Primary	< 0.5	**20**	**140**	**2.4**	**14**	**35 J**	**73 J**	**14**	**5.8**	**5.7**	**87 J**	**2**
EW-2	07/23/2012	Shallow Gaspur	Primary	< 0.5	**12**	**25**	**2.4**	**1.5**	**3.1**	**4.5**	**1.4**	**1.5**	< 0.5	**12**	< 0.5
EW-2	08/17/2012	Shallow Gaspur	Primary	< 0.5	**9.2**	**25**	**2.9**	**1.6**	**4.6**	**4.9**	**1.4**	**1.7**	< 0.5	**12 J**	< 0.5
EW-2	08/24/2012	Shallow Gaspur	Primary	< 0.5	**9.9**	**29**	**2.4**	**1.5**	**3.7**	**5.1**	**1.3**	**1.6**	**0.5**	**9.8 J**	< 0.5
EW-2	09/07/2012	Shallow Gaspur	Primary	< 0.5	**17**	**42**	**2.9**	**2.4**	**2.6**	**6.1**	**1.2**	**1.8**	< 0.5	**15 J**	< 0.5
EW-2	09/14/2012	Shallow Gaspur	Primary	< 0.5	**16**	**42**	**2.6**	**2.3**	**3.5**	**5.9**	**1.3**	**1.8**	**0.86**	**14 J**	**0.58**
EW-2	02/28/2013	Shallow Gaspur	Primary	< 0.5	**13**	**52**	**3.5**	**2.9**	**3.8**	**6.2**	**2**	**5.8**	**0.77**	**16**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
EW-2	03/08/2013	Shallow Gaspur	Primary	< 1	**13**	**40**	**2.4 J**	**2.5**	**2.8**	**5.1**	**1.4**	**3.8**	< 1	**24**	< 1
EW-2	03/15/2013	Shallow Gaspur	Primary	< 1	**15**	**44**	**3.6**	**3**	**3.4**	**5.4**	**1.9**	**3.8**	< 1	**21**	< 1
EW-2	03/22/2013	Shallow Gaspur	Primary	< 1	**16**	**47**	**3.1**	**2.9**	**3.8**	**6.1**	**1.9**	**4**	< 1	**21**	< 1 J
EW-2	06/21/2013	Shallow Gaspur	Primary	< 0.5	**11**	**41**	**3.2**	**2.7**	**2.8**	**6.2**	**1.7**	**2.4**	< 0.5	**17**	< 0.3
EW-2	12/13/2013	Shallow Gaspur	Primary	< 0.5	**12**	**38**	**3**	**2.3**	**2.7**	**4.4**	**2.1**	**2.5**	< 0.5	**16**	< 0.3
EW-2	06/12/2014	Shallow Gaspur	Primary	< 0.5	**3.8**	**26**	**2**	**1.8**	**1.4**	**2.7**	**1.3**	**2.4**	< 0.5	**15**	< 0.3
EW-2	12/17/2014	Shallow Gaspur	Primary	< 0.5	**4.2**	**35**	**2.5**	**2.1**	**2.9**	**3.7**	**1.3**	**2.7**	< 0.5	**16**	< 0.3
EW-2	06/11/2015	Shallow Gaspur	Primary	< 0.5	**6.3**	**32**	**3.2**	**2.5**	**4.7**	**4.7**	**2.5 J**	**3.1**	< 0.5	**17**	< 0.3
EW-2	12/11/2015	Shallow Gaspur	Primary	< 0.5	**2.5**	**27**	**3.6**	**1.7**	**3.2**	**3.2**	**0.86**	**2.5**	< 0.5	**16**	< 0.3
EW-2	06/10/2016	Shallow Gaspur	Primary	< 0.5	**2.3**	**17**	**4.9**	**1.2**	**2**	**2.1**	**0.42 J**	**2.5**	< 0.5	**17**	< 0.3
EW-2	12/01/2016	Shallow Gaspur	Primary	< 0.5	**1.9**	**19**	**4.6**	**1.3**	**2.2**	**2.1**	**0.38 J**	**2.7**	< 0.5	**18**	< 0.3
EW-2	06/07/2017	Shallow Gaspur	Primary	< 0.5	**0.48 J**	**11**	**2.8**	**0.82**	**3**	**1.7**	**0.42 J**	**2.7**	< 0.5	**17**	< 0.3
EW-2	12/06/2017	Shallow Gaspur	Primary	< 0.5	**0.93**	**29**	**2.4**	**1.4**	**2.6**	**4.2**	**0.95**	**3.3**	< 0.5	**13**	< 0.3
EW-2	06/06/2018	Shallow Gaspur	Primary	< 0.5	**0.52**	**15**	**2.2**	**0.93**	**1.3**	**1.3**	< 0.3	**5**	< 0.5	**7.9**	< 0.3
EW-2	06/06/2018	Shallow Gaspur	Duplicate	< 0.5	**0.6**	**16**	**2.1**	**0.91**	**1.2**	**1.3**	< 0.3	**4.6**	< 0.5	**8**	< 0.3
EW-2	12/04/2018	Shallow Gaspur	Primary	< 0.5	**0.6**	**13**	**2.8**	< 0.4	< 0.5	**0.79**	< 0.3	**5**	< 0.5	**8.9**	< 0.3
EW-2	06/13/2019	Shallow Gaspur	Primary	< 0.5	**0.48 J**	**7.3**	**1.4**	< 0.3	< 0.4	< 0.2	< 0.2	**2.4**	< 0.3	**7**	< 0.2
EW-4	07/26/2011	Shallow/Intermediate	Primary	< 0.5	**1**	**43**	< 0.5	**4.4**	< 0.5	**1.3**	**2.2**	**5.2**	< 0.5	**8.1**	< 0.5
EW-4	02/28/2013	Shallow/Intermediate	Primary	< 0.5	**1.9**	**45**	**0.82**	**2**	**2.2**	**2**	**3.6**	**5.2**	< 0.5	**8.8**	< 0.5
EW-4	03/08/2013	Shallow/Intermediate	Primary	< 1	**3.4**	**36**	< 1 J	**2.3**	**2**	**2.4**	**2.6**	**4**	< 1	**9.8**	< 1
EW-4	03/15/2013	Shallow/Intermediate	Primary	< 1	**3.5**	**40**	**1.2**	**2.4**	**2.4**	**2.7**	**3.3**	**3.5**	< 1	**9.9**	< 1
EW-4	03/22/2013	Shallow/Intermediate	Primary	< 1	**4.1**	**43**	**1.3**	**2.5**	**2.8**	**3**	**3.4**	**3.5**	< 1	**11**	< 1 J
EW-4	06/21/2013	Shallow/Intermediate	Primary	< 0.5	**5.4**	**43**	**2**	**2.5**	**2**	**4.2**	**2**	**2.2**	< 0.5	**15**	< 0.3
EW-4	12/13/2013	Shallow/Intermediate	Primary	< 0.5	**5.5**	**48**	**2.6**	**3.2**	**2**	**4.7**	**1.6**	**1.2**	< 0.5	**17**	< 0.3
EW-4	06/12/2014	Shallow/Intermediate	Primary	< 0.5	**1.9**	**44**	**2**	**3.4**	**1.3**	**3.1**	**1.4**	**1.2**	< 0.5	**20**	< 0.3
EW-4	12/17/2014	Shallow/Intermediate	Primary	< 0.5	**0.76**	**28**	**1.2**	**2**	**0.92**	**1.4**	**1.2**	**0.7**	< 0.5	**14**	< 0.3
EW-4	06/11/2015	Shallow/Intermediate	Primary	< 0.5	**4.4**	**40**	**2**	**4.8**	**2.1**	**3.1**	**3.2 J**	**1.5**	< 0.5	**15**	< 0.3
EW-4	12/09/2015	Shallow/Intermediate	Primary	< 0.5	**0.63**	**41**	**1.4**	**6.7**	**2.2**	**2.4**	**3.9**	**2.2**	< 0.5	**6.2**	< 0.3
EW-4	06/10/2016	Shallow/Intermediate	Primary	< 0.5	**0.61**	**41**	**1.4**	**4.9**	**2.1**	**2.1**	**3.9**	**2.7**	< 0.5	**2.9**	< 0.3
EW-4	12/01/2016	Shallow/Intermediate	Primary	< 0.5	**0.56**	**39**	**1.3**	**4.7**	**4.1**	**2**	**3.2**	**1.6**	< 0.5	**7.4**	< 0.3
EW-4	06/09/2017	Shallow/Intermediate	Primary	< 0.5	**0.4 J**	**38**	**0.91**	**3.4**	**1.6**	**2**	**2.5**	**1.4**	< 0.5	**10**	< 0.3
EW-4	06/09/2017	Shallow/Intermediate	Duplicate	< 0.5	**0.42 J**	**41**	**0.87**	**4.6**	**1.5**	**2.2**	**2.8**	**1.6**	< 0.5	**11**	< 0.3
EW-4	12/06/2017	Shallow/Intermediate	Primary	< 0.5	**0.38 J**	**45**	**1.1**	**3.6**	**1.8**	**2.7**	**3.7**	**1.5**	< 0.5	**9**	< 0.3
EW-4	06/07/2018	Shallow/Intermediate	Primary	< 0.5	< 0.2	**23**	**0.58**	**2.6**	**1.5**	**1.7**	**1.6**	**0.49 J**	< 0.5	**4**	< 0.3
EW-4	12/07/2018	Shallow/Intermediate	Primary	< 0.5	< 0.2	**0.36 J**	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
EW-4	06/14/2019	Shallow/Intermediate	Primary	< 0.5	< 0.3	**1.1**	< 0.4	< 0.3	< 0.4	< 0.2	< 0.2	< 0.4	< 0.3	< 1	< 0.2

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
EW-5	06/19/2013	Shallow Gaspur	Primary	< 0.5	**18**	**59**	**5.7**	**3.3**	**0.87**	**9.4**	**0.45 J**	< 0.2	< 0.5	**29**	< 0.3
EW-5	12/11/2013	Shallow Gaspur	Primary	< 0.5	**10**	**4.7**	**0.48 J**	< 0.4	< 0.5	**0.32 J**	< 0.3	< 0.2	< 0.5	< 1	< 0.3
EW-5	06/11/2014	Shallow Gaspur	Primary	< 0.5	**5.2**	**12**	**0.95**	**0.78**	< 0.5	**0.6**	< 0.3	< 0.2	< 0.5	**5.9**	< 0.3
EW-5	12/17/2014	Shallow Gaspur	Primary	< 0.5	**6.1**	**3.9**	**0.4 J**	< 0.4	< 0.5	**0.25 J**	< 0.3	< 0.2	< 0.5	**2**	< 0.3
EW-5	12/09/2015	Shallow Gaspur	Primary	< 0.5	**10**	**24**	**1.4**	**1.4**	< 0.5	**1.3**	**1.8**	< 0.2	< 0.5	**16**	< 0.3
EW-5	12/16/2015	Shallow Gaspur	Primary	< 0.5	**9.4**	**23**	**1.3**	**1.7**	< 0.5	**1.1**	**1.5**	< 0.2	< 0.5	**14**	< 0.3
EW-5	12/23/2015	Shallow Gaspur	Primary	< 0.5	**10**	**34**	**2.2**	**1.9**	< 0.5	**2.1**	**1.8**	**0.3 J**	< 0.5	**18**	< 0.3
EW-5	12/30/2015	Shallow Gaspur	Primary	< 0.5	**9.5**	**25**	**1.6**	**1.7**	**0.56**	**1.8**	< 0.3	< 0.2	< 0.5	**17**	< 0.3
EW-5	06/08/2016	Shallow Gaspur	Primary	< 0.5	**9.1**	**26**	**1.9**	**1.4**	< 0.5	**1.9**	**1.7**	< 0.2	< 0.5	**11**	< 0.3
EW-5	12/02/2016	Shallow Gaspur	Primary	< 0.5	**13**	**20**	**1.5**	**1.1**	< 0.5	**1.4**	< 0.3	< 0.2	< 0.5	**13**	< 0.3
EW-5	06/07/2017	Shallow Gaspur	Primary	< 0.5	**11**	**15**	**1.3**	**0.71**	< 0.5	**1.8**	< 0.3	< 0.2	< 0.5	**15**	< 0.3
EW-5	12/06/2017	Shallow Gaspur	Primary	< 0.5	**11**	**29**	**2.3**	**1.9**	< 0.5	**3.4**	**0.71**	< 0.2	< 0.5	**15**	< 0.3
EW-5	06/06/2018	Shallow Gaspur	Primary	< 0.5	**14**	**44**	**3.1**	**3.2**	< 0.5	**6.4**	**1.2**	< 0.2	< 0.5	**13**	< 0.3
EW-5	12/05/2018	Shallow Gaspur	Primary	< 0.5	**2**	**35 J+**	< 0.3	**5.5 J+**	< 0.5	**1.5 J+**	**1.9**	**0.77**	< 0.5	**6.1**	< 0.3
EW-5	06/12/2019	Shallow Gaspur	Primary	< 0.5	**8.8**	**43**	**3.4**	**1.9**	< 0.4	**7.5**	< 0.2	< 0.4	< 0.3	**32**	< 0.2
EW-7A	06/19/2013	Shallow/Intermediate	Primary	< 0.5	**3.1**	**41**	**0.55**	**3.7**	< 0.5	**1.2**	**2**	**2.3**	< 0.5	**5.2**	< 0.3
EW-7A	12/11/2013	Shallow/Intermediate	Primary	< 0.5	**1.8**	**35**	**0.51**	**4.4**	< 0.5	**0.72**	**2.1**	**3.9**	< 0.5	**3.4**	< 0.3
EW-7A	12/11/2013	Shallow/Intermediate	Duplicate	< 0.5	**1.8**	**36**	**0.51**	**4.4**	< 0.5	**0.56**	**2.1**	**4**	< 0.5	**3.4**	< 0.3
EW-7A	06/11/2014	Shallow/Intermediate	Primary	< 0.5	**0.94**	**36**	**0.38 J**	**3.3**	< 0.5	**0.38 J**	**1.6**	**2.3**	< 0.5	**4.5**	< 0.3
EW-7A	12/17/2014	Shallow/Intermediate	Primary	< 0.5	**0.82**	**33**	< 0.3	**3.5**	< 0.5	**0.48 J**	**1.4**	**2.3**	< 0.5	**2.5**	< 0.3
EW-7A	12/17/2014	Shallow/Intermediate	Duplicate	< 0.5	**0.88**	**34**	**0.36 J**	**3.6**	< 0.5	**0.49 J**	**1.7**	**2.2**	< 0.5	**2.6**	< 0.3
EW-7A	12/09/2015	Shallow/Intermediate	Primary	< 0.5	**1.4**	**27**	< 0.3	**5.6**	< 0.5	< 0.2	**1.9**	**3.1**	< 0.5	**1 J**	< 0.3
EW-7A	12/10/2015	Shallow/Intermediate	Primary	< 0.5	**1.3**	**30**	< 0.3	**6.3**	< 0.5	**0.3 J**	**1.8**	**2.6**	< 0.5	< 1	< 0.3
EW-7A	12/10/2015	Shallow/Intermediate	Duplicate	< 0.5	**1.4**	**31**	< 0.3	**6.6**	< 0.5	**0.26 J**	**1.8**	**2.7**	< 0.5	< 1	< 0.3
EW-7A	12/16/2015	Shallow/Intermediate	Primary	< 0.5	**1.4**	**25**	< 0.3	**5.7**	< 0.5	< 0.2	**2.1**	**2.9**	< 0.5	< 1	< 0.3
EW-7A	12/23/2015	Shallow/Intermediate	Primary	< 0.5	**1.4**	**36**	**0.46 J**	**6.9**	< 0.5	**0.43 J**	**1.8**	**3.1**	< 0.5	**2**	< 0.3
EW-7A	12/30/2015	Shallow/Intermediate	Primary	< 0.5	**1.3**	**27**	< 0.3	**6.8**	**0.52**	< 0.2	< 0.3	**3**	< 0.5	**1.3 J**	< 0.3
EW-7A	06/07/2016	Shallow/Intermediate	Primary	< 0.5	**2.3**	**29**	**0.6**	**6.9**	< 0.5	**0.64**	**1.8**	**2.1**	< 0.5	**3**	< 0.3
EW-7A	11/29/2016	Shallow/Intermediate	Primary	< 0.5	**1.9**	**29**	**0.49 J**	**6.4**	< 0.5	**0.77**	**1.7**	**1.8**	< 0.5	**4.7**	< 0.3
EW-7A	06/07/2017	Shallow/Intermediate	Primary	< 0.5	**1.8**	**24**	**0.53**	**4.2**	< 0.5	**1**	**1.2**	**0.83**	< 0.5	**6.5**	< 0.3
EW-7A	12/06/2017	Shallow/Intermediate	Primary	< 0.5	**0.71**	**23**	< 0.3	**5**	< 0.5	**0.36 J**	**2.1**	**1.4**	< 0.5	**2.6**	< 0.3
EW-7A	06/06/2018	Shallow/Intermediate	Primary	< 0.5	**1**	**24**	< 0.3	**5.1**	< 0.5	**1**	**1.7**	**1.4**	< 0.5	**2 J**	< 0.3
EW-7A	12/05/2018	Shallow/Intermediate	Primary	< 0.5	**1.3**	**27**	< 0.3	**5.8**	< 0.5	**1.3**	**1.2 J**	**0.94**	< 0.5	**6.2**	< 0.3
EW-7A	12/05/2018	Shallow/Intermediate	Duplicate	< 0.5	**1.4**	**29**	< 0.3	**6**	< 0.5	**1.4**	**1.8 J**	**0.96**	< 0.5	**5.9**	< 0.3
EW-7A	06/12/2019	Shallow/Intermediate	Primary	< 0.5	**0.57**	**23**	< 0.3	**5.2**	< 0.5	< 0.2	< 0.3	**0.6**	< 0.5	**3.8**	< 0.3
EW-7B	06/19/2013	Lower Gaspur	Primary	< 0.5	**3**	**42**	**0.33 J**	**6.6**	**0.59**	**0.57**	**2.6**	**4.2**	< 0.5	**4.4**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
EW-7B	12/11/2013	Lower Gaspur	Primary	< 0.5	**2.9**	**52**	**0.44 J**	**8.6**	**0.54**	**0.53**	**3.1**	**5.2**	< 0.5	**4.3**	< 0.3
EW-7B	06/11/2014	Lower Gaspur	Primary	< 0.5	**1.7**	**43**	< 0.3	**6.7**	< 0.5	< 0.2	**2.2**	**4.5**	< 0.5	**3.6**	< 0.3
EW-7B	12/17/2014	Lower Gaspur	Primary	< 0.5	**1.6**	**38**	< 0.3	**7.1**	**0.75**	**0.26 J**	**1.9**	**4.5**	< 0.5	**2.4**	< 0.3
EW-7B	12/09/2015	Lower Gaspur	Primary	< 0.5	**4**	**50**	< 0.3	**8.4**	**1.1**	**1.1**	**2.8**	**4.5**	< 0.5	**5.1**	< 0.3
EW-7B	12/10/2015	Lower Gaspur	Primary	< 0.5	**3.9**	**57**	**0.69**	**10**	**1.3**	**1.3**	**2.8**	**4.4**	< 0.5	**4.1**	< 0.3
EW-7B	12/16/2015	Lower Gaspur	Primary	< 0.5	**4.2**	**53**	< 0.3	**8.6**	**1.2**	**1**	**3.2**	**4.7**	< 0.5	**4.7**	< 0.3
EW-7B	12/23/2015	Lower Gaspur	Primary	< 0.5	**4.4**	**68**	**1.4**	**10**	**2.4**	**2**	**3.2**	**5.1**	< 0.5	**6.5**	< 0.3
EW-7B	12/30/2015	Lower Gaspur	Primary	< 0.5	**3.8**	**51**	**0.86**	**9.7**	**1.6**	**1.4**	< 0.3	**4.5**	< 0.5	**6.5**	< 0.3
EW-7B	06/07/2016	Lower Gaspur	Primary	< 0.5	**3.5**	**52**	**1.2**	**7.5**	**1.2**	**1.6**	**2.4**	**2.5**	< 0.5	**7.1**	< 0.3
EW-7B	11/29/2016	Lower Gaspur	Primary	< 0.5	**3.4**	**58**	**1.2**	**6.6**	**0.94**	**1.6**	**2.2**	**2.3**	< 0.5	**9.2**	< 0.3
EW-7B	06/07/2017	Lower Gaspur	Primary	< 0.5	**2.9**	**46**	**0.82**	**5.1**	**0.82**	**1.5**	**1.6**	**1.2**	< 0.5	**8.9**	< 0.3
EW-7B	12/06/2017	Lower Gaspur	Primary	< 0.5	**2.4**	**44**	**0.62**	**4.7**	< 0.5	**1.5**	**2**	**0.79**	< 0.5	**6.4**	< 0.3
EW-7B	06/06/2018	Lower Gaspur	Primary	< 0.5	**2.6**	**55**	**0.87**	**6.1**	< 0.5	**2**	**2.4**	**1.2**	< 0.5	**4.9**	< 0.3
EW-7B	12/05/2018	Lower Gaspur	Primary	< 0.5	**2.4**	**46 J+**	< 0.3	**5.8 J+**	< 0.5	**1.5 J+**	**2.2**	**0.99**	< 0.5	**5.8**	< 0.3
EW-7B	06/12/2019	Lower Gaspur	Primary	< 0.5	**1.6**	**35**	**0.52**	**4.6**	< 0.5	**1.1**	**1.3**	**0.57**	< 0.5	**5.2**	< 0.3
EW-8	06/21/2013	Lower Gaspur	Primary	< 0.5	**1.2**	**47**	**0.8**	**3.3**	**1.3**	**2.2**	**3.2**	**2**	< 0.5	**7.9**	< 0.3
EW-8	12/11/2013	Lower Gaspur	Primary	< 0.5	**1.8**	**56**	**0.98**	**6.1**	**1.8**	**2.1**	**3.7**	**3**	< 0.5	**7.9**	< 0.3
EW-8	06/11/2014	Lower Gaspur	Primary	< 0.5	**1.7**	**55**	**0.84**	**6**	**2.1**	**2**	**3.2**	**3.4**	< 0.5	**8.7**	< 0.3
EW-8	12/18/2014	Lower Gaspur	Primary	< 0.5	**1.4**	**47**	**0.61**	**5.4**	**1.3**	**1.3**	**2.6**	**2.8**	< 0.5	**5.8**	< 0.3
EW-8	06/09/2015	Lower Gaspur	Primary	< 0.5	**1.6**	**45**	**0.54**	**8.7**	**1.6**	**1**	**4.3**	**4.4**	< 0.5	**3.9**	< 0.3
EW-8	12/08/2015	Lower Gaspur	Primary	< 0.5	**1.8**	**40**	< 0.3	**9.4**	**1.5**	**0.75**	**2.7**	**3.8**	< 0.5	**1.7 J**	< 0.3
EW-8	06/07/2016	Lower Gaspur	Primary	< 0.5	**1.2**	**30**	< 0.3	**9.3**	**3.4**	**1.2**	**2.3**	**4**	< 0.5	**2.6**	< 0.3
EW-8	11/30/2016	Lower Gaspur	Primary	< 0.5	**1.5**	**35**	< 0.3	**9.5**	**1.2**	**2.3**	**2.5**	**3**	< 0.5	**5.5**	< 0.3
EW-8	06/09/2017	Lower Gaspur	Primary	< 0.5	**1.1**	**30**	< 0.3	**10**	**0.91**	**0.58**	**2.4**	**2.4**	< 0.5	**2 J**	< 0.3
EW-8	12/05/2017	Lower Gaspur	Primary	< 0.5	< 0.2	< 0.2	< 0.3	< 0.4	< 0.5	< 0.2	< 0.3	< 0.2	< 0.5	< 1	< 0.3
EW-8	06/07/2018	Lower Gaspur	Primary	< 0.5	**0.77**	**38**	< 0.3	**9.4**	**1.2**	**0.52**	**3.3**	**3.5**	< 0.5	**1.4 J**	< 0.3
EW-8	12/06/2018	Lower Gaspur	Primary	< 0.5	**0.38 J**	**27**	< 0.3	**8.4**	**4.6**	< 0.2	**2.1**	**3.2**	< 0.5	**1.6 J**	< 0.3
EW-8	06/13/2019	Lower Gaspur	Primary	< 0.5	**0.49 J**	**32**	< 0.4	**7.7**	**1.5**	< 0.2	**2.6**	**2.1**	< 0.3	**1.7 J**	< 0.2
EW-A	12/09/2015	Lower Gaspur	Primary	< 0.5	**1.2**	**32**	**0.92**	**5**	**1.9**	**2**	**4**	**1.8**	< 0.5	**7.2**	< 0.3
EW-A	12/09/2015	Lower Gaspur	Primary	< 0.5	**1.1**	**25**	**0.76**	**4**	**1.2**	**1.4**	**3.3**	**1.7**	< 0.5	**8.4**	< 0.3
EW-A	12/16/2015	Lower Gaspur	Primary	< 0.5	**1.2**	**26**	< 0.3	**4.2**	**1.2**	**1.3**	**3.4**	**1.8**	< 0.5	**7.2**	< 0.3
EW-A	12/23/2015	Lower Gaspur	Primary	< 0.5	**1.4**	**35**	**1**	**4.9**	**2**	**2.1**	**3.6**	**2**	< 0.5	**9**	< 0.3
EW-A	12/30/2015	Lower Gaspur	Primary	< 0.5	**1.4**	**31**	**1.1**	**5.5**	**2**	**2**	< 0.3	**2.2**	< 0.5	**8.7**	< 0.3
EW-A	06/10/2016	Lower Gaspur	Primary	< 0.5	**1.4**	**46**	**1.5**	**5.6**	**1.2**	**2.9**	**3**	**3.6**	< 0.5	**13**	< 0.3
EW-A	12/01/2016	Lower Gaspur	Primary	< 0.5	**0.83**	**51**	**2**	**6.8**	**1.8**	**3.4**	**2.9**	**2.2**	< 0.5	**18**	< 0.3
EW-A	06/09/2017	Lower Gaspur	Primary	< 0.5	**0.59**	**44**	**1.4**	**5.2**	**1.4**	**2.7**	**2.2**	**2.3**	< 0.5	**16**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
EW-A	12/06/2017	Lower Gaspur	Primary	< 0.5	**0.69**	**60**	**1.7**	**5.8**	**2.4**	**4.5**	**3.4**	**2**	< 0.5	**16**	< 0.3
EW-A	12/06/2017	Lower Gaspur	Duplicate	< 0.5	**0.71**	**58**	**1.8**	**5.3**	**2.2**	**4.4**	**3.2**	**1.9**	< 0.5	**18**	< 0.3
EW-A	06/06/2018	Lower Gaspur	Primary	< 0.5	**0.73**	**54**	**1.4**	**7.1**	**3.8**	**4.2**	**3.9**	**3.3**	< 0.5	**9.8**	< 0.3
EW-A	12/07/2018	Lower Gaspur	Primary	< 1	**0.51 J**	**42 J**	**1.4 J**	**5.5**	**2.7**	**2.7**	< 0.6	**2.3**	< 1	**11**	< 0.6
EW-A	06/13/2019	Lower Gaspur	Primary	< 0.5	**0.61**	**50**	**1.2**	**6.4**	**2.8**	**3.7**	**3.2**	**2.3**	< 0.3	**13**	< 0.2
PZ-7A	08/11/2011	Shallow Gaspur	Primary	< 0.5	**7.2**	**20**	< 0.5	**1.4**	< 0.5	**0.53**	**2.8**	**1.7**	< 0.5	**2.7**	< 0.5
PZ-7A	09/27/2011	Shallow Gaspur	Primary	< 0.5	**5.6**	**25**	< 0.5	**1.7**	< 0.5	**0.64**	**2.6**	**1.5**	< 0.5	< 2.9	< 0.5
PZ-7A	12/07/2011	Shallow Gaspur	Primary	< 0.5	**4.4**	**30**	< 0.5	**2.4 J**	< 0.5	**0.63**	**3.1**	**1.6**	< 0.5	**2.2**	< 0.5
PZ-7A	12/07/2011	Shallow Gaspur	Duplicate	< 0.5	**4.6**	**23**	< 0.5	**1.7 J**	< 0.5	**0.5**	**3.2**	**1.5**	< 0.5	**2.3**	< 0.5
PZ-7A	03/27/2012	Shallow Gaspur	Primary	< 0.5	**3.1**	**27**	< 0.5	**2**	< 0.5	< 0.5	**2.7**	**1.9**	< 0.5	**2.5 J**	< 0.5
PZ-7A	06/12/2012	Shallow Gaspur	Primary	< 0.5	**2.5**	**30**	< 0.5	**2**	< 0.5	**0.54**	**3.2 J**	**2.5**	< 0.5	**2.2**	< 0.5
PZ-7A	12/13/2012	Shallow Gaspur	Primary	< 0.5	**1.4**	**26**	< 0.5	**1.6**	< 0.5	**0.53**	**3.2**	**1.6**	< 0.5	< 2.6	< 0.5
PZ-7A	06/19/2013	Shallow Gaspur	Primary	< 0.5	**1.5**	**27**	**0.48 J**	**2.5**	< 0.5	**0.57**	**2.5**	**1.5**	< 0.5	**2.3**	< 0.3
PZ-7A	12/11/2013	Shallow Gaspur	Primary	< 0.5	**2.2**	**30**	< 0.3	**2.7**	< 0.5	**0.4 J**	**2.2**	**1.4**	< 0.5	**2.4**	< 0.3
PZ-7A	06/11/2014	Shallow Gaspur	Primary	< 0.5	**2.4**	**22**	< 0.3	**2.3**	< 0.5	< 0.2	**1.6**	**1.2**	< 0.5	**2.4**	< 0.3
PZ-7A	12/17/2014	Shallow Gaspur	Primary	< 0.5	**1.9**	**22**	< 0.3	**2.3**	< 0.5	< 0.2	**1.3**	**1.2**	< 0.5	**1.7 J**	< 0.3
PZ-7A	06/10/2015	Shallow Gaspur	Primary	< 0.5	**3.7**	**27**	< 0.3	**5.5**	**0.66**	**0.35 J**	**3**	**2.2**	< 0.5	< 1	< 0.3
PZ-7A	12/09/2015	Shallow Gaspur	Primary	< 0.5	**3.1**	**30**	< 0.3	**7.2**	< 0.5	< 0.2	**3.1**	**2.7**	< 0.5	< 1	< 0.3
PZ-7A	06/07/2016	Shallow Gaspur	Primary	< 0.5	**2.6**	**26**	< 0.3	**8.2**	< 0.5	< 0.2	**2.2**	**2.4**	< 0.5	< 1	< 0.3
PZ-7A	11/29/2016	Shallow Gaspur	Primary	< 0.5	**1.9**	**20**	< 0.3	**6.1**	< 0.5	**0.5**	**1.6**	**1.1**	< 0.5	**2.1**	< 0.3
PZ-7A	06/07/2017	Shallow Gaspur	Primary	< 0.5	**0.59**	**8.4**	< 0.3	**1.6**	< 0.5	< 0.2	**0.59**	**0.38 J**	< 0.5	< 1	< 0.3
PZ-7A	12/06/2017	Shallow Gaspur	Primary	< 0.5	**2.1**	**26**	< 0.3	**4.2**	< 0.5	**0.59**	**1.4**	**1.7**	< 0.5	**2.1**	< 0.3
PZ-7A	06/06/2018	Shallow Gaspur	Primary	< 0.5	**1.9**	**25**	< 0.3	**5.4**	< 0.5	**0.67 J**	**1.2**	**0.51**	< 0.5	**2.6**	< 0.3
PZ-7A	12/05/2018	Shallow Gaspur	Primary	< 0.5	**0.86**	**18**	< 0.3	**4.1**	< 0.5	**0.53**	**0.85**	< 0.2	< 0.5	**3**	< 0.3
PZ-7A	06/12/2019	Shallow Gaspur	Primary	< 0.5	**1.1**	**26**	< 0.4	**5.8**	**0.69**	< 0.2	**1.3**	< 0.4	< 0.3	**3**	< 0.2
PZ-7B	08/11/2011	Intermediate Gaspur	Primary	< 0.5	**5.7**	**27 J**	< 0.5	**3.5**	< 0.5	< 0.5	**3**	**2.6**	< 0.5	**2.1**	< 0.5
PZ-7B	09/27/2011	Intermediate Gaspur	Primary	< 0.5	**5**	**39**	< 0.5	**4.3**	< 0.5	< 0.5	**2.9**	**3.2**	< 0.5	< 2.6	< 0.5
PZ-7B	12/07/2011	Intermediate Gaspur	Primary	< 0.5	**2.8**	**37**	< 0.5	**4**	< 0.5	< 0.5	**2.8**	**2.8**	< 0.5	**2.1**	< 0.5
PZ-7B	03/27/2012	Intermediate Gaspur	Primary	< 0.5	**2.4**	**33**	< 0.5	**4.5**	< 0.5	< 0.5	**2.9**	**2.8**	< 0.5	**1.9 J**	< 0.5
PZ-7B	06/13/2012	Intermediate Gaspur	Primary	< 0.5	**1.1 J**	**25**	< 0.5	**2.3**	< 0.5	< 0.5	**2.6**	**2**	< 0.5	**2.1**	< 0.5
PZ-7B	12/13/2012	Intermediate Gaspur	Primary	< 0.5	**0.98**	**32**	< 0.5	**3.8**	**0.75**	< 0.5	**3.5**	**2.4**	< 0.5	< 2	< 0.5
PZ-7B	12/13/2012	Intermediate Gaspur	Duplicate	< 0.5	**0.98**	**31**	< 0.5	**3.6**	**0.73**	< 0.5	**3.4**	**2.4**	< 0.5	< 2	< 0.5
PZ-7B	06/19/2013	Intermediate Gaspur	Primary	< 0.5	**0.52**	**34**	< 0.3	**5.5**	**0.97**	**0.36 J**	**2.4**	**3**	< 0.5	**2**	< 0.3
PZ-7B	12/11/2013	Intermediate Gaspur	Primary	< 0.5	**0.67**	**33**	**0.34 J**	**6**	**1**	< 0.2	**1.9**	**3.2**	< 0.5	**1.8 J**	< 0.3
PZ-7B	06/11/2014	Intermediate Gaspur	Primary	< 0.5	**0.81**	**38**	< 0.3	**6**	**0.76**	< 0.2	**1.5**	**3.8**	< 0.5	**2.1**	< 0.3
PZ-7B	12/17/2014	Intermediate Gaspur	Primary	< 0.5	**0.54**	**26**	< 0.3	**4.8**	**1.2**	< 0.2	**1.3**	**1.8**	< 0.5	**1.5 J**	< 0.3

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
PZ-7B	06/10/2015	Intermediate Gaspur	Primary	< 0.5	**1.3**	**32**	< 0.3	**9.6**	**0.89**	**0.37 J**	**3.4**	**3.6**	< 0.5	< 1	< 0.3
PZ-7B	06/10/2015	Intermediate Gaspur	Duplicate	< 0.5	**1.5**	**30**	< 0.3	**9.3**	**0.81**	< 0.2	**3.4**	**3.4**	< 0.5	< 1	< 0.3
PZ-7B	12/09/2015	Intermediate Gaspur	Primary	< 0.5	**1.2**	**38**	< 0.3	**11**	**1.2**	< 0.2	**3.2**	**4.3**	< 0.5	< 1	< 0.3
PZ-7B	06/07/2016	Intermediate Gaspur	Primary	< 0.5	**0.95**	**27**	**0.3 J**	**9.9**	**0.95**	< 0.2	**2.2**	**3.3**	< 0.5	< 1	< 0.3
PZ-7B	11/29/2016	Intermediate Gaspur	Primary	< 0.5	**1.8**	**22**	< 0.3	**7.6**	**1.6**	**0.91**	**1.8**	**1.1**	< 0.5	**1.7 J**	< 0.3
PZ-7B	11/29/2016	Intermediate Gaspur	Duplicate	< 0.5	**1.9**	**24**	< 0.3	**8.4**	**1.6**	**0.85**	**2**	**1.3**	< 0.5	**2**	< 0.3
PZ-7B	06/07/2017	Intermediate Gaspur	Primary	< 0.5	**0.49 J**	**3.7**	< 0.3	**4**	**8.1**	< 0.2	**1.1**	**1.9**	< 0.5	< 1	< 0.3
PZ-7B	12/06/2017	Intermediate Gaspur	Primary	< 0.5	**0.6**	**20**	**0.35 J**	**3.7**	< 0.5	**1.1**	**0.76**	< 0.2	< 0.5	**3.8**	< 0.3
PZ-7B	06/06/2018	Intermediate Gaspur	Primary	< 0.5	**0.53**	**25**	< 0.3	**7.7**	**2**	**2.2**	**1.9**	**0.31 J**	< 0.5	**3.7**	< 0.3
PZ-7B	12/05/2018	Intermediate Gaspur	Primary	< 0.5	**0.4 J**	**21**	< 0.3	**6.4**	< 0.5	**1.8**	**1.2**	< 0.2	< 0.5	**5.5**	< 0.3
PZ-7B	06/12/2019	Intermediate Gaspur	Primary	< 0.5	**0.34 J**	**20**	< 0.4	**4.8**	**0.46 J**	**1.2**	< 0.2	< 0.4	< 0.3	**3.8**	< 0.2
PZ-7B	06/12/2019	Intermediate Gaspur	Duplicate	< 0.5	**0.37 J**	**19**	< 0.4	**4.5**	< 0.4	**1**	< 0.2	< 0.4	< 0.3	**4**	< 0.2
SAIA-MW1A	03/27/2014	Shallow Gaspur	Primary	< 100	**7400 J**	**3300**	< 100	**71 J**	< 100	**21 J**	< 100	< 100	< 100	**1.6 J**	< 100
SAIA-MW1A	08/25/2014	Shallow Gaspur	Primary	**0.42 J**	**4800**	**6900**	**16**	**96 J**	< 360	**17**	< 0.5	**0.29 J**	< 0.5	**1.4**	< 0.5
SAIA-MW1A	07/14/2016	Shallow Gaspur	Primary	< 25	**1500**	**3900**	< 25	**160**	< 25	**22 J**	< 25	< 25	< 25	< 0.5	< 25
SAIA-MW1B	03/27/2014	Intermediate Gaspur	Primary	< 0.5	**17**	**59**	< 0.5	**4.6**	< 0.5	**0.25**	**0.48 J**	< 0.5	< 0.5	**1.9**	< 0.5
SAIA-MW1B	08/25/2014	Intermediate Gaspur	Primary	< 0.5	**4.3**	**51**	< 0.5	**4.6**	< 0.5	**0.19 J**	**0.52**	< 0.5	**0.097 J**	**2.6**	< 0.5
SAIA-MW1B	07/14/2016	Intermediate Gaspur	Primary	< 0.5	**0.84**	**14**	< 0.5	**2**	< 0.5	< 0.5	**0.58**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW1B	07/14/2016	Intermediate Gaspur	Duplicate	< 0.5	**0.82**	**15**	< 0.5	**2.5**	< 0.5	< 0.5	**0.64**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW1C	03/27/2014	Lower Gaspur	Primary	< 4	**420 J**	**370**	< 4	**34**	< 4	**3.9 J**	**35**	< 4	< 4	**18**	< 4
SAIA-MW1C	08/25/2014	Lower Gaspur	Primary	< 0.5	**210**	**560**	**6.5**	**47**	**1.4**	**4.2**	**52**	**3.7**	**0.1 J**	**22**	< 0.5
SAIA-MW1C	07/14/2016	Lower Gaspur	Primary	< 0.5	**4.4**	**350**	**5.3**	**27**	**18**	**2.6**	**33**	**3.2**	< 0.5	**7.3**	< 0.5
SAIA-MW2A	03/27/2014	Shallow Gaspur	Primary	< 10	**1100 J**	**2000**	< 10	**74**	< 10	**4.8 J**	< 10	< 10	< 10	**12**	< 10
SAIA-MW2A	08/25/2014	Shallow Gaspur	Primary	< 0.5	**1300**	**2500**	**7.7**	**110 J**	**5.5**	**7.2**	**0.25 J**	**0.35 J**	< 0.5	**16**	< 0.5
SAIA-MW2A	08/25/2014	Shallow Gaspur	Duplicate	< 0.5	**1300**	**2400**	**7.7**	**120 J**	**5.3**	**7**	< 0.5	**0.35 J**	< 0.5	**15**	< 0.5
SAIA-MW2A	07/11/2016	Shallow Gaspur	Primary	< 2.5	**120**	**1300**	**6.4**	**85**	< 2.5	**5.5**	< 2.5	< 2.5	< 2.5	**5.3**	< 2.5
SAIA-MW2B	03/27/2014	Intermediate Gaspur	Primary	< 0.5	**6.8 J**	**69**	< 0.5	**7.2**	< 0.5	< 0.5	**6.6**	< 0.5	< 0.5	**1.7**	< 0.5
SAIA-MW2B	08/25/2014	Intermediate Gaspur	Primary	< 0.5	**2.8**	**51**	**0.5**	**5.9**	**0.75**	**0.11 J**	**5.1**	**0.2 J**	**0.23 J**	**1.3**	< 0.5
SAIA-MW2B	07/11/2016	Intermediate Gaspur	Primary	< 0.5	**0.57**	**10**	< 0.5	**1.5**	< 0.5	< 0.5	**0.81**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW2C	03/27/2014	Lower Gaspur	Primary	< 2	**260 J**	**360**	**4.7**	**28**	< 2	**3**	**32**	**6.1**	**0.19**	**14**	< 2
SAIA-MW2C	08/25/2014	Lower Gaspur	Primary	< 0.5	**200**	**370**	**5.2**	**33**	**3.3**	**2.8**	**34**	**4.7**	< 0.5	**20**	< 0.5
SAIA-MW2C	07/11/2016	Lower Gaspur	Primary	< 0.5	**4.7**	**270 J**	**3.5 J**	**19 J**	**0.87**	**1.8**	**33**	**2.2**	< 0.5	**15**	< 0.5
SAIA-MW3A	03/24/2014	Shallow Gaspur	Primary	< 0.5	**9.2**	**8.9**	< 0.5	**0.2**	< 0.5	**0.13**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW3A	08/26/2014	Shallow Gaspur	Primary	< 0.5	**3.6**	**5.8**	< 0.5	**0.15 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.46	< 0.5
SAIA-MW3A	07/13/2016	Shallow Gaspur	Primary	< 0.5	**0.29 J**	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW3B	03/24/2014	Intermediate Gaspur	Primary	< 25	**6700 J**	**7000**	**18 J**	**120**	< 25	**49**	< 25	< 25	< 25	**110**	< 25

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
SAIA-MW3B	08/26/2014	Intermediate Gaspur	Primary	< 0.5	**6600**	**9100**	**20**	**230 J**	**47**	**72**	**2.1**	**1.5**	< 0.5	**86**	< 0.5
SAIA-MW3B	07/13/2016	Intermediate Gaspur	Primary	< 25	**3500**	**4600**	< 25	**340**	< 25	**23 J**	< 25	< 25	< 25	**3.9**	< 25
SAIA-MW3C	03/24/2014	Lower Gaspur	Primary	< 0.5	**2.1**	**38**	< 0.5	**2.5**	< 0.5	**0.2**	**1.8**	< 0.5	**0.23**	**1.5**	< 0.5
SAIA-MW3C	03/24/2014	Lower Gaspur	Duplicate	< 0.5	**2**	**37**	< 0.5	**2.5**	< 0.5	**0.2**	**1.6**	< 0.5	**0.25**	**1.6**	< 0.5
SAIA-MW3C	08/26/2014	Lower Gaspur	Primary	< 0.5	**6**	**27**	< 0.5	**2.6**	**6.1**	**0.25 J**	**2.1**	**0.085 J**	**0.27 J**	< 0.46	< 0.5
SAIA-MW3C	07/13/2016	Lower Gaspur	Primary	< 0.5	**5.7**	**49**	< 0.5	**5.4**	< 0.5	**0.51**	**2.8**	< 0.5	< 0.5	**6.1**	< 0.5
SAIA-MW4A	03/25/2014	Shallow Gaspur	Primary	< 0.5	**0.53**	**4.7**	< 0.5	**0.19**	< 0.5	**0.32**	< 0.5	< 0.5	< 0.5	**1.6**	< 0.5
SAIA-MW4A	08/26/2014	Shallow Gaspur	Primary	< 0.5	**0.19 J**	**0.72**	< 0.5	< 0.5	< 0.5	**0.34 J**	< 0.5	< 0.5	< 0.5	**1.8**	< 0.5
SAIA-MW4A	07/22/2016	Shallow Gaspur	Primary	< 0.5	< 0.5	**0.16 J**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW4B	03/25/2014	Intermediate Gaspur	Primary	< 25	**790**	**4200**	< 25	**130**	< 25	**15 J**	< 25	< 25	< 25	**58**	< 25
SAIA-MW4B	08/26/2014	Intermediate Gaspur	Primary	< 0.5	**150 J**	**4800**	**6.6**	**180 J**	**6.5**	**18**	**0.72**	**0.55**	< 0.5	**60**	< 0.5
SAIA-MW4B	08/26/2014	Intermediate Gaspur	Duplicate	< 0.5	**150 J**	**4800**	**6.6**	**180 J**	**6.5**	**18**	**0.69**	**0.55**	< 0.5	**59**	< 0.5
SAIA-MW4B	07/22/2016	Intermediate Gaspur	Primary	< 10	**6.6 J**	**4200**	< 10	**210**	< 10	**16**	< 10	< 10	< 10	**62 J**	< 10
SAIA-MW4C	03/25/2014	Lower Gaspur	Primary	< 10	**3.9 J**	**910**	< 10	**53**	< 10	**3.6 J**	< 10	< 10	< 10	**14**	< 10
SAIA-MW4C	08/26/2014	Lower Gaspur	Primary	< 0.5	**3.4**	**910**	**1.3**	**73**	**11**	**4.1**	**2.1**	**0.19 J**	**0.3 J**	**11**	< 0.5
SAIA-MW4C	07/22/2016	Lower Gaspur	Primary	< 2.5	**2.7**	**870**	< 2.5	**120**	**45**	**5.9**	**2 J**	< 2.5	< 2.5	**7.7**	< 2.5
SAIA-MW5A	03/25/2014	Shallow Gaspur	Primary	< 5	**1.8 J**	**530**	< 5	**21**	< 5	< 5	< 5	< 5	< 5	**2.4**	< 5
SAIA-MW5A	08/27/2014	Shallow Gaspur	Primary	< 0.5	**1.9**	**520**	**0.89**	**24 J**	**0.72**	**0.42 J**	< 0.5	< 0.5	< 0.5	**2.3**	< 0.5
SAIA-MW5A	07/20/2016	Shallow Gaspur	Primary	< 0.5	**1.3**	**210**	< 0.5	**19**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1**	< 0.5
SAIA-MW5A	07/20/2016	Shallow Gaspur	Duplicate	< 0.5	**1.2**	**220**	**0.66**	**17**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.3**	< 0.5
SAIA-MW5B	03/25/2014	Intermediate Gaspur	Primary	< 25	**380**	**3100**	< 25	**98**	< 25	< 25	< 25	< 25	< 25	**16**	< 25
SAIA-MW5B	08/27/2014	Intermediate Gaspur	Primary	< 0.5	**99 J**	**3600**	**5.5**	**120 J**	**4.5**	**9.5**	**0.52**	**0.36 J**	< 0.5	**23**	< 0.5
SAIA-MW5B	07/21/2016	Intermediate Gaspur	Primary	< 2.5	**3**	**2100**	< 2.5	**79**	**20**	**6.5**	< 2.5	< 2.5	< 2.5	**30 J**	< 2.5
SAIA-MW5C	03/25/2014	Lower Gaspur	Primary	< 4	**6.5**	**300**	< 4	**21**	< 4	< 4	**2 J**	< 4	< 4	**3.4**	< 4
SAIA-MW5C	08/27/2014	Lower Gaspur	Primary	< 0.5	**4.8**	**320**	**0.8**	**25**	< 0.5	**0.64**	**1.9**	**0.18 J**	**0.26 J**	**3.2**	< 0.5
SAIA-MW5C	07/21/2016	Lower Gaspur	Primary	< 0.5	**1.6**	**95**	< 0.5	**11**	< 0.5	< 0.5	**1.6**	< 0.5	< 0.5	**2.4**	< 0.5
SAIA-MW6A	03/24/2014	Shallow Gaspur	Primary	< 0.5	**0.087**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.52**	< 0.5
SAIA-MW6A	08/27/2014	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.53**	< 0.5
SAIA-MW6A	07/20/2016	Shallow Gaspur	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW6B	03/24/2014	Intermediate Gaspur	Primary	< 0.5	**3.7**	**13**	< 0.5	**3.9**	< 0.5	< 0.5	**0.12**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW6B	08/27/2014	Intermediate Gaspur	Primary	< 0.5	**3.6**	**14**	< 0.5	**5.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.26 J**	< 0.5
SAIA-MW6B	07/20/2016	Intermediate Gaspur	Primary	< 0.5	**2.7**	**14**	< 0.5	**3.7**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW6C	03/24/2014	Lower Gaspur	Primary	< 0.5	**2**	**17**	< 0.5	**2.3**	< 0.5	< 0.5	**0.2**	< 0.5	< 0.5	**0.52**	< 0.5
SAIA-MW6C	08/27/2014	Lower Gaspur	Primary	< 0.5	**2.4**	**21**	< 0.5	**2.8**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.52**	< 0.5
SAIA-MW6C	07/20/2016	Lower Gaspur	Primary	< 0.5	**2**	**17**	< 0.5	**2.9**	**1.2**	< 0.5	**0.31 J**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW7	03/27/2014	Exposition	Primary	< 0.5	**24 J**	**16**	< 0.5	**1.1**	< 0.5	**0.3**	**0.96**	< 0.5	< 0.5	**1.9**	< 0.5

TABLE 9
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Sample Date	Aquifer	Sample Type	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCE µg/L	tDCE µg/L	VC µg/L	1,1-DCA µg/L	1,2-DCA µg/L	Benzene µg/L	1,2-DCP µg/L	1,4-Dioxane µg/L	1,2,3-TCP µg/L
SAIA-MW7	03/27/2014	Exposition	Duplicate	< 0.5	**22 J**	**17**	< 0.5	**1.1**	< 0.5	**0.37**	**1.1**	< 0.5	< 0.5	**2**	< 0.5
SAIA-MW7	08/25/2014	Exposition	Primary	< 0.5	**22**	**57**	**0.65**	**2.5**	**1.3**	**0.67**	**1.6**	**0.14 J**	< 0.5	**3.6**	< 0.5
SAIA-MW7	07/11/2016	Exposition	Primary	< 0.5	**19**	**73**	< 0.5	**4.8**	< 0.5	**0.84**	**2.9**	< 0.5	< 0.5	**7.9**	< 0.5
SAIA-MW8	03/24/2014	Exposition	Primary	< 0.5	**0.53**	**0.83**	< 0.5	**0.08**	< 0.5	< 0.5	**0.18**	< 0.5	< 0.5	< 0.5	< 0.5
SAIA-MW8	08/25/2014	Exposition	Primary	< 0.5	**3.9**	**1.9**	< 0.5	**0.2 J**	< 0.5	< 0.5	**0.62**	< 0.5	< 0.5	**0.16 J**	< 0.5
SAIA-MW8	07/21/2016	Exposition	Primary	< 0.5	**1.3**	**2.2**	< 0.5	**0.31 J**	< 0.5	< 0.5	**0.78**	< 0.5	< 0.5	< 0.5	< 0.5

Notes:

1. Results reported in micrograms per liter (µg/L).
2. Samples collected 2010-2012 were reported by AMEC. Analytical results and associated data qualifiers for samples collected prior to 2010 were reported by others.
3. Detected concentrations are shown in **BOLD** font.
4. Estimated and dilution values are shown for April 2005 sampling results.
5. "Split" groundwater samples collected by U.S. Environmental Protection Agency.

Abbreviations:

< = Not detected at or above laboratory reporting limit shown
B = Analyte found in associated method blank as well as in sample
D = Detection associated with sample dilution
DJ = Estimated value; Detection associated with sample dilution
E = Concentration exceeds upper level of instrument calibration range
EJ = Estimated value; concentration exceeds upper level of instrument calibration range
J = Estimated value
UJ = Estimated value; value is below detection limit
R = Rejected - R qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
NA = Not analyzed
PCE = Tetrachloroethene
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
1,1-DCE = 1,1-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl Chloride
1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
1,2,3-TCP = 1,2,3-Trichloropropane

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-1	4/10/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	42.11	3.79	67.85
DPE-1	5/16/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	41.25	4.65	68.71
DPE-1	5/22/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	42.25	3.65	67.71
DPE-1	5/31/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	(44.00)	NA	NA
DPE-1	6/6/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	40.68	5.22	69.28
DPE-1	6/13/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	40.8	5.1	69.16
DPE-1	6/20/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	40.3	5.60	69.66
DPE-1	6/26/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	(44.00)	NA	NA
DPE-1	7/3/2012	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.95	0.95	65.01
DPE-1	1/25/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	42.22	3.68	67.74
DPE-1	2/22/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	43.04	2.86	66.92
DPE-1	3/22/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.03	1.87	65.93
DPE-1	4/23/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.05	1.85	61.58
DPE-1	5/31/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.16	1.74	61.47
DPE-1	6/28/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.18	1.72	61.45
DPE-1	7/30/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.26	1.64	61.37
DPE-1	8/30/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.36	1.54	61.27
DPE-1	9/27/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.49	1.41	61.14
DPE-1	10/29/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.53	1.37	61.10
DPE-1	11/26/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.62	1.28	61.01
DPE-1	12/23/2013	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.72	1.18	60.91
DPE-1	1/31/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.69	1.21	60.94
DPE-1	2/28/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.61	1.29	61.02
DPE-1	3/28/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	4/29/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	5/27/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	6/24/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	7/30/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	8/27/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	9/24/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	10/30/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	11/24/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	12/9/2014	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	1/20/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	2/17/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	3/26/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	4/14/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	5/27/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	6/18/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	7/30/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	8/26/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	9/29/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	10/28/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	11/18/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	12/30/2015	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	1/27/2016	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	3/23/2016	46.9	10.9 - 45.9	10.9 - 45.9	109.96	44.55	Dry	Dry
DPE-1	6/22/2016	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	8/31/2016	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	12/27/2016	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	3/29/2017	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	6/28/2017	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	9/27/2017	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	12/27/2017	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	3/28/2018	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	6/27/2018	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	9/19/2018	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	12/27/2018	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	4/24/2019	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-1	6/26/2019	46.9	10.9 - 45.9	10.9 - 45.9	109.96	46.9	Dry	Dry
DPE-10	4/10/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	43.77	6.53	64.78
DPE-10	5/16/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	39.7	10.6	68.85
DPE-10	5/22/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	42.78	7.52	65.77
DPE-10	5/31/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	6/6/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	39.25	11.05	69.30
DPE-10	6/13/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	38.95	11.35	69.60

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-10	6/20/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	39.19	11.11	69.36
DPE-10	6/26/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	7/3/2012	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	1/25/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	45.66	4.64	62.89
DPE-10	2/22/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	46.69	3.61	61.86
DPE-10	3/22/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	4/23/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	5/31/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	6/28/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	7/30/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	8/30/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	9/27/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	10/29/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	11/26/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	12/23/2013	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	1/31/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	2/28/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	3/28/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	4/29/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	5/27/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	6/24/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	7/30/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	8/27/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	9/24/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	10/30/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	11/24/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	12/9/2014	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	1/20/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	2/17/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	3/26/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	4/14/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	5/27/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	6/18/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.2	-1.9	56.35
DPE-10	7/30/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	8/26/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	9/29/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	10/28/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	11/18/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	12/30/2015	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	1/27/2016	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	3/23/2016	52.8	35.9 - 50.3	35.9 - 50.3	108.55	Dry	Dry	Dry
DPE-10	6/22/2016	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	8/31/2016	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	12/27/2016	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	3/29/2017	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	6/28/2017	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	9/27/2017	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	12/27/2017	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	3/28/2018	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	6/27/2018	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	9/19/2018	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	12/27/2018	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	4/24/2019	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-10	6/26/2019	52.8	35.9 - 50.3	35.9 - 50.3	108.55	52.62	Dry	Dry
DPE-11	4/10/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	44.6	5.7	64.15
DPE-11	5/16/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	40.3	10	68.45
DPE-11	5/22/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	44.8	5.5	63.95
DPE-11	5/31/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/6/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	39.35	10.95	69.40
DPE-11	6/13/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	39.53	10.77	69.22
DPE-11	6/20/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	39.4	10.9	69.35
DPE-11	6/26/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	7/3/2012	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	1/25/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	50.27	0.03	58.48
DPE-11	2/22/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/22/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-11	4/23/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	5/31/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/28/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	7/30/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	8/30/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	9/27/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	10/29/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	11/26/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/23/2013	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	1/31/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	2/28/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/28/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	4/29/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	5/27/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/24/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	7/30/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	8/27/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	9/24/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	10/30/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	11/24/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/9/2014	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	1/20/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	2/17/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/26/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	4/14/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	5/27/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/18/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	7/30/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	8/26/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	9/29/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	10/28/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	11/18/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/30/2015	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	1/27/2016	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/23/2016	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/22/2016	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	8/31/2016	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/27/2016	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/29/2017	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/28/2017	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	9/27/2017	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/27/2017	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	3/28/2018	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/27/2018	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	9/19/2018	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	12/27/2018	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	4/24/2019	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-11	6/26/2019	52.8	35.8 - 50.3	35.8 - 50.3	108.75	Dry	Dry	Dry
DPE-12	4/10/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.33	1.37	60.70
DPE-12	5/16/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	47.15	2.55	61.88
DPE-12	5/22/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	47.72	1.98	61.31
DPE-12	5/31/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	46.61	3.09	62.42
DPE-12	6/6/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	40.97	8.73	68.06
DPE-12	6/13/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	41.11	8.59	67.92
DPE-12	6/20/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	40.86	8.84	68.17
DPE-12	6/26/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	7/3/2012	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	1/25/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	2/22/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/22/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.01	0.69	60.02
DPE-12	4/23/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.04	0.66	56.59
DPE-12	5/31/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.14	0.56	56.49
DPE-12	6/28/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.15	0.55	56.48
DPE-12	7/30/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.21	0.49	56.42
DPE-12	8/30/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.25	0.45	56.38
DPE-12	9/27/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.28	0.42	56.35

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-12	10/29/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	11/26/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/23/2013	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	1/31/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	2/28/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/28/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.62	1.08	57.01
DPE-12	4/29/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.62	1.08	57.01
DPE-12	5/27/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.62	1.08	57.01
DPE-12	6/24/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.62	1.08	57.01
DPE-12	7/30/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	48.84	0.86	56.79
DPE-12	8/27/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	49.09	0.61	56.54
DPE-12	9/24/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	10/30/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	11/24/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/9/2014	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	1/20/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	2/17/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/26/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	4/14/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	5/27/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	6/18/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	7/30/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	8/26/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	9/29/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	10/28/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	11/18/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/30/2015	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	1/27/2016	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/23/2016	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	6/22/2016	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	8/31/2016	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/27/2016	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/29/2017	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	6/28/2017	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	9/27/2017	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/27/2017	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	3/28/2018	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	6/27/2018	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	9/19/2018	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	12/27/2018	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	4/24/2019	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-12	6/26/2019	52.2	35.3 - 49.7	35.3 - 49.7	109.03	Dry	Dry	Dry
DPE-13	4/10/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	36.3	9.8	68.13
DPE-13	5/16/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	37.7	8.4	66.73
DPE-13	5/22/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	36.08	10.02	68.35
DPE-13	5/31/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.24	1.86	60.19
DPE-13	6/6/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	33.35	12.75	71.08
DPE-13	6/20/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	33.3	12.8	71.13
DPE-13	7/3/2012	49.3	31.6 - 46.1	31.6 - 46.1	104.43	NM	NM	NM
DPE-13	1/25/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	39.02	7.08	65.41
DPE-13	2/22/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	39.96	6.14	64.47
DPE-13	3/22/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	43.75	2.35	60.68
DPE-13	4/23/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	43.76	2.34	61.87
DPE-13	5/31/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	43.85	2.25	61.78
DPE-13	6/28/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	43.86	2.24	61.77
DPE-13	7/30/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44	2.1	61.63
DPE-13	8/30/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.06	2.04	61.57
DPE-13	9/27/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.13	1.97	61.50
DPE-13	10/29/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.2	1.9	61.43
DPE-13	11/26/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.3	1.8	61.33
DPE-13	12/23/2013	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.36	1.74	61.27
DPE-13	1/31/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.44	1.66	61.19
DPE-13	2/28/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.64	1.46	60.99
DPE-13	3/28/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.89	1.21	60.74
DPE-13	4/29/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	45.03	1.07	60.60
DPE-13	5/27/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	45	1.1	60.63

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-13	6/24/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	45.06	1.04	60.57
DPE-13	7/30/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.76	1.34	60.87
DPE-13	8/27/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	44.99	1.11	60.64
DPE-13	9/24/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	10/30/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	11/24/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	12/9/2014	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	1/20/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	2/17/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	3/26/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	4/14/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	5/27/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	6/18/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	7/30/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	8/26/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	9/29/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	10/28/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	11/18/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	12/30/2015	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	1/27/2016	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	3/23/2016	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	6/22/2016	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	8/31/2016	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	12/27/2016	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	3/29/2017	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	6/28/2017	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	9/27/2017	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	12/27/2017	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	3/28/2018	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	6/27/2018	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	9/19/2018	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	12/27/2018	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	4/24/2019	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-13	6/26/2019	49.3	31.6 - 46.1	31.6 - 46.1	104.43	Dry	Dry	Dry
DPE-14	4/10/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	41.82	9.38	66.81
DPE-14	5/16/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	39.1	12.1	69.53
DPE-14	5/22/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	41.69	9.51	66.94
DPE-14	5/31/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/6/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	38.35	12.85	70.28
DPE-14	6/13/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	50	1.2	58.63
DPE-14	6/20/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	38.15	13.05	70.48
DPE-14	6/26/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	(50.30)	NA	NA
DPE-14	7/3/2012	53.7	36.7 - 51.2	36.7 - 51.2	108.63	43.65	7.55	64.98
DPE-14	1/25/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	41.45	9.75	67.18
DPE-14	2/22/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	42.79	8.41	65.84
DPE-14	3/22/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	4/23/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	5/31/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/28/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	7/30/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	8/30/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	9/27/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	10/29/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	11/26/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	12/23/2013	53.7	36.7 - 51.2	36.7 - 51.2	108.63	47.7	3.5	60.93
DPE-14	1/31/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	44.44	6.76	64.19
DPE-14	2/28/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	41.32	9.88	67.31
DPE-14	3/28/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.73	13.47	70.90
DPE-14	4/29/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.76	13.44	70.87
DPE-14	5/27/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.71	13.49	70.92
DPE-14	6/24/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.73	13.47	70.90
DPE-14	7/30/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.62	13.58	71.01
DPE-14	8/27/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.46	13.74	71.17
DPE-14	9/24/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.36	13.84	71.27
DPE-14	10/30/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	37.36	13.84	67.21
DPE-14	11/24/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-14	12/9/2014	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	1/20/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	2/17/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	3/26/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	4/14/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	5/27/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/18/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	7/30/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	8/26/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	9/29/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	10/28/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	11/18/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	12/30/2015	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	1/27/2016	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	3/23/2016	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/22/2016	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	8/31/2016	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	12/27/2016	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	3/29/2017	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/28/2017	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	9/27/2017	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	12/27/2017	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	3/28/2018	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/27/2018	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	9/19/2018	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	12/27/2018	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	4/24/2019	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-14	6/26/2019	53.7	36.7 - 51.2	36.7 - 51.2	108.63	Dry	Dry	Dry
DPE-2	4/10/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	44.50	5.60	64.20
DPE-2	5/16/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	44.02	6.08	64.68
DPE-2	5/22/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	45.25	4.85	63.45
DPE-2	5/31/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	43.89	6.21	64.81
DPE-2	6/6/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	40.00	10.10	68.70
DPE-2	6/13/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	39.54	10.56	69.16
DPE-2	6/20/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	39.52	10.58	69.18
DPE-2	6/26/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	7/3/2012	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	1/25/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	46.47	3.63	62.23
DPE-2	2/22/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	48.00	2.10	60.70
DPE-2	3/22/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	4/23/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	5/31/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/28/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	7/30/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	8/30/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	9/27/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	10/29/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	11/26/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/23/2013	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	1/31/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	2/28/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	3/28/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	4/29/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	5/27/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/24/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	7/30/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	8/27/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	9/24/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	10/30/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	11/24/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/9/2014	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	1/20/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	2/17/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	3/26/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	4/14/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	5/27/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-2	6/18/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	7/30/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	8/26/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	9/29/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	10/28/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	11/18/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/30/2015	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	1/27/2016	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	3/23/2016	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/22/2016	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	8/31/2016	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/27/2016	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	3/29/2017	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/28/2017	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	9/27/2017	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/27/2017	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	3/28/2018	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/27/2018	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	9/19/2018	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	12/27/2018	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	4/24/2019	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-2	6/26/2019	52.6	35.6 - 50.1	35.6 - 50.1	108.70	Dry	Dry	Dry
DPE-3	4/10/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	45.74	4.56	63.34
DPE-3	5/11/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	44.9	5.4	64.18
DPE-3	5/16/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	45.27	5.03	63.81
DPE-3	5/22/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	46.52	3.78	62.56
DPE-3	5/31/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	45.09	5.21	63.99
DPE-3	6/6/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.15	10.15	68.93
DPE-3	6/13/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.17	10.13	68.91
DPE-3	6/20/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.08	10.22	69.00
DPE-3	6/26/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	41.35	8.95	67.73
DPE-3	7/3/2012	52.9	35.8 - 50.3	35.8 - 50.3	109.08	45.32	4.98	63.76
DPE-3	1/25/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	46.62	3.68	62.46
DPE-3	2/22/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	45.56	4.74	63.52
DPE-3	3/22/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.66	9.64	68.42
DPE-3	4/23/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.75	9.55	64.88
DPE-3	5/31/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.81	9.49	64.82
DPE-3	6/28/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	40.8	9.5	64.83
DPE-3	7/30/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	41.63	8.67	64.00
DPE-3	8/30/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	42.4	7.9	63.23
DPE-3	9/27/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	44.44	5.86	61.19
DPE-3	10/29/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	46.88	3.42	58.75
DPE-3	11/26/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.16	3.14	58.47
DPE-3	12/23/2013	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.73	2.57	57.90
DPE-3	1/31/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	48.61	1.69	57.02
DPE-3	2/28/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	49.19	1.11	56.44
DPE-3	3/28/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	4/29/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	5/27/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	6/24/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	7/30/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	8/27/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	50.37	Dry	Dry
DPE-3	9/24/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	10/30/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	11/24/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	12/9/2014	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	1/20/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	2/17/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	3/26/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	4/14/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	5/27/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	6/18/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.90	Dry	Dry
DPE-3	7/30/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	8/26/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	9/29/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	10/28/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-3	11/18/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	12/30/2015	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	1/27/2016	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	3/23/2016	52.9	35.8 - 50.3	35.8 - 50.3	109.08	47.29	Dry	Dry
DPE-3	6/22/2016	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.90	Dry	Dry
DPE-3	8/31/2016	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	12/27/2016	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	3/29/2017	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	6/28/2017	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	9/27/2017	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	12/27/2017	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	3/28/2018	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	6/27/2018	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	9/19/2018	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	12/27/2018	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	4/24/2019	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-3	6/26/2019	52.9	35.8 - 50.3	35.8 - 50.3	109.08	52.9	Dry	Dry
DPE-4	4/10/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	48.75	1.15	60.24
DPE-4	5/11/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	47.6	2.3	61.39
DPE-4	5/16/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	48.28	1.62	60.71
DPE-4	5/22/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	48.8	1.1	60.19
DPE-4	5/31/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	47.9	2	61.09
DPE-4	6/6/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	40.8	9.1	68.19
DPE-4	6/13/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	40.9	9	68.09
DPE-4	6/20/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	40.65	9.25	68.34
DPE-4	6/26/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	7/3/2012	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	1/25/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	40.1	9.8	68.89
DPE-4	2/22/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	48.19	1.71	60.80
DPE-4	3/22/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	4/23/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	5/31/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/28/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	7/30/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	8/30/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	9/27/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	10/29/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	11/26/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/23/2013	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	1/31/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	2/28/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	3/28/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	4/29/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	5/27/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/24/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	7/30/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	8/27/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	9/24/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	10/30/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	11/24/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/9/2014	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	1/20/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	2/17/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	3/26/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	4/14/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	5/27/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/18/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	7/30/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	8/26/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	9/29/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	10/28/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	11/18/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/30/2015	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	1/27/2016	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	3/23/2016	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/22/2016	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-4	8/31/2016	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/27/2016	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	3/29/2017	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/28/2017	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	9/27/2017	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/27/2017	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	3/28/2018	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/27/2018	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	9/19/2018	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	12/27/2018	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	4/24/2019	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-4	6/26/2019	52.5	35.6 - 49.9	35.6 - 49.9	108.99	Dry	Dry	Dry
DPE-5	4/10/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	47.93	1.97	61.18
DPE-5	5/11/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	47.65	2.25	61.46
DPE-5	5/16/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	47.82	2.08	61.29
DPE-5	5/22/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	48.37	1.53	60.74
DPE-5	5/31/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	48.27	1.63	60.84
DPE-5	6/6/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	41.72	8.18	67.39
DPE-5	6/13/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	43.19	6.71	65.92
DPE-5	6/20/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	42.49	7.41	66.62
DPE-5	6/26/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	7/3/2012	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	1/25/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	39.91	9.99	69.20
DPE-5	2/22/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	46.63	3.27	62.48
DPE-5	3/22/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.60	0.30	59.51
DPE-5	4/23/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.59	0.31	56.04
DPE-5	5/31/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.62	0.28	56.01
DPE-5	6/28/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.65	0.25	55.98
DPE-5	7/30/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.76	0.14	55.87
DPE-5	8/30/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	49.86	0.04	55.77
DPE-5	9/27/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	10/29/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	11/26/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	12/23/2013	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	1/31/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	2/28/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	3/28/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	4/29/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	5/27/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/24/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	7/30/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	8/27/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	9/24/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	10/30/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	11/24/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	12/9/2014	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	1/20/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	2/17/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	3/26/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	4/14/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	5/27/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/18/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	7/30/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	8/26/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	9/29/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	10/28/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	11/18/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	12/30/2015	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	1/27/2016	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	3/23/2016	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/22/2016	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	8/31/2016	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	12/27/2016	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	3/29/2017	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/28/2017	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	9/27/2017	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-5	12/27/2017	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	3/28/2018	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/27/2018	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	9/19/2018	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	12/27/2018	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	4/24/2019	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-5	6/26/2019	52.4	35.4 - 49.9	35.4 - 49.9	109.11	Dry	Dry	Dry
DPE-6	4/10/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	47.35	2.55	61.48
DPE-6	5/16/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	47.25	2.65	61.58
DPE-6	5/22/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	47.85	2.05	60.98
DPE-6	5/31/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	47.09	2.81	61.74
DPE-6	6/6/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	40.94	8.96	67.89
DPE-6	6/13/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	41.07	8.83	67.76
DPE-6	6/20/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	40.80	9.10	68.03
DPE-6	6/26/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	7/3/2012	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	1/25/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	47.40	2.5	61.43
DPE-6	2/22/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	48.11	1.79	60.72
DPE-6	3/22/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	4/23/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	5/31/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/28/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	7/30/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	8/30/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	9/27/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	10/29/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	11/26/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/23/2013	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	1/31/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	2/28/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	3/28/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	4/29/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	5/27/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/24/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	7/30/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	8/27/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	9/24/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	10/30/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	11/24/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/9/2014	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	1/20/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	2/17/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	3/26/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	4/14/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	5/27/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/18/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	7/30/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	8/26/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	9/29/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	10/28/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	11/18/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/30/2015	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	1/27/2016	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	3/23/2016	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/22/2016	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	8/31/2016	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/27/2016	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	3/29/2017	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/28/2017	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	9/27/2017	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/27/2017	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	3/28/2018	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	6/27/2018	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	9/19/2018	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	12/27/2018	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-6	4/24/2019	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-6	6/26/2019	52.4	35.5 - 49.9	35.5 - 49.9	108.83	Dry	Dry	Dry
DPE-7	4/10/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	(44.60) *	6.3 *	NA
DPE-7	5/16/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	43.65	7.25	69.26
DPE-7	5/22/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	46.11	4.79	66.80
DPE-7	5/31/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	6/6/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	42.55	8.35	70.36
DPE-7	6/13/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	41.15	9.75	71.76
DPE-7	6/20/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	41.97	8.93	70.94
DPE-7	6/26/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	7/3/2012	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	1/25/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.08	5.82	67.83
DPE-7	2/22/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	46.81	4.09	66.10
DPE-7	3/22/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	4/23/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	5/31/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	6/28/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	7/30/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	8/30/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	9/27/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	10/29/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	11/26/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	12/23/2013	50.9	10.9 - 50.9	10.9 - 50.9	112.91	Dry	Dry	Dry
DPE-7	1/31/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	46.93	3.97	65.98
DPE-7	2/28/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	46.16	4.74	66.75
DPE-7	3/28/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.90	5.00	67.01
DPE-7	4/29/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.99	4.91	66.92
DPE-7	5/27/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.95	4.95	66.96
DPE-7	6/24/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.90	5.00	67.01
DPE-7	7/30/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.00	5.90	67.91
DPE-7	8/27/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	44.98	5.92	67.93
DPE-7	9/24/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	44.48	6.42	68.43
DPE-7	10/30/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	44.92	5.98	67.99
DPE-7	11/24/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	45.15	5.75	67.76
DPE-7	12/9/2014	50.9	10.9 - 50.9	10.9 - 50.9	112.91	46.25	Dry	Dry
DPE-7	1/20/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.05	Dry	Dry
DPE-7	2/17/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.36	Dry	Dry
DPE-7	3/26/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	4/14/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	5/27/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	6/18/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.25	Dry	Dry
DPE-7	7/30/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	8/26/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	9/29/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	10/28/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	11/18/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	12/30/2015	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	1/27/2016	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	3/23/2016	50.9	10.9 - 50.9	10.9 - 50.9	112.91	47.50	Dry	Dry
DPE-7	6/22/2016	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	8/31/2016	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	12/27/2016	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	3/29/2017	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	6/28/2017	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	9/27/2017	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	12/27/2017	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	3/28/2018	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	6/27/2018	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	9/19/2018	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	12/27/2018	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	4/24/2019	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-7	6/26/2019	50.9	10.9 - 50.9	10.9 - 50.9	112.91	49.31	Dry	Dry
DPE-8	4/10/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.62	3.18	62.38
DPE-8	5/16/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	41.00	8.80	68.00
DPE-8	5/22/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.8	3	62.20
DPE-8	5/31/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/6/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	40.6	9.2	68.40

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-8	6/13/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	40.67	9.13	68.33
DPE-8	6/20/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	40.40	9.40	68.60
DPE-8	6/26/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	7/3/2012	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	1/25/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	49.79	0.01	59.21
DPE-8	2/22/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	49.75	0.05	59.25
DPE-8	3/22/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	4/23/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	5/31/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/28/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	7/30/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	8/30/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	9/27/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	10/29/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	11/26/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/23/2013	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	1/31/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	49.3	0.50	59.37
DPE-8	2/28/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	48.15	1.65	60.85
DPE-8	3/28/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.99	2.81	62.01
DPE-8	4/29/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.99	2.81	62.01
DPE-8	5/27/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.99	2.81	62.01
DPE-8	6/24/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.99	2.81	62.01
DPE-8	7/30/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	47.36	2.44	61.64
DPE-8	8/27/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	46.99	2.81	62.01
DPE-8	9/24/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	10/30/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	11/24/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/9/2014	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	1/20/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	2/17/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	3/26/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	4/14/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	5/27/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/18/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	7/30/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	8/26/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	9/29/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	10/28/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	11/18/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/30/2015	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	1/27/2016	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	3/23/2016	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/22/2016	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	8/31/2016	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/27/2016	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	3/29/2017	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/28/2017	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	9/27/2017	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/27/2017	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	3/28/2018	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/27/2018	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	9/19/2018	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	12/27/2018	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	4/24/2019	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-8	6/26/2019	52.3	35.4 - 49.8	35.4 - 49.8	109.00	Dry	Dry	Dry
DPE-9	4/10/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	40.34	9.96	68.08
DPE-9	5/16/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	39.4	10.9	69.02
DPE-9	5/22/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	39.98	10.32	68.44
DPE-9	5/31/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/6/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	39.22	11.08	69.20
DPE-9	6/13/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	38.82	11.48	69.60
DPE-9	6/20/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	38.86	11.44	69.56
DPE-9	6/26/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	(48.40)	NA	NA
DPE-9	7/3/2012	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	1/25/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	43.38	6.92	65.04
DPE-9	2/22/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	45.17	5.13	63.25

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
DPE-9	3/22/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	4/23/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	5/31/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/28/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	7/30/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	8/30/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	9/27/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	10/29/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	11/26/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/23/2013	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	1/31/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	2/28/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	3/28/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	4/29/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	5/27/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/24/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	7/30/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	8/27/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	9/24/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	10/30/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	11/24/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/9/2014	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	1/20/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	2/17/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	3/26/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	4/14/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	5/27/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/18/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	7/30/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	8/26/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	9/29/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	10/28/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	11/18/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/30/2015	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	1/27/2016	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	3/23/2016	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/22/2016	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	8/31/2016	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/27/2016	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	3/29/2017	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/28/2017	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	9/27/2017	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/27/2017	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	3/28/2018	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/27/2018	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	9/19/2018	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	12/27/2018	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	4/24/2019	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
DPE-9	6/26/2019	52.8	35.7 - 50.3	35.7 - 50.3	108.42	Dry	Dry	Dry
PZ-5	7/15/2010	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.20	3.20	68.69
PZ-5	3/23/2011	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.44	2.96	68.45
PZ-5	11/18/2011	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.80	2.60	68.09
PZ-5	4/10/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.96	2.44	67.93
PZ-5	5/16/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.00	2.40	67.89
PZ-5	5/31/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.94	2.46	67.95
PZ-5	6/6/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.95	2.45	67.94
PZ-5	6/13/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.84	2.56	68.05
PZ-5	6/20/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.80	2.60	68.09
PZ-5	6/26/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.77	2.63	68.12
PZ-5	7/3/2012	49.93	37.0 - 41.4	34.4 - 41.9	106.89	38.74	2.66	68.15
PZ-5	1/25/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.14	2.26	67.75
PZ-5	2/22/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.15	2.25	67.74
PZ-5	3/22/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.20	2.20	67.69
PZ-5	4/23/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.25	2.15	67.64
PZ-5	5/31/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.31	2.09	67.58
PZ-5	6/28/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.33	2.07	67.56

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
PZ-5	7/30/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	39.35	2.05	67.54
PZ-5	8/30/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.16	1.24	66.73
PZ-5	9/27/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.23	1.17	66.66
PZ-5	10/29/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.35	1.05	66.54
PZ-5	11/26/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.51	0.89	66.38
PZ-5	12/23/2013	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.51	0.89	66.38
PZ-5	1/31/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.55	0.85	66.34
PZ-5	2/28/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.39	1.01	66.50
PZ-5	3/28/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.23	1.17	66.66
PZ-5	4/29/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.23	1.17	66.66
PZ-5	5/27/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.23	1.17	66.66
PZ-5	6/24/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.23	1.17	66.66
PZ-5	7/30/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.56	0.84	66.33
PZ-5	8/27/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	40.99	0.41	65.90
PZ-5	9/24/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	41.37	0.03	65.52
PZ-5	10/30/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	41.38	0.02	65.51
PZ-5	11/24/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	41.4	0	65.49
PZ-5	12/9/2014	49.93	37.0 - 41.4	34.4 - 41.9	106.89	44	Dry	Dry
PZ-5	1/20/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	45.3	Dry	Dry
PZ-5	2/17/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	48	Dry	Dry
PZ-5	3/26/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49	Dry	Dry
PZ-5	4/14/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	5/27/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	6/18/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	7/30/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	8/26/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	9/29/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	10/28/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	11/18/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	12/30/2015	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	1/27/2016	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	3/23/2016	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	6/22/2016	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	8/31/2016	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	12/27/2016	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	3/29/2017	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	6/28/2017	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	9/27/2017	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	12/27/2017	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	3/28/2018	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	6/27/2018	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	9/19/2018	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	12/27/2018	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-5	6/26/2019	49.93	37.0 - 41.4	34.4 - 41.9	106.89	49.75	Dry	Dry
PZ-6	7/15/2010	44.7	36.9 - 41.3	34.2 - 41.7	106.74	38.33	2.97	68.41
PZ-6	3/23/2011	44.7	36.9 - 41.3	34.2 - 41.7	106.74	38.65	2.65	68.09
PZ-6	11/18/2011	44.7	36.9 - 41.3	34.2 - 41.7	106.74	38.95	2.35	67.79
PZ-6	4/10/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.07	2.23	67.67
PZ-6	5/16/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.1	2.2	67.64
PZ-6	5/31/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.18	2.12	67.56
PZ-6	6/6/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.45	1.85	67.29
PZ-6	6/13/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.1	2.2	67.64
PZ-6	6/20/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.18	2.12	67.56
PZ-6	6/26/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.04	2.26	67.70
PZ-6	7/3/2012	44.7	36.9 - 41.3	34.2 - 41.7	106.74	38.82	2.48	67.92
PZ-6	1/25/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.25	2.05	67.49
PZ-6	2/22/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.30	2.00	67.44
PZ-6	3/22/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.39	1.91	67.35
PZ-6	4/23/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.4	1.9	67.34
PZ-6	5/31/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.5	1.8	67.24
PZ-6	6/28/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.5	1.8	67.24
PZ-6	7/30/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	39.51	1.79	67.23
PZ-6	8/30/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.19	1.11	66.55
PZ-6	9/27/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.26	1.04	66.64
PZ-6	10/29/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.16	1.14	66.58
PZ-6	11/26/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.31	0.99	66.43

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
PZ-6	12/23/2013	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.51	0.79	66.23
PZ-6	1/31/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.52	0.78	66.22
PZ-6	2/28/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.55	0.75	66.19
PZ-6	3/28/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.58	0.72	66.16
PZ-6	4/29/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.58	0.72	66.16
PZ-6	5/27/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.58	0.72	66.16
PZ-6	6/24/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.58	0.72	66.16
PZ-6	7/30/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	40.69	0.61	66.05
PZ-6	8/27/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.12	0.18	65.62
PZ-6	9/24/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.25	0.05	65.49
PZ-6	10/30/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.28	0.02	65.46
PZ-6	11/24/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.3	Dry	Dry
PZ-6	12/9/2014	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.3	Dry	Dry
PZ-6	1/20/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	41.3	Dry	Dry
PZ-6	2/17/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	42.5	Dry	Dry
PZ-6	3/26/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	42.89	Dry	Dry
PZ-6	4/14/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	43.5	Dry	Dry
PZ-6	5/27/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44	Dry	Dry
PZ-6	6/18/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	7/30/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	8/26/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	9/29/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	10/28/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	11/18/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	12/30/2015	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	1/27/2016	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	3/23/2016	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	6/22/2016	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	8/31/2016	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	12/27/2016	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	3/29/2017	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	6/28/2017	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	9/27/2017	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	12/27/2017	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	3/28/2018	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	6/27/2018	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	9/19/2018	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	12/27/2018	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	4/24/2019	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
PZ-6	6/26/2019	44.7	36.9 - 41.3	34.2 - 41.7	106.74	44.55	Dry	Dry
VP-10D	1/26/2011	48.79	39.8 - 40.3	32.8 - 40.8	106.15	37.83	2.47	68.32
VP-10D	11/18/2011	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.05	2.25	68.10
VP-10D	4/10/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	37.57	2.73	68.58
VP-10D	5/11/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	NM	NM	NM
VP-10D	5/16/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.7	1.60	67.45
VP-10D	5/31/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.15	2.15	68.00
VP-10D	6/6/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.77	1.53	67.38
VP-10D	6/13/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.5	1.80	67.65
VP-10D	6/20/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.95	1.35	67.20
VP-10D	6/26/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.08	2.22	68.07
VP-10D	7/3/2012	48.79	39.8 - 40.3	32.8 - 40.8	106.15	37.95	2.35	68.20
VP-10D	1/25/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.34	1.96	67.81
VP-10D	2/22/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.36	1.94	67.79
VP-10D	3/22/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.39	1.91	67.76
VP-10D	4/23/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.42	1.88	67.21
VP-10D	5/31/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.51	1.79	67.12
VP-10D	6/28/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.52	1.78	67.11
VP-10D	7/30/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.54	1.76	67.09
VP-10D	8/30/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.55	1.75	67.08
VP-10D	9/27/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.56	1.74	67.07
VP-10D	10/29/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.58	1.72	67.05
VP-10D	11/26/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.6	1.70	67.03
VP-10D	12/23/2013	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.63	1.67	67.00
VP-10D	1/31/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.7	1.60	66.93
VP-10D	2/28/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.65	1.65	66.98
VP-10D	3/28/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.62	1.68	67.01

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-10D	4/29/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.64	1.66	66.99
VP-10D	5/27/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.63	1.67	67.00
VP-10D	6/24/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.62	1.68	67.01
VP-10D	7/30/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	38.65	1.65	66.98
VP-10D	8/27/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	39.19	1.11	66.44
VP-10D	9/24/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	39.76	0.54	65.87
VP-10D	10/30/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	39.76	0.54	65.87
VP-10D	11/24/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	39.80	0.50	65.83
VP-10D	12/9/2014	48.79	39.8 - 40.3	32.8 - 40.8	106.15	39.82	0.48	65.81
VP-10D	1/20/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.00	Dry	Dry
VP-10D	2/17/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.20	Dry	Dry
VP-10D	3/26/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	4/14/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	5/27/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	6/18/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	7/30/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	8/26/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	9/29/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	10/28/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	11/18/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	12/30/2015	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	1/27/2016	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	3/23/2016	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	6/22/2016	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	8/31/2016	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	12/27/2016	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	3/29/2017	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	6/28/2017	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	9/27/2017	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	12/27/2017	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	3/28/2018	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	6/27/2018	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	9/19/2018	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	12/27/2018	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	4/24/2019	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10D	6/26/2019	48.79	39.8 - 40.3	32.8 - 40.8	106.15	40.35	Dry	Dry
VP-10E	1/26/2011	48.79	38.8 - 39.3	32.8 - 40.8	106.15	37.85	1.45	68.30
VP-10E	3/23/2011	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.39	0.91	67.76
VP-10E	11/18/2011	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.05	1.25	68.10
VP-10E	4/10/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.3	1.00	67.85
VP-10E	5/11/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	NM	NM	NM
VP-10E	5/16/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.88	0.42	67.27
VP-10E	5/31/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.18	1.12	67.97
VP-10E	6/6/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	(38.90)	NA	NA
VP-10E	6/13/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.87	0.43	67.28
VP-10E	6/20/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.85	0.45	67.30
VP-10E	6/26/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	37.62	1.68	68.53
VP-10E	7/3/2012	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38	1.30	68.15
VP-10E	1/25/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.4	0.90	67.75
VP-10E	2/22/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.49	0.81	67.66
VP-10E	3/22/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.48	0.82	67.67
VP-10E	4/23/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.52	0.78	67.11
VP-10E	5/31/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.62	0.68	67.01
VP-10E	6/28/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.63	0.67	67.00
VP-10E	7/30/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.65	0.65	66.98
VP-10E	8/30/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.71	0.59	66.92
VP-10E	9/27/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.7	0.60	66.93
VP-10E	10/29/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.74	0.56	66.89
VP-10E	11/26/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.78	0.52	66.85
VP-10E	12/23/2013	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.83	0.47	66.80
VP-10E	1/31/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.9	0.40	66.73
VP-10E	2/28/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.95	0.35	66.68
VP-10E	3/28/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.99	0.31	66.64
VP-10E	4/29/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.00	0.30	66.63
VP-10E	5/27/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.04	0.26	66.59
VP-10E	6/24/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.10	0.20	66.53

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-10E	7/30/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.00	0.30	66.63
VP-10E	8/27/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.92	0.38	66.71
VP-10E	9/24/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.82	0.48	66.81
VP-10E	10/30/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.84	0.46	66.79
VP-10E	11/24/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.84	0.46	66.79
VP-10E	12/9/2014	48.79	38.8 - 39.3	32.8 - 40.8	106.15	38.86	0.44	66.77
VP-10E	1/20/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	2/17/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	3/26/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	4/14/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	5/27/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	6/18/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	7/30/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	8/26/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	9/29/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	10/28/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	11/18/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	12/30/2015	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	1/27/2016	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	3/23/2016	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	6/22/2016	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	8/31/2016	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	12/27/2016	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	3/29/2017	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	6/28/2017	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	9/27/2017	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	12/27/2017	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	3/28/2018	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	6/27/2018	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	9/19/2018	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	12/27/2018	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	4/24/2019	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10E	6/26/2019	48.79	38.8 - 39.3	32.8 - 40.8	106.15	39.35	Dry	Dry
VP-10F	1/26/2011	48.79	46.3 - 46.8	44.3 - 47.8	106.15	42.74	4.06	63.41
VP-10F	3/23/2011	48.79	46.3 - 46.8	44.3 - 47.8	106.15	42.75	4.05	63.40
VP-10F	11/18/2011	48.79	46.3 - 46.8	44.3 - 47.8	106.15	42.21	4.59	63.94
VP-10F	4/10/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	42.42	4.38	63.73
VP-10F	5/11/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	NM	NM	NM
VP-10F	5/16/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.42	3.38	62.73
VP-10F	5/31/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.85	2.95	62.30
VP-10F	6/6/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.88	1.92	61.27
VP-10F	6/13/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.07	2.73	62.08
VP-10F	6/20/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.13	2.67	62.02
VP-10F	6/26/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	45.5	1.30	60.65
VP-10F	7/3/2012	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.85	2.95	60.65
VP-10F	1/25/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.03	3.77	63.12
VP-10F	2/22/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.16	3.64	62.99
VP-10F	3/22/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.19	3.61	62.96
VP-10F	4/23/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.25	3.55	62.38
VP-10F	5/31/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.33	3.47	62.30
VP-10F	6/28/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.35	3.45	62.28
VP-10F	7/30/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.41	3.39	62.22
VP-10F	8/30/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.45	3.35	62.18
VP-10F	9/27/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.52	3.28	62.11
VP-10F	10/29/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.59	3.21	62.04
VP-10F	11/26/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.66	3.14	61.97
VP-10F	12/23/2013	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.71	3.09	61.92
VP-10F	1/31/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.85	2.95	61.78
VP-10F	2/28/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	43.91	2.89	61.72
VP-10F	3/28/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.01	2.79	61.62
VP-10F	4/29/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.05	2.75	61.58
VP-10F	5/27/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.11	2.69	61.52
VP-10F	6/24/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	44.15	2.65	61.48
VP-10F	7/30/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	45.00	1.80	60.63
VP-10F	8/27/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	45.82	0.98	59.81
VP-10F	9/24/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.20	0.60	59.43

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-10F	10/30/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.33	0.47	59.30
VP-10F	11/24/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.5	0.3	59.13
VP-10F	12/9/2014	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.21	0.59	59.42
VP-10F	1/20/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.50	0.30	59.13
VP-10F	2/17/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	3/26/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	4/14/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	5/27/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	6/18/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	7/30/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	8/26/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	9/29/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	10/28/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	11/18/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	12/30/2015	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	1/27/2016	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	3/23/2016	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	6/22/2016	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	8/31/2016	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	12/27/2016	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	3/29/2017	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	6/28/2017	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	9/27/2017	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	12/27/2017	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	3/28/2018	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	6/27/2018	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	9/19/2018	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	12/27/2018	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	4/24/2019	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10F	6/26/2019	48.79	46.3 - 46.8	44.3 - 47.8	106.15	46.88	Dry	Dry
VP-10G	1/26/2011	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.27 *	9.03*	67.88 *
VP-10G	11/18/2011	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.00 *	9.30 *	68.15 *
VP-10G	4/10/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	33.24	14.06	72.91
VP-10G	5/11/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	NM	NM	NM
VP-10G	5/16/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	34.65	12.65	71.50
VP-10G	5/31/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	34.68	12.62	71.47
VP-10G	6/6/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	34.95	12.35	71.20
VP-10G	6/13/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	35.30	12.00	70.85
VP-10G	6/20/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	35.70	11.60	70.45
VP-10G	6/26/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	(46.00)	NA	NA
VP-10G	7/3/2012	48.79	46.8 - 47.3	44.3 - 47.8	106.15	43.85	3.45	62.30
VP-10G	1/25/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.19	9.11	67.96
VP-10G	2/22/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.17	9.13	67.98
VP-10G	3/22/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.22	9.08	67.93
VP-10G	4/23/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.29	9.01	67.34
VP-10G	5/31/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.34	8.96	67.29
VP-10G	6/28/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.35	8.95	67.28
VP-10G	7/30/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.42	8.88	67.21
VP-10G	8/30/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.51	8.79	67.12
VP-10G	9/27/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.60	8.70	67.03
VP-10G	10/29/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.57	8.73	67.06
VP-10G	11/26/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.60	8.70	67.03
VP-10G	12/23/2013	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.63	8.67	67.00
VP-10G	1/31/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.70	8.60	66.93
VP-10G	2/28/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.74	8.56	66.89
VP-10G	3/28/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.80	8.50	66.83
VP-10G	4/29/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	38.91	8.39	66.72
VP-10G	5/27/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	39.00	8.30	66.63
VP-10G	6/24/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	39.26	8.04	66.37
VP-10G	7/30/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	42	5.3	63.63
VP-10G	8/27/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	44	3.3	61.63
VP-10G	9/24/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	46.20	1.10	59.43
VP-10G	10/30/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	46.52	0.78	59.11
VP-10G	11/24/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	46.61	0.69	59.02
VP-10G	12/9/2014	48.79	46.8 - 47.3	44.3 - 47.8	106.15	46.43	0.87	59.20
VP-10G	1/20/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	46.96	0.34	58.67

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-10G	2/17/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.40	Dry	Dry
VP-10G	3/26/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	4/14/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	5/27/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	6/18/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	7/30/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	8/26/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	9/29/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	10/28/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	11/18/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	12/30/2015	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	1/27/2016	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	3/23/2016	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	6/22/2016	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	8/31/2016	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	12/27/2016	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	3/29/2017	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	6/28/2017	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	9/27/2017	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	12/27/2017	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	3/28/2018	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	6/27/2018	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	9/19/2018	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	12/27/2018	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	4/24/2019	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-10G	6/26/2019	48.79	46.8 - 47.3	44.3 - 47.8	106.15	47.30	Dry	Dry
VP-11D	11/18/2011	48.48	41.5 - 42.0	32.0 - 42.5	105.44	38.77	3.23	66.67
VP-11D	4/10/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	39.38	2.62	66.06
VP-11D	5/11/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	NM	NM	NM
VP-11D	5/16/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	38.87	3.13	66.57
VP-11D	5/31/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.45	0.55	63.99
VP-11D	6/6/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	39.10	2.90	66.34
VP-11D	6/13/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	39.40	2.60	66.04
VP-11D	6/20/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	39.22	2.78	66.22
VP-11D	6/26/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.05	0.95	64.39
VP-11D	7/3/2012	48.48	41.5 - 42.0	32.0 - 42.5	105.44	38.95	3.05	66.49
VP-11D	1/25/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	40.75	1.25	64.69
VP-11D	2/22/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	40.71	1.29	64.73
VP-11D	3/22/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	40.77	1.23	64.67
VP-11D	4/23/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	40.82	1.18	64.81
VP-11D	5/31/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	40.99	1.01	64.64
VP-11D	6/28/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.00	1.00	64.63
VP-11D	7/30/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.15	0.85	64.48
VP-11D	8/30/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.26	0.74	64.37
VP-11D	9/27/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.37	0.63	64.26
VP-11D	10/29/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.44	0.56	64.19
VP-11D	11/26/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.73	0.27	63.90
VP-11D	12/23/2013	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	1/31/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	2/28/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	3/28/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	4/29/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	5/27/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	6/24/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	7/30/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	8/27/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42.02	Dry	Dry
VP-11D	9/24/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	41.9	Dry	Dry
VP-11D	10/30/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	11/24/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	12/9/2014	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	1/20/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	2/17/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	3/26/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	4/14/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	5/27/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	6/18/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-11D	7/30/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	8/26/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	9/29/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	10/28/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	11/18/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	12/30/2015	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	1/27/2016	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	3/23/2016	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	6/22/2016	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	8/31/2016	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	12/27/2016	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	3/29/2017	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	6/28/2017	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	9/27/2017	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	12/27/2017	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	3/28/2018	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	6/27/2018	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	9/19/2018	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	12/27/2018	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	4/24/2019	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11D	6/26/2019	48.48	41.5 - 42.0	32.0 - 42.5	105.44	42	Dry	Dry
VP-11E	1/26/2011	48.48	40.5 - 41.0	32.0 - 42.5	105.44	38.24	2.76	67.20
VP-11E	3/23/2011	48.48	40.5 - 41.0	32.0 - 42.5	105.44	38.75	2.25	66.69
VP-11E	11/18/2011	48.48	40.5 - 41.0	32.0 - 42.5	105.44	38.79	2.21	66.65
VP-11E	4/10/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	39.43	1.57	66.01
VP-11E	5/11/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	NM	NM	NM
VP-11E	5/16/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	38.97	2.03	66.47
VP-11E	5/31/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	40.05	0.95	65.39
VP-11E	6/6/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	39.39	1.61	66.05
VP-11E	6/13/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	39.55	1.45	65.89
VP-11E	6/20/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	39.42	1.58	66.02
VP-11E	6/26/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	40.78	0.22	64.66
VP-11E	7/3/2012	48.48	40.5 - 41.0	32.0 - 42.5	105.44	38.92	2.08	66.52
VP-11E	1/25/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	40.78	0.22	64.66
VP-11E	2/22/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	40.76	0.24	64.68
VP-11E	3/22/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	4/23/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	5/31/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/28/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	7/30/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	8/30/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	9/27/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	10/29/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	11/26/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/23/2013	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	1/31/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	2/28/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	3/28/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	4/29/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	5/27/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/24/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	7/30/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	8/27/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	9/24/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	10/30/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	11/24/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/9/2014	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	1/20/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	2/17/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	3/26/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	4/14/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	5/27/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/18/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	7/30/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	8/26/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	9/29/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-11E	10/28/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	11/18/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/30/2015	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	1/27/2016	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	3/23/2016	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/22/2016	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	8/31/2016	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/27/2016	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	3/29/2017	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/28/2017	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	9/27/2017	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/27/2017	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	3/28/2018	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/27/2018	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	9/19/2018	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	12/27/2018	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	4/24/2019	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11E	6/26/2019	48.48	40.5 - 41.0	32.0 - 42.5	105.44	Dry	Dry	Dry
VP-11F	1/26/2011	48.48	45.5 - 46.0	44.5 - 47.5	105.44	42.36	3.64	63.08
VP-11F	3/23/2011	48.48	45.5 - 46.0	44.5 - 47.5	105.44	42.55	3.45	62.89
VP-11F	11/18/2011	48.48	45.5 - 46.0	44.5 - 47.5	105.44	42.25	3.75	63.19
VP-11F	4/10/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	42.37	3.63	63.07
VP-11F	5/11/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	NM	NM	NM
VP-11F	5/16/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	43.25	2.75	62.19
VP-11F	5/31/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	43.42	2.58	62.02
VP-11F	6/6/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	44.52	1.48	60.92
VP-11F	6/13/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	44.05	1.95	61.39
VP-11F	6/20/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	44.09	1.91	61.35
VP-11F	6/26/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	44.85	1.15	60.59
VP-11F	7/3/2012	48.48	45.5 - 46.0	44.5 - 47.5	105.44	43.30	2.70	62.14
VP-11F	1/25/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.28	5.72	65.16
VP-11F	2/22/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.31	5.69	65.13
VP-11F	3/22/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.46	5.54	64.98
VP-11F	4/23/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.5	5.5	65.13
VP-11F	5/31/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.62	5.38	65.01
VP-11F	6/28/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.65	5.35	64.98
VP-11F	7/30/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.79	5.21	64.84
VP-11F	8/30/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.86	5.14	64.77
VP-11F	9/27/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.91	5.09	64.72
VP-11F	10/29/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	40.99	5.01	64.64
VP-11F	11/26/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.06	4.94	64.57
VP-11F	12/23/2013	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.13	4.87	64.50
VP-11F	1/31/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.22	4.78	64.41
VP-11F	2/28/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.39	4.61	64.24
VP-11F	3/28/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.6	4.4	64.03
VP-11F	4/29/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.65	4.35	63.98
VP-11F	5/27/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.76	4.24	63.87
VP-11F	6/24/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	41.89	4.11	63.74
VP-11F	7/30/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	42.36	3.64	63.27
VP-11F	8/27/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	44.73	1.27	60.90
VP-11F	9/24/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	45.89	0.11	59.74
VP-11F	10/30/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46	0	59.63
VP-11F	11/24/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46	0	59.63
VP-11F	12/9/2014	48.48	45.5 - 46.0	44.5 - 47.5	105.44	45.9	0.1	59.73
VP-11F	1/20/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	2/17/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	3/26/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	4/14/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	5/27/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	6/18/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	7/30/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	8/26/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	9/29/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	10/28/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	11/18/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	12/30/2015	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-11F	1/27/2016	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	3/23/2016	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	6/22/2016	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	8/31/2016	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	12/27/2016	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	3/29/2017	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	6/28/2017	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	9/27/2017	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	12/27/2017	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	3/28/2018	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	6/27/2018	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	9/19/2018	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	12/27/2018	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	4/24/2019	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11F	6/26/2019	48.48	45.5 - 46.0	44.5 - 47.5	105.44	46.32	Dry	Dry
VP-11G	1/26/2011	48.48	46.5 - 47.0	44.5 - 47.5	105.44	42.39	4.61	63.05
VP-11G	3/23/2011	48.48	46.5 - 47.0	44.5 - 47.5	105.44	42.55	4.45	62.89
VP-11G	11/18/2011	48.48	46.5 - 47.0	44.5 - 47.5	105.44	42.21	4.79	63.23
VP-11G	4/10/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	42.36	4.64	63.08
VP-11G	5/11/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	NM	NM	NM
VP-11G	5/16/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.25	3.75	62.19
VP-11G	5/31/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	42.80	4.20	62.64
VP-11G	6/6/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.52	2.48	60.92
VP-11G	6/13/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.05	2.95	61.39
VP-11G	6/20/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.07	2.93	61.37
VP-11G	6/26/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.85	2.15	60.59
VP-11G	7/3/2012	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.28	3.72	62.16
VP-11G	1/25/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.26	3.74	62.18
VP-11G	2/22/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.3	3.7	62.14
VP-11G	3/22/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.52	3.48	61.92
VP-11G	4/23/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.56	3.44	62.07
VP-11G	5/31/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.69	3.31	61.94
VP-11G	6/28/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.71	3.29	61.92
VP-11G	7/30/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.74	3.26	61.89
VP-11G	8/30/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.79	3.21	61.84
VP-11G	9/27/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.86	3.14	61.77
VP-11G	10/29/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.89	3.11	61.74
VP-11G	11/26/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	43.97	3.03	61.66
VP-11G	12/23/2013	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.02	2.98	61.61
VP-11G	1/31/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.13	2.87	61.50
VP-11G	2/28/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.22	2.78	61.41
VP-11G	3/28/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.31	2.69	61.32
VP-11G	4/29/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.5	2.5	61.13
VP-11G	5/27/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.68	2.32	60.95
VP-11G	6/24/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	44.89	2.11	60.74
VP-11G	7/30/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	45.06	1.94	60.57
VP-11G	8/27/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	45.61	1.39	60.02
VP-11G	9/24/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	45.89	1.11	59.74
VP-11G	10/30/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	46	1	59.63
VP-11G	11/24/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	46.1	0.9	59.53
VP-11G	12/9/2014	48.48	46.5 - 47.0	44.5 - 47.5	105.44	45.84	1.16	59.79
VP-11G	1/20/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	46.18	0.82	59.45
VP-11G	2/17/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47	Dry	Dry
VP-11G	3/26/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	4/14/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	5/27/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	6/18/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	7/30/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	8/26/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	9/29/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	10/28/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.1	Dry	Dry
VP-11G	11/18/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	12/30/2015	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	1/27/2016	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	3/23/2016	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	6/22/2016	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-11G	8/31/2016	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	12/27/2016	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	3/29/2017	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	6/28/2017	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	9/27/2017	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	12/27/2017	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	3/28/2018	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	6/27/2018	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	9/19/2018	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	12/27/2018	48.48	46.5 -47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	4/24/2019	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-11G	6/26/2019	48.48	46.5 - 47.0	44.5 - 47.5	105.44	47.10	Dry	Dry
VP-12D	11/18/2011	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	4/10/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	41.45	0.15	64.20
VP-12D	5/11/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	5/16/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	41.45	0.15	64.20
VP-12D	5/31/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	6/6/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	6/13/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.43)	NA	NA
VP-12D	6/20/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	6/26/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	7/3/2012	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.45)	NA	NA
VP-12D	1/25/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.49)	NA	NA
VP-12D	2/22/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.50)	NA	NA
VP-12D	3/22/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	(41.55)	NA	NA
VP-12D	4/23/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	5/31/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/28/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	7/30/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	8/30/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	9/27/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	10/29/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	11/26/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	12/23/2013	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	1/31/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	2/28/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	3/28/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	4/29/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	5/27/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/24/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	7/30/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	8/27/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	9/24/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	10/30/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	11/24/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	12/9/2014	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	1/20/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	2/17/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	3/26/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	4/14/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	5/27/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/18/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	7/30/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	8/26/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	9/29/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	10/28/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	11/18/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	12/30/2015	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	1/27/2016	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	3/23/2016	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/22/2016	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	8/31/2016	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	12/27/2016	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	3/29/2017	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/28/2017	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	9/27/2017	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-12D	12/27/2017	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	3/28/2018	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/27/2018	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	9/19/2018	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	12/27/2018	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	4/24/2019	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12D	6/26/2019	48.59	41.1 - 41.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	1/26/2011	48.59	37.1 - 37.6	32.6 - 42.1	105.65	37.46	0.14	68.19
VP-12E	3/23/2011	48.59	37.1 - 37.6	32.6 - 42.1	105.65	37.34	0.26	68.31
VP-12E	11/18/2011	48.59	37.1 - 37.6	32.6 - 42.1	105.65	37.4	0.2	68.25
VP-12E	4/10/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	37.46	0.14	68.19
VP-12E	5/11/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.50)	NA	NA
VP-12E	5/16/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.50)	NA	NA
VP-12E	5/31/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.48)	NA	NA
VP-12E	6/6/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.49)	NA	NA
VP-12E	6/13/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.48)	NA	NA
VP-12E	6/20/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.49)	NA	NA
VP-12E	6/26/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.50)	NA	NA
VP-12E	7/3/2012	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.50)	NA	NA
VP-12E	1/25/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.43)	NA	NA
VP-12E	2/22/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.48)	NA	NA
VP-12E	3/22/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	(37.56)	NA	NA
VP-12E	4/23/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	5/31/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/28/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	7/30/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	8/30/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	9/27/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	10/29/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	11/26/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/23/2013	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	1/31/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	2/28/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	3/28/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	4/29/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	5/27/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/24/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	7/30/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	8/27/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	9/24/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	10/30/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	11/24/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/9/2014	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	1/20/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	2/17/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	3/26/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	4/14/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	5/27/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/18/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	7/30/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	8/26/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	9/29/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	10/28/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	11/18/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/30/2015	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	1/27/2016	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	3/23/2016	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/22/2016	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	8/31/2016	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/27/2016	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	3/29/2017	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/28/2017	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	9/27/2017	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/27/2017	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	3/28/2018	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/27/2018	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-12E	9/19/2018	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	12/27/2018	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	4/24/2019	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12E	6/26/2019	48.59	37.1 - 37.6	32.6 - 42.1	105.65	Dry	Dry	Dry
VP-12F	1/26/2011	48.59	46.1 - 46.6	44.1 - 47.6	105.65	43.92	2.68	61.73
VP-12F	3/23/2011	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.09	2.51	61.56
VP-12F	11/18/2011	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.05	2.55	61.60
VP-12F	4/10/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.06	2.54	61.59
VP-12F	5/11/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	43.62	2.98	62.03
VP-12F	5/16/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.45	2.15	61.20
VP-12F	5/31/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.46	2.14	61.19
VP-12F	6/6/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	43.65	2.95	62.00
VP-12F	6/13/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	43.09	3.51	62.56
VP-12F	6/20/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	43.29	3.31	62.36
VP-12F	6/26/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.47	2.13	61.18
VP-12F	7/3/2012	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.99	1.61	60.66
VP-12F	1/25/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.83	1.77	60.82
VP-12F	2/22/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.88	1.72	60.77
VP-12F	3/22/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	44.99	1.61	60.66
VP-12F	4/23/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.04	1.56	60.59
VP-12F	5/31/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.10	1.50	60.53
VP-12F	6/28/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.11	1.49	60.52
VP-12F	7/30/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.14	1.46	60.49
VP-12F	8/30/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.19	1.41	60.44
VP-12F	9/27/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.24	1.36	60.39
VP-12F	10/29/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.32	1.28	60.31
VP-12F	11/26/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.35	1.25	60.28
VP-12F	12/23/2013	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.5	1.10	60.13
VP-12F	1/31/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.63	0.97	60.00
VP-12F	2/28/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	45.75	0.85	59.88
VP-12F	3/28/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	46.03	0.57	59.60
VP-12F	4/29/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	5/27/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	6/24/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	7/30/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	8/27/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	9/24/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	10/30/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	11/24/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	12/9/2014	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	1/20/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	2/17/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	3/26/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	4/14/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	5/27/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	6/18/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	7/30/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	8/26/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	9/29/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	10/28/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	11/18/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	12/30/2015	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	1/27/2016	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	3/23/2016	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	6/22/2016	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	8/31/2016	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	12/27/2016	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	3/29/2017	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	6/28/2017	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	9/27/2017	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	12/27/2017	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	3/28/2018	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	6/27/2018	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	9/19/2018	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	12/27/2018	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12F	4/24/2019	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-12F	6/26/2019	48.59	46.1 - 46.6	44.1 - 47.6	105.65	Dry	Dry	Dry
VP-12G	1/26/2011	48.59	46.6 - 47.1	44.1 - 47.6	105.65	43.95	3.15	61.70
VP-12G	3/23/2011	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.05	3.05	61.60
VP-12G	11/18/2011	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.04	3.06	61.61
VP-12G	4/10/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47	0.10	58.65
VP-12G	5/11/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	43.57	3.53	62.08
VP-12G	5/16/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.5	2.60	61.15
VP-12G	5/31/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.47	2.63	61.18
VP-12G	6/6/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	43.65	3.45	62.00
VP-12G	6/13/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	43.38	3.72	62.27
VP-12G	6/20/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	43.2	3.90	62.45
VP-12G	6/26/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.47	2.63	61.18
VP-12G	7/3/2012	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.99	2.11	60.66
VP-12G	1/25/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.85	2.25	60.80
VP-12G	2/22/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.81	2.29	60.84
VP-12G	3/22/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.85	2.25	60.80
VP-12G	4/23/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	44.91	2.19	60.72
VP-12G	5/31/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.63
VP-12G	6/28/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.63
VP-12G	7/30/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.57
VP-12G	8/30/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.52
VP-12G	9/27/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.48
VP-12G	10/29/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.40
VP-12G	11/26/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.28
VP-12G	12/23/2013	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45	2.10	60.15
VP-12G	1/31/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45.65	1.45	59.98
VP-12G	2/28/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	45.72	1.38	59.91
VP-12G	3/28/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.06	1.04	59.57
VP-12G	4/29/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.15	0.95	59.48
VP-12G	5/27/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.32	0.78	59.31
VP-12G	6/24/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.35	0.75	59.28
VP-12G	7/30/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.30	0.80	59.33
VP-12G	8/27/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.38	0.72	59.25
VP-12G	9/24/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.32	0.78	59.31
VP-12G	10/30/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.30	0.80	59.33
VP-12G	11/24/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.32	0.78	59.31
VP-12G	12/9/2014	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.33	0.77	59.30
VP-12G	1/20/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	46.76	0.34	58.87
VP-12G	2/17/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.10	Dry	Dry
VP-12G	3/26/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	4/14/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	5/27/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	6/18/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	7/30/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	8/26/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	9/29/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	10/28/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	11/18/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	12/30/2015	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	1/27/2016	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	3/23/2016	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	6/22/2016	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	8/31/2016	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	12/27/2016	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	3/29/2017	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	6/28/2017	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	9/27/2017	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	12/27/2017	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	3/28/2018	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	6/27/2018	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	9/19/2018	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	12/27/2018	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	4/24/2019	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-12G	6/26/2019	48.59	46.6 - 47.1	44.1 - 47.6	105.65	47.32	Dry	Dry
VP-13D	1/26/2011	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.53	3.57	67.71
VP-13D	11/18/2011	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.69	1.41	65.55

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-13D	4/10/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.83	3.27	67.41
VP-13D	5/11/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	NM	NM	NM
VP-13D	5/16/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.25	3.85	67.99
VP-13D	5/31/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.75	3.35	67.49
VP-13D	6/6/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.22	2.88	67.02
VP-13D	6/13/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.8	3.30	67.44
VP-13D	6/20/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.15	3.95	68.09
VP-13D	6/26/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.3	2.80	66.94
VP-13D	7/3/2012	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.29	3.81	67.95
VP-13D	1/25/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.55	3.55	67.69
VP-13D	2/22/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.51	3.59	67.73
VP-13D	3/22/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.56	3.54	67.68
VP-13D	4/23/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.6	3.50	68.03
VP-13D	5/31/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.7	3.40	67.93
VP-13D	6/28/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	37.71	3.39	67.92
VP-13D	7/30/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.23	2.87	67.40
VP-13D	8/30/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.99	2.11	66.64
VP-13D	9/27/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.62	1.48	66.01
VP-13D	10/29/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41	0.10	64.63
VP-13D	11/26/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.56	Dry	Dry
VP-13D	12/23/2013	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.56	Dry	Dry
VP-13D	1/31/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.56	Dry	Dry
VP-13D	2/28/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.56	Dry	Dry
VP-13D	3/28/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.56	Dry	Dry
VP-13D	4/29/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.00	0.10	64.63
VP-13D	5/27/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.62	1.48	66.01
VP-13D	6/24/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.10	3.00	67.53
VP-13D	7/30/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.88	2.22	66.75
VP-13D	8/27/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.16	1.94	66.47
VP-13D	9/24/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.21	1.89	66.42
VP-13D	10/30/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.32	1.78	66.31
VP-13D	11/24/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.44	1.66	66.19
VP-13D	12/9/2014	49.66	40.7 - 41.1	31.7 - 41.7	105.24	38.65	2.45	66.98
VP-13D	1/20/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	39.46	1.64	66.17
VP-13D	2/17/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	40	1.1	65.63
VP-13D	3/26/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	40.83	0.27	64.80
VP-13D	4/14/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	5/27/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	6/18/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	7/30/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	8/26/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	9/29/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	10/28/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	11/18/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	12/30/2015	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	1/27/2016	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	3/23/2016	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	6/22/2016	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	8/31/2016	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	12/27/2016	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	3/29/2017	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	6/28/2017	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	9/27/2017	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	12/27/2017	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	3/28/2018	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	6/27/2018	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	9/19/2018	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	12/27/2018	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	4/24/2019	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13D	6/26/2019	49.66	40.7 - 41.1	31.7 - 41.7	105.24	41.2	Dry	Dry
VP-13E	1/26/2011	49.66	39.2 - 39.7	31.7 - 41.7	105.24	36.66	3.04	68.58
VP-13E	3/23/2011	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37	2.70	68.24
VP-13E	11/18/2011	49.66	39.2 - 39.7	31.7 - 41.7	105.24	36.9	2.80	68.34
VP-13E	4/10/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.03	2.67	68.21
VP-13E	5/11/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	NM	NM	NM
VP-13E	5/16/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.54	2.16	67.70

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-13E	5/31/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.55	2.15	67.69
VP-13E	6/6/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/13/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.48	1.22	66.76
VP-13E	6/20/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.4	1.30	66.84
VP-13E	6/26/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.48	1.22	66.76
VP-13E	7/3/2012	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.22	2.48	68.02
VP-13E	1/25/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.08	2.62	68.16
VP-13E	2/22/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.15	2.55	68.09
VP-13E	3/22/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.17	2.53	68.07
VP-13E	4/23/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.18	2.52	68.45
VP-13E	5/31/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.29	2.41	68.34
VP-13E	6/28/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.30	2.40	68.33
VP-13E	7/30/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.63	2.07	68.00
VP-13E	8/30/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.81	1.89	67.82
VP-13E	9/27/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	37.86	1.84	67.77
VP-13E	10/29/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.01	1.69	67.62
VP-13E	11/26/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.04	1.66	67.59
VP-13E	12/23/2013	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.56	1.14	67.07
VP-13E	1/31/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.61	1.09	67.02
VP-13E	2/28/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.55	1.15	67.08
VP-13E	3/28/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.1	1.60	67.53
VP-13E	4/29/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.1	1.60	67.53
VP-13E	5/27/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.10	1.60	67.53
VP-13E	6/24/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.10	1.60	67.53
VP-13E	7/30/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	38.10	1.60	67.53
VP-13E	8/27/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	39.12	0.58	66.51
VP-13E	9/24/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	10/30/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	11/24/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	12/9/2014	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	1/20/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	2/17/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	3/26/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	4/14/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	5/27/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/18/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	7/30/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	8/26/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	9/29/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	10/28/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	11/18/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	12/30/2015	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	1/27/2016	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	3/23/2016	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/22/2016	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	8/31/2016	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	12/27/2016	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	3/29/2017	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/28/2017	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	9/27/2017	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	12/27/2017	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	3/28/2018	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/27/2018	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	9/19/2018	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	12/27/2018	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	4/24/2019	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13E	6/26/2019	49.66	39.2 - 39.7	31.7 - 41.7	105.24	Dry	Dry	Dry
VP-13F	1/26/2011	49.66	45.2 - 45.7	43.7 - 48.4	105.24	41.28	4.42	63.96
VP-13F	3/23/2011	49.66	45.2 - 45.7	43.7 - 48.4	105.24	41.05	4.65	64.19
VP-13F	11/18/2011	49.66	45.2 - 45.7	43.7 - 48.4	105.24	40.40	5.30	64.84
VP-13F	4/10/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	40.38	5.32	64.86
VP-13F	5/11/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	NM	NM	NM
VP-13F	5/16/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	40.87	4.83	64.37
VP-13F	5/31/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.98	1.72	61.26
VP-13F	6/6/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.29	2.41	61.95
VP-13F	6/13/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	41.15	4.55	64.09

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-13F	6/20/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	41.20	4.50	64.04
VP-13F	6/26/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	45.30	0.40	59.94
VP-13F	7/3/2012	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.02	1.68	61.22
VP-13F	1/25/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.07	3.63	63.17
VP-13F	2/22/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.11	3.59	63.13
VP-13F	3/22/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.08	3.62	63.16
VP-13F	4/23/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.09	3.61	63.54
VP-13F	5/31/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.16	3.54	63.47
VP-13F	6/28/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.15	3.55	63.48
VP-13F	7/30/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.18	3.52	63.45
VP-13F	8/30/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.22	3.48	63.41
VP-13F	9/27/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.2	3.5	63.43
VP-13F	10/29/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.26	3.44	63.37
VP-13F	11/26/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.33	3.37	63.30
VP-13F	12/23/2013	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.35	3.35	63.28
VP-13F	1/31/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.66	3.04	62.97
VP-13F	2/28/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	42.97	2.73	62.66
VP-13F	3/28/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.37	2.33	62.26
VP-13F	4/29/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.37	2.33	62.26
VP-13F	5/27/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.37	2.33	62.26
VP-13F	6/24/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	43.37	2.33	62.26
VP-13F	7/30/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.01	1.69	61.62
VP-13F	8/27/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.69	1.01	60.94
VP-13F	9/24/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.73	0.97	60.90
VP-13F	10/30/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.86	0.84	60.77
VP-13F	11/24/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	44.93	0.77	60.70
VP-13F	12/9/2014	49.66	45.2 - 45.7	43.7 - 48.4	105.24	45	0.70	60.63
VP-13F	1/20/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	45.5	0.20	60.13
VP-13F	2/17/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	45.75	Dry	Dry
VP-13F	3/26/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	4/14/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	5/27/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	6/18/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	7/30/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	8/26/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	9/29/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	10/28/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	11/18/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	12/30/2015	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	1/27/2016	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	3/23/2016	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	6/22/2016	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	8/31/2016	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	12/27/2016	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	3/29/2017	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	6/28/2017	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	9/27/2017	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	12/27/2017	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	3/28/2018	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	6/27/2018	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	9/19/2018	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	12/27/2018	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	4/24/2019	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13F	6/26/2019	49.66	45.2 - 45.7	43.7 - 48.4	105.24	46.01	Dry	Dry
VP-13G	3/23/2011	49.66	47.7 - 48.2	43.7 - 48.4	105.24	41.04	7.16	64.20
VP-13G	11/18/2011	49.66	47.7 - 48.2	43.7 - 48.4	105.24	40.00	8.20	65.24
VP-13G	4/10/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	40.53	7.67	64.71
VP-13G	5/11/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	NM	NM	NM
VP-13G	5/16/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	41.10	7.10	64.14
VP-13G	5/31/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	44.38	3.82	60.86
VP-13G	6/6/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	42.79	5.41	62.45
VP-13G	6/13/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	41.03	7.17	64.21
VP-13G	6/20/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	41.20	7.00	64.04
VP-13G	6/26/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	45.62	2.58	59.62
VP-13G	7/3/2012	49.66	47.7 - 48.2	43.7 - 48.4	105.24	44.05	4.15	61.19
VP-13G	1/25/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.54	10.66	67.70

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-13G	2/22/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.66	10.54	67.58
VP-13G	3/22/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.69	10.51	67.55
VP-13G	4/23/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.71	10.49	67.92
VP-13G	5/31/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.74	10.46	67.89
VP-13G	6/28/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.75	10.45	67.88
VP-13G	7/30/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.81	10.39	67.82
VP-13G	8/30/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.89	10.31	67.74
VP-13G	9/27/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	37.94	10.26	67.69
VP-13G	10/29/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38	10.20	67.63
VP-13G	11/26/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.06	10.14	67.57
VP-13G	12/23/2013	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.11	10.09	67.52
VP-13G	1/31/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.16	10.04	67.47
VP-13G	2/28/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.19	10.01	67.44
VP-13G	3/28/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.1	10.10	67.53
VP-13G	4/29/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.28	9.92	67.35
VP-13G	5/27/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	38.66	9.54	66.97
VP-13G	6/24/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	39.01	9.19	66.62
VP-13G	7/30/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	41.06	7.14	64.57
VP-13G	8/27/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	43.28	4.92	62.35
VP-13G	9/24/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	44.73	3.47	60.90
VP-13G	10/30/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	44.81	3.39	60.82
VP-13G	11/24/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	44.92	3.28	60.71
VP-13G	12/9/2014	49.66	47.7 - 48.2	43.7 - 48.4	105.24	45.26	2.94	60.37
VP-13G	1/20/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	46.13	2.07	59.50
VP-13G	2/17/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	46.46	1.74	59.17
VP-13G	3/26/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	47.23	0.97	58.40
VP-13G	4/14/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	47.99	0.21	57.64
VP-13G	5/27/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.34	Dry	Dry
VP-13G	6/18/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	7/30/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	8/26/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	9/29/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	10/28/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	11/18/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	12/30/2015	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	1/27/2016	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	3/23/2016	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	6/22/2016	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	8/31/2016	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	12/27/2016	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	3/29/2017	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	6/28/2017	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	9/27/2017	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	12/27/2017	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	3/28/2018	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	6/27/2018	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	9/19/2018	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	12/27/2018	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	4/24/2019	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-13G	6/26/2019	49.66	47.7 - 48.2	43.7 - 48.4	105.24	48.55	Dry	Dry
VP-14D	11/18/2011	48.15	40.7 - 41.2	31.7 - 41.7	105.13	37.46	3.74	67.67
VP-14D	4/10/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	37.32	3.88	67.81
VP-14D	5/11/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	NM	NM	NM
VP-14D	5/16/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	37.00	4.20	68.13
VP-14D	5/31/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	36.62	4.58	68.51
VP-14D	6/6/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	36.8	4.4	68.33
VP-14D	6/13/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	NM	NM	NM
VP-14D	6/20/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	36.50	4.70	68.63
VP-14D	6/26/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	NM	NM	NM
VP-14D	7/3/2012	48.15	40.7 - 41.2	31.7 - 41.7	105.13	NM	NM	NM
VP-14D	1/25/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	NM	NM	NM
VP-14D	2/22/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/22/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	4/23/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	5/31/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/28/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-14D	7/30/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	8/30/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	9/27/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	10/29/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	11/26/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/23/2013	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	1/31/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	2/28/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/28/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	4/29/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	5/27/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/24/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	7/30/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	8/27/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	9/24/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	10/30/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	11/24/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/9/2014	48.15	40.7 - 41.2	31.7 - 41.7	105.13	38.75	2.45	66.38
VP-14D	1/20/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	2/17/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/26/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	4/14/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	5/27/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/18/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	7/30/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	8/26/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	9/29/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	10/28/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	11/18/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/30/2015	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	1/27/2016	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/23/2016	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/22/2016	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	8/31/2016	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/27/2016	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/29/2017	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/28/2017	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	9/27/2017	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/27/2017	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	3/28/2018	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/27/2018	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	9/19/2018	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	12/27/2018	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	4/24/2019	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14D	6/26/2019	48.15	40.7 - 41.2	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	11/18/2011	48.15	39.2 - 39.7	31.7 - 41.7	105.13	36.78	2.92	68.35
VP-14E	4/10/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	36.24	3.46	68.89
VP-14E	5/11/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	NM	NM	NM
VP-14E	5/16/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	37.13	2.57	68.00
VP-14E	5/31/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	36.62	3.08	68.51
VP-14E	6/6/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.15	0.55	65.98
VP-14E	6/13/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	NM	NM	NM
VP-14E	6/20/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	37.94	1.76	67.19
VP-14E	6/26/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	NM	NM	NM
VP-14E	7/3/2012	48.15	39.2 - 39.7	31.7 - 41.7	105.13	NM	NM	NM
VP-14E	1/25/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	NM	NM	NM
VP-14E	2/22/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	3/22/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	4/23/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	5/31/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	6/28/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	7/30/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	8/30/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	9/27/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	10/29/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	11/26/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-14E	12/23/2013	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	1/31/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.45	1.25	66.68
VP-14E	2/28/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.57	1.13	66.56
VP-14E	3/28/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.64	1.06	66.49
VP-14E	4/29/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.66	1.04	66.47
VP-14E	5/27/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.69	1.01	66.44
VP-14E	6/24/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.64	1.06	66.49
VP-14E	7/30/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	8/27/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	9/24/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	10/30/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	11/24/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	Dry	Dry	Dry
VP-14E	12/9/2014	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	1/20/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	2/17/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	3/26/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	4/14/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	5/27/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	6/18/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	38.60	1.10	66.53
VP-14E	7/30/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.35	0.35	65.78
VP-14E	8/26/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.62	0.08	65.51
VP-14E	9/29/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	10/28/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	11/18/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	12/30/2015	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	1/27/2016	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	3/23/2016	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	6/22/2016	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.7	Dry	Dry
VP-14E	8/31/2016	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.7	Dry	Dry
VP-14E	12/27/2016	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	3/29/2017	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	6/28/2017	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	9/27/2017	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	12/27/2017	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	3/28/2018	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	6/27/2018	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	9/19/2018	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	12/27/2018	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	4/24/2019	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14E	6/26/2019	48.15	39.2 - 39.7	31.7 - 41.7	105.13	39.70	Dry	Dry
VP-14F	11/18/2011	48.15	45.2 - 45.7	43.7 - 48.2	105.13	39.93	5.77	65.20
VP-14F	4/10/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.42	0.28	59.71
VP-14F	5/11/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	NM	NM	NM
VP-14F	5/16/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	44.60	1.10	60.53
VP-14F	5/31/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	43.97	1.73	61.16
VP-14F	6/6/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	42.55	3.15	62.58
VP-14F	6/13/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	NM	NM	NM
VP-14F	6/20/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	40.85	4.85	64.28
VP-14F	6/26/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	NM	NM	NM
VP-14F	7/3/2012	48.15	45.2 - 45.7	43.7 - 48.2	105.13	NM	NM	NM
VP-14F	1/25/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	NM	NM	NM
VP-14F	2/22/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.18	0.52	59.95
VP-14F	3/22/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.27	0.43	59.86
VP-14F	4/23/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.29	0.41	60.34
VP-14F	5/31/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.36	0.34	60.27
VP-14F	6/28/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.36	0.34	60.27
VP-14F	7/30/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.41	0.29	60.22
VP-14F	8/30/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.47	0.23	60.16
VP-14F	9/27/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.62	0.08	60.01
VP-14F	10/29/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.70	Dry	Dry
VP-14F	11/26/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.74	Dry	Dry
VP-14F	12/23/2013	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.74	Dry	Dry
VP-14F	1/31/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.74	Dry	Dry
VP-14F	2/28/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.74	Dry	Dry
VP-14F	3/28/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.74	Dry	Dry
VP-14F	4/29/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.64	0.06	59.99

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-14F	5/27/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	45.01	0.69	60.62
VP-14F	6/24/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	43.37	2.33	62.26
VP-14F	7/30/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	8/27/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	9/24/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	10/30/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	11/24/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	12/9/2014	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	1/20/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	2/17/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	3/26/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	4/14/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	5/27/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	6/18/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	7/30/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	8/26/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	9/29/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	10/28/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	11/18/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	12/30/2015	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	1/27/2016	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	3/23/2016	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	6/22/2016	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	8/31/2016	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	12/27/2016	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	3/29/2017	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	6/28/2017	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	9/27/2017	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	12/27/2017	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	3/28/2018	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	6/27/2018	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	9/19/2018	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	12/27/2018	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	4/24/2019	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14F	6/26/2019	48.15	45.2 - 45.7	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	11/18/2011	48.15	46.7 - 47.2	43.7 - 48.2	105.13	39.93	7.27	65.20
VP-14G	4/10/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	5/11/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	5/16/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	36.2	11.00	68.93
VP-14G	5/31/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	(44.90)	NA	NA
VP-14G	6/6/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	37.8	9.40	67.33
VP-14G	6/13/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	6/20/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	38.37	8.83	66.76
VP-14G	6/26/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	7/3/2012	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	1/25/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	NM	NM	NM
VP-14G	2/22/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.63	1.57	59.50
VP-14G	3/22/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.61	1.59	59.52
VP-14G	4/23/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.65	1.55	59.98
VP-14G	5/31/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.71	1.49	59.92
VP-14G	6/28/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.75	1.45	59.88
VP-14G	7/30/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.76	1.44	59.87
VP-14G	8/30/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.81	1.39	59.82
VP-14G	9/27/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.89	1.31	59.74
VP-14G	10/29/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	45.99	1.21	59.64
VP-14G	11/26/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.03	1.17	59.60
VP-14G	12/23/2013	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.08	1.12	59.55
VP-14G	1/31/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.55	0.65	59.08
VP-14G	2/28/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.69	0.51	58.94
VP-14G	3/28/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.85	0.35	58.78
VP-14G	4/29/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.90	0.30	58.73
VP-14G	5/27/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.91	0.29	58.72
VP-14G	6/24/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	46.95	0.25	58.68
VP-14G	7/30/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	8/27/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	9/24/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-14G	10/30/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	11/24/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	12/9/2014	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	1/20/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	2/17/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	3/26/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	4/14/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	5/27/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	6/18/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	7/30/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	8/26/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	9/29/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	10/28/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	11/18/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	12/30/2015	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	1/27/2016	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	3/23/2016	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	6/22/2016	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	8/31/2016	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	12/27/2016	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	3/29/2017	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	6/28/2017	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	9/27/2017	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	12/27/2017	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	3/28/2018	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	6/27/2018	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	9/19/2018	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	12/27/2018	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	4/24/2019	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-14G	6/26/2019	48.15	46.7 - 47.2	43.7 - 48.2	105.13	Dry	Dry	Dry
VP-15D	11/18/2011	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	4/10/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	34.84 *	0.06	71.04 *
VP-15D	5/11/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	5/16/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.75)	NA	NA
VP-15D	5/31/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/6/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	6/13/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	6/20/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	6/26/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	7/3/2012	49.87	34.4 - 34.9	33.4 - 35.9	105.88	(34.80)	NA	NA
VP-15D	1/25/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	NM	NM	NM
VP-15D	2/22/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	3/22/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	4/23/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	5/31/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/28/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	7/30/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	8/30/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	9/27/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	10/29/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	11/26/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/23/2013	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	1/31/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	2/28/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	3/28/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	4/29/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	5/27/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/24/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	7/30/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	8/27/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	9/24/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	10/30/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	11/24/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/9/2014	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	1/20/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	2/17/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-15D	3/26/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	4/14/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	5/27/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/18/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	7/30/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	8/26/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	9/29/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	10/28/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	11/18/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/30/2015	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	1/27/2016	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	3/23/2016	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/22/2016	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	8/31/2016	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/27/2016	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	3/29/2017	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/28/2017	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	9/27/2017	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/27/2017	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	3/28/2018	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/27/2018	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	9/19/2018	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	12/27/2018	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	4/24/2019	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15D	6/26/2019	49.87	34.4 - 34.9	33.4 - 35.9	105.88	Dry	Dry	Dry
VP-15E	11/18/2011	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	4/10/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/11/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/16/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/31/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/6/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/13/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/20/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/26/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	7/3/2012	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	1/25/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	NM	NM	NM
VP-15E	2/22/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/22/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	4/23/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/31/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/28/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	7/30/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	8/30/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	9/27/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	10/29/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	11/26/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/23/2013	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	1/31/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	2/28/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/28/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	4/29/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/27/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/24/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	7/30/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	8/27/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	9/24/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	10/30/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	11/24/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/9/2014	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	1/20/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	2/17/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/26/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	4/14/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	5/27/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/18/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	7/30/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-15E	8/26/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	9/29/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	10/28/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	11/18/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/30/2015	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	1/27/2016	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/23/2016	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/22/2016	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	8/31/2016	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/27/2016	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/29/2017	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/28/2017	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	9/27/2017	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/27/2017	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	3/28/2018	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/27/2018	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	9/19/2018	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	12/27/2018	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	4/24/2019	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15E	6/26/2019	49.9	39.9 - 40.4	38.9 - 41.4	105.88	Dry	Dry	Dry
VP-15F	11/18/2011	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.30	0.10	58.58
VP-15F	4/10/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	Dry	Dry	Dry
VP-15F	5/11/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.05	0.35	58.83
VP-15F	5/16/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.35	0.05	58.53
VP-15F	5/31/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	Dry	Dry	Dry
VP-15F	6/6/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.15	0.25	58.73
VP-15F	6/13/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	46.50	0.90	59.38
VP-15F	6/20/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	46.27	1.13	59.61
VP-15F	6/26/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	Dry	Dry	Dry
VP-15F	7/3/2012	49.9	46.9 - 47.4	43.4 - 48.4	105.88	Dry	Dry	Dry
VP-15F	1/25/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	NM	NM	NM
VP-15F	2/22/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.68	3.72	62.20
VP-15F	3/22/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.64	3.76	62.24
VP-15F	4/23/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.65	3.75	61.98
VP-15F	5/31/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.69	3.71	61.94
VP-15F	6/28/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.7	3.7	61.93
VP-15F	7/30/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.74	3.66	61.89
VP-15F	8/30/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.79	3.61	61.84
VP-15F	9/27/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.89	3.51	61.74
VP-15F	10/29/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	43.93	3.47	61.70
VP-15F	11/26/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	44.00	3.40	61.63
VP-15F	12/23/2013	49.9	46.9 - 47.4	43.4 - 48.4	105.88	44.06	3.34	61.57
VP-15F	1/31/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	45.15	2.25	60.48
VP-15F	2/28/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	46.29	1.11	59.34
VP-15F	3/28/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.45	Dry	Dry
VP-15F	4/29/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.45	Dry	Dry
VP-15F	5/27/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.45	Dry	Dry
VP-15F	6/24/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.45	Dry	Dry
VP-15F	7/30/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	8/27/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	9/24/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	10/30/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	11/24/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	12/9/2014	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	1/20/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	2/17/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	3/26/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	4/14/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	5/27/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	6/18/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	7/30/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	8/26/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	9/29/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	10/28/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	11/18/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	12/30/2015	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-15F	1/27/2016	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	3/23/2016	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	6/22/2016	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	8/31/2016	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	12/27/2016	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	3/29/2017	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	6/28/2017	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	9/27/2017	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	12/27/2017	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	3/28/2018	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	6/27/2018	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	9/19/2018	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	12/27/2018	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	4/24/2019	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15F	6/26/2019	49.9	46.9 - 47.4	43.4 - 48.4	105.88	47.8	Dry	Dry
VP-15G	11/18/2011	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.29	1.11	58.59
VP-15G	4/10/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.50	0.90	58.38
VP-15G	5/16/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.35	1.05	58.53
VP-15G	5/31/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.64	0.76	58.24
VP-15G	6/6/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.1	1.3	58.78
VP-15G	6/13/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	46.85	1.55	59.03
VP-15G	6/20/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	46.28	2.12	59.60
VP-15G	6/26/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.65	0.75	58.23
VP-15G	7/3/2012	49.9	47.9 - 48.4	43.4 - 48.4	105.88	(47.90)	NA	NA
VP-15G	1/25/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	NM	NM	NM
VP-15G	2/22/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.56	4.84	62.32
VP-15G	3/22/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.49	4.91	62.39
VP-15G	4/23/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.55	4.85	62.08
VP-15G	5/31/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.61	4.79	62.02
VP-15G	6/28/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	62.03
VP-15G	7/30/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.99
VP-15G	8/30/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.91
VP-15G	9/27/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.84
VP-15G	10/29/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.75
VP-15G	11/26/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.63
VP-15G	12/23/2013	49.9	47.9 - 48.4	43.4 - 48.4	105.88	43.60	4.80	61.57
VP-15G	1/31/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	45.15	3.25	60.48
VP-15G	2/28/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	46.29	2.11	59.34
VP-15G	3/28/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.45	0.95	58.18
VP-15G	4/29/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.48	0.92	58.15
VP-15G	5/27/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.47	0.93	58.16
VP-15G	6/24/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.50	0.90	58.13
VP-15G	7/30/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.60	0.80	58.03
VP-15G	8/27/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.72	0.68	57.91
VP-15G	9/24/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	47.80	0.60	57.83
VP-15G	10/30/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.00	0.40	57.63
VP-15G	11/24/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.20	0.20	57.43
VP-15G	12/9/2014	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	1/20/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	2/17/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	3/26/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	4/14/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	5/27/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	6/18/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	7/30/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	8/26/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	9/29/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	10/28/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	11/18/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	12/30/2015	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.40	Dry	Dry
VP-15G	1/27/2016	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	3/23/2016	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	6/22/2016	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	8/31/2016	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	12/27/2016	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	3/29/2017	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-15G	6/28/2017	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	9/27/2017	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	12/27/2017	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	3/28/2018	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	6/27/2018	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	9/19/2018	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	12/27/2018	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	4/24/2019	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-15G	6/26/2019	49.9	47.9 - 48.4	43.4 - 48.4	105.88	48.4	Dry	Dry
VP-7D	1/26/2011	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.31	0.99	67.69
VP-7D	11/18/2011	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.58	0.72	67.42
VP-7D	4/10/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.75	0.55	67.25
VP-7D	5/11/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	5/16/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.85	0.45	67.15
VP-7D	5/31/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	39	0.30	67.00
VP-7D	6/6/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.76	0.54	67.24
VP-7D	6/13/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	39.15	0.15	66.85
VP-7D	6/20/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.77	0.53	67.23
VP-7D	6/26/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.70	0.60	67.30
VP-7D	7/3/2012	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.28	1.02	67.72
VP-7D	1/25/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	2/22/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	3/22/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	4/23/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	5/31/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	6/28/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	7/30/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	8/30/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	9/27/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	10/29/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	11/26/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	NM	NM	NM
VP-7D	12/23/2013	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.45	0.85	67.55
VP-7D	1/31/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	38.85	0.45	67.15
VP-7D	2/28/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	39.01	0.29	66.99
VP-7D	3/28/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	4/29/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	5/27/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	6/24/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	7/30/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	8/27/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	9/24/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	10/30/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	11/24/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	12/9/2014	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	1/20/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	2/17/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	3/26/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	4/14/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	5/27/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	6/18/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	7/30/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	8/26/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	9/29/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	10/28/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	11/18/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	12/30/2015	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	1/27/2016	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	3/23/2016	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	6/22/2016	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	8/31/2016	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	12/27/2016	48.8	38.8 - 39.3	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7D	3/29/2017	49.8	38.8 - 39.4	33.3 - 39.9	107.00	Dry	Dry	Dry
VP-7D	6/28/2017	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	9/27/2017	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	12/27/2017	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	3/28/2018	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-7D	6/27/2018	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	9/19/2018	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	12/27/2018	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	4/24/2019	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7D	6/26/2019	50.8	38.8 - 39.5	33.3 - 39.10	108.00	Dry	Dry	Dry
VP-7E	1/26/2011	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/23/2011	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	11/18/2011	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	4/10/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	5/11/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	5/16/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	5/31/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/6/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/13/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/20/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/26/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	7/3/2012	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	1/25/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	NM	NM	NM
VP-7E	2/22/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	NM	NM	NM
VP-7E	3/22/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	NM	NM	NM
VP-7E	4/23/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	NM	NM	NM
VP-7E	5/31/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	NM	NM	NM
VP-7E	6/28/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	7/30/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	8/30/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	9/27/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	10/29/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	11/26/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/23/2013	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	1/31/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	2/28/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/28/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	4/29/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	5/27/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/24/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	7/30/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	8/27/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	9/24/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	10/30/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	11/24/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/9/2014	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	1/20/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	2/17/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/26/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	4/14/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	5/27/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/18/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	7/30/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	8/26/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	9/29/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	10/28/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	11/18/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/30/2015	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	1/27/2016	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/23/2016	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/22/2016	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	8/31/2016	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/27/2016	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/29/2017	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/28/2017	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	9/27/2017	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/27/2017	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	3/28/2018	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/27/2018	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	9/19/2018	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	12/27/2018	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-7E	4/24/2019	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7E	6/26/2019	48.8	37.3 - 37.8	33.3 - 39.8	106.00	Dry	Dry	Dry
VP-7F	1/26/2011	48.8	41.3 - 41.8	40.8 - 47.3	106.00	40.38	1.42	65.62
VP-7F	3/23/2011	48.8	41.3 - 41.8	40.8 - 47.3	106.00	40.35	1.45	65.65
VP-7F	11/18/2011	48.8	41.3 - 41.8	40.8 - 47.3	106.00	40.15	1.65	65.85
VP-7F	4/10/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	40.28	1.52	65.72
VP-7F	5/11/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	41.60	0.20	64.40
VP-7F	5/16/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	41.38	0.42	64.62
VP-7F	5/31/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	40.71	1.09	65.29
VP-7F	6/6/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/13/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/20/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/26/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	7/3/2012	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	1/25/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	NM	NM	NM
VP-7F	2/22/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	NM	NM	NM
VP-7F	3/22/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	NM	NM	NM
VP-7F	4/23/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	NM	NM	NM
VP-7F	5/31/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	NM	NM	NM
VP-7F	6/28/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	7/30/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	8/30/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	9/27/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	10/29/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	11/26/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/23/2013	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	1/31/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	2/28/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	3/28/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	4/29/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	5/27/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/24/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	7/30/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	8/27/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	9/24/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	10/30/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	11/24/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/9/2014	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	1/20/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	2/17/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	3/26/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	4/14/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	5/27/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/18/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	7/30/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	8/26/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	9/29/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	10/28/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	11/18/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/30/2015	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	1/27/2016	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	3/23/2016	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/22/2016	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	8/31/2016	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/27/2016	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	3/29/2017	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/28/2017	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	9/27/2017	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/27/2017	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	3/28/2018	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/27/2018	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	9/19/2018	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	12/27/2018	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	4/24/2019	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7F	6/26/2019	48.8	41.3 - 41.8	40.8 - 47.3	106.00	Dry	Dry	Dry
VP-7G	1/26/2011	48.8	46.3 - 46.8	40.8 - 47.3	106.00	40.11	6.69	65.89

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-7G	3/23/2011	48.8	46.3 - 46.8	40.8 - 47.3	106.00	43.41	3.39	62.59
VP-7G	11/18/2011	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.1	4.70	63.90
VP-7G	4/10/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.88	3.92	63.12
VP-7G	5/11/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.81	3.99	63.19
VP-7G	5/16/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.78	4.02	63.22
VP-7G	5/31/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.75	4.05	63.25
VP-7G	6/6/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.77	4.03	63.23
VP-7G	6/13/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.75	4.05	63.25
VP-7G	6/20/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.75	4.05	63.25
VP-7G	6/26/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	41.5	5.30	64.50
VP-7G	7/3/2012	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.76	4.04	63.24
VP-7G	1/25/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	37.96	8.84	68.04
VP-7G	2/22/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38	8.80	68.00
VP-7G	3/22/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38.05	8.75	67.95
VP-7G	4/23/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38.1	8.70	67.90
VP-7G	5/31/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38.15	8.65	67.85
VP-7G	6/28/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38.21	8.59	67.79
VP-7G	7/30/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	38.22	8.58	67.78
VP-7G	8/30/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	39.33	7.47	66.67
VP-7G	9/27/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	39.56	7.24	66.44
VP-7G	10/29/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	39.66	7.14	66.34
VP-7G	11/26/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	39.71	7.09	66.29
VP-7G	12/23/2013	48.8	46.3 - 46.8	40.8 - 47.3	106.00	39.78	7.02	66.22
VP-7G	1/31/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	40.26	6.54	65.74
VP-7G	2/28/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	41.32	5.48	64.68
VP-7G	3/28/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.16	4.64	63.84
VP-7G	4/29/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.47	4.33	63.53
VP-7G	5/27/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	42.66	4.14	63.34
VP-7G	6/24/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	43.05	3.75	62.95
VP-7G	7/30/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	43.55	3.25	62.45
VP-7G	8/27/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	43.72	3.08	62.28
VP-7G	9/24/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	44.00	2.80	62.00
VP-7G	10/30/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	44.26	2.54	61.74
VP-7G	11/24/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	44.59	2.21	61.41
VP-7G	12/9/2014	48.8	46.3 - 46.8	40.8 - 47.3	106.00	45.00	1.80	61.00
VP-7G	1/20/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.00	0.80	60.00
VP-7G	2/17/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.50	0.30	59.50
VP-7G	3/26/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.65	Dry	Dry
VP-7G	4/14/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	5/27/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	6/18/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	7/30/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	8/26/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	9/29/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	10/28/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	11/18/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	12/30/2015	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	1/27/2016	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	3/23/2016	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	6/22/2016	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	8/31/2016	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	12/27/2016	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	3/29/2017	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	6/28/2017	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	9/27/2017	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	12/27/2017	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	3/28/2018	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	6/27/2018	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	9/19/2018	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	12/27/2018	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	4/24/2019	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-7G	6/26/2019	48.8	46.3 - 46.8	40.8 - 47.3	106.00	46.82	Dry	Dry
VP-8D	1/26/2011	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	11/18/2011	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	4/10/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	5/11/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-8D	5/16/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	5/31/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/6/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/13/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/20/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/26/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	7/3/2012	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	1/25/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	2/22/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/22/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	4/23/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	5/31/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/28/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	7/30/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	8/30/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	9/27/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	10/29/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	11/26/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/23/2013	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	1/31/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	2/28/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/28/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	4/29/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	5/27/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/24/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	7/30/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	8/27/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	9/24/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	10/30/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	11/24/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/9/2014	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	1/20/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	2/17/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/26/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	4/14/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	5/27/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/18/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	7/30/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	8/26/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	9/29/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	10/28/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	11/18/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/30/2015	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	1/27/2016	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/23/2016	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/22/2016	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	8/31/2016	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/27/2016	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/29/2017	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/28/2017	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	9/27/2017	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/27/2017	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	3/28/2018	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/27/2018	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	9/19/2018	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	12/27/2018	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	4/24/2019	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8D	6/26/2019	48.82	37.8 - 38.3	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	1/26/2011	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/23/2011	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	11/18/2011	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	4/10/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/11/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/16/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/31/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/6/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-8E	6/13/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/20/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/26/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	7/3/2012	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	1/25/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	2/22/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/22/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	4/23/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/31/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/28/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	7/30/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	8/30/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	9/27/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	10/29/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	11/26/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	12/23/2013	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	1/31/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	2/28/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/28/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	4/29/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/27/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/24/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	7/30/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	8/27/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	9/24/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	10/30/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	11/24/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	12/9/2014	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	1/20/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	2/17/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/26/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	4/14/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	5/27/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/18/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	7/30/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	8/26/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	9/29/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	10/28/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	11/18/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	12/30/2015	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	1/27/2016	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/23/2016	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/22/2016	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	8/31/2016	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	12/27/2016	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/29/2017	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/28/2017	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	9/27/2017	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	12/27/2017	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	3/28/2018	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/27/2018	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	9/19/2018	48.82	37.3 - 37.8	32.8-38.8	105.92	Dry	Dry	Dry
VP-8E	12/27/2018	48.82	37.3 - 37.8	32.8-38.8	105.92	Dry	Dry	Dry
VP-8E	4/24/2019	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8E	6/26/2019	48.82	37.3 - 37.8	32.8 - 38.8	105.92	Dry	Dry	Dry
VP-8F	1/26/2011	48.82	46.3 - 46.8	43.8 - 47.8	105.92	43.86	2.94	62.06
VP-8F	3/23/2011	48.82	46.3 - 46.8	43.8 - 47.8	105.92	43.92	2.88	62.00
VP-8F	11/18/2011	48.82	46.3 - 46.8	43.8 - 47.8	105.92	43.82	2.98	62.10
VP-8F	4/10/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	43.85	2.95	62.07
VP-8F	5/11/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.65	2.15	61.27
VP-8F	5/16/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.52	2.28	61.40
VP-8F	5/31/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.63	2.17	61.29
VP-8F	6/6/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.97	0.83	59.95
VP-8F	6/13/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.38	1.42	60.54
VP-8F	6/20/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.47	1.33	60.45
VP-8F	6/26/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	46	0.8	59.92

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-8F	7/3/2012	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.55	2.25	61.37
VP-8F	1/25/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.87	1.93	61.05
VP-8F	2/22/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.79	2.01	61.13
VP-8F	3/22/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	44.98	1.82	60.94
VP-8F	4/23/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.03	1.77	60.89
VP-8F	5/31/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.09	1.71	60.83
VP-8F	6/28/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.11	1.69	60.81
VP-8F	7/30/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.18	1.62	60.74
VP-8F	8/30/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.22	1.58	60.70
VP-8F	9/27/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.53	1.27	60.39
VP-8F	10/29/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.66	1.14	60.26
VP-8F	11/26/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.77	1.03	60.15
VP-8F	12/23/2013	48.82	46.3 - 46.8	43.8 - 47.8	105.92	45.75	1.05	60.17
VP-8F	1/31/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	2/28/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	3/28/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	4/29/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	5/27/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/24/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	7/30/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	8/27/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	9/24/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	10/30/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	11/24/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	12/9/2014	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	1/20/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	2/17/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	3/26/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	4/14/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	5/27/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/18/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	7/30/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	8/26/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	9/29/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	10/28/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	11/18/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	12/30/2015	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	1/27/2016	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	3/23/2016	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/22/2016	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	8/31/2016	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	12/27/2016	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	3/29/2017	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/28/2017	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	9/27/2017	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	12/27/2017	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	3/28/2018	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/27/2018	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	9/19/2018	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	12/27/2018	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	4/24/2019	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8F	6/26/2019	48.82	46.3 - 46.8	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8G	1/26/2011	48.82	46.8 - 47.3	43.8 - 47.8	105.92	43.89	3.41	62.03
VP-8G	3/23/2011	48.82	46.8 - 47.3	43.8 - 47.8	105.92	43.8	3.50	62.12
VP-8G	11/18/2011	48.82	46.8 - 47.3	43.8 - 47.8	105.92	43.86	3.44	62.06
VP-8G	4/10/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	43.9	3.40	62.02
VP-8G	5/11/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.7	2.60	61.22
VP-8G	5/16/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.52	2.78	61.40
VP-8G	5/31/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.62	2.68	61.30
VP-8G	6/6/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.97	1.33	59.95
VP-8G	6/13/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.38	1.92	60.54
VP-8G	6/20/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.49	1.81	60.43
VP-8G	6/26/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.00	1.30	59.92
VP-8G	7/3/2012	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.55	2.75	61.37
VP-8G	1/25/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.61	2.69	61.31
VP-8G	2/22/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.63	2.67	61.29

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-8G	3/22/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.66	2.64	61.26
VP-8G	4/23/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	44.71	2.59	61.21
VP-8G	5/31/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.00	2.30	60.92
VP-8G	6/28/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.02	2.28	60.90
VP-8G	7/30/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.15	2.15	60.77
VP-8G	8/30/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.19	2.11	60.73
VP-8G	9/27/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.56	1.74	60.36
VP-8G	10/29/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.72	1.58	60.20
VP-8G	11/26/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.81	1.49	60.11
VP-8G	12/23/2013	48.82	46.8 - 47.3	43.8 - 47.8	105.92	45.89	1.41	60.03
VP-8G	1/31/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.26	1.04	59.66
VP-8G	2/28/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.89	0.41	59.03
VP-8G	3/28/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.16	0.14	58.76
VP-8G	4/29/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.26	0.04	58.66
VP-8G	5/27/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8G	6/24/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8G	7/30/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8G	8/27/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	Dry	Dry	Dry
VP-8G	9/24/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.95	0.35	58.97
VP-8G	10/30/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.95	0.35	58.97
VP-8G	11/24/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.95	0.35	58.97
VP-8G	12/9/2014	48.82	46.8 - 47.3	43.8 - 47.8	105.92	46.96	0.34	58.96
VP-8G	1/20/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.28	Dry	Dry
VP-8G	2/17/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.28	Dry	Dry
VP-8G	3/26/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.28	Dry	Dry
VP-8G	4/14/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.28	Dry	Dry
VP-8G	5/27/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.35	Dry	Dry
VP-8G	6/18/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	7/30/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	8/26/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	9/29/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	10/28/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	11/18/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	12/30/2015	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	1/27/2016	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	3/23/2016	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	6/22/2016	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	8/31/2016	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	12/27/2016	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	3/29/2017	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	6/28/2017	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	9/27/2017	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	12/27/2017	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	3/28/2018	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	6/27/2018	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	9/19/2018	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	12/27/2018	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	4/24/2019	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-8G	6/26/2019	48.82	46.8 - 47.3	43.8 - 47.8	105.92	47.30	Dry	Dry
VP-9D	11/18/2011	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	4/10/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/11/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/16/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/31/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/6/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/13/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/20/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/26/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	7/3/2012	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	1/25/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	2/22/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/22/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	4/23/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/31/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/28/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	7/30/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-9D	8/30/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	9/27/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	10/29/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	11/26/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/23/2013	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	1/31/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	2/28/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/28/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	4/29/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/27/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/24/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	7/30/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	8/27/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	9/24/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	10/30/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	11/24/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/9/2014	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	1/20/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	2/17/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/26/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	4/14/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	5/27/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/18/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	7/30/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	8/26/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	9/29/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	10/28/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	11/18/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/30/2015	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	1/27/2016	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/23/2016	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/22/2016	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	8/31/2016	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/27/2016	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/29/2017	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/28/2017	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	9/27/2017	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/27/2017	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	3/28/2018	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/27/2018	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	9/19/2018	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	12/27/2018	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	4/24/2019	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9D	6/26/2019	48.67	37.7 - 38.2	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	11/18/2011	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	4/10/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/11/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/16/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/31/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/6/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/13/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/20/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/26/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	7/3/2012	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	1/25/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	2/22/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/22/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	4/23/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/31/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/28/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	7/30/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	8/30/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	9/27/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	10/29/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	11/26/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/23/2013	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-9E	1/31/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	2/28/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/28/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	4/29/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/27/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/24/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	7/30/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	8/27/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	9/24/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	10/30/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	11/24/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/9/2014	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	1/20/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	2/17/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/26/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	4/14/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	5/27/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/18/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	7/30/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	8/26/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	9/29/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	10/28/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	11/18/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/30/2015	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	1/27/2016	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/23/2016	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/22/2016	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	8/31/2016	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/27/2016	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/29/2017	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/28/2017	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	9/27/2017	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/27/2017	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	3/28/2018	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/27/2018	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	9/19/2018	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	12/27/2018	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	4/24/2019	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9E	6/26/2019	48.67	37.2 - 37.7	32.7 - 38.7	105.63	Dry	Dry	Dry
VP-9F	1/26/2011	48.67	45.7 - 46.2	40.7 - 47.7	105.63	43.76	2.44	61.87
VP-9F	3/23/2011	48.67	45.7 - 46.2	40.7 - 47.7	105.63	43.87	2.33	61.76
VP-9F	11/18/2011	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.33	1.87	61.30
VP-9F	4/10/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.40	1.80	61.23
VP-9F	5/11/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.88	1.32	60.75
VP-9F	5/16/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.5	1.70	61.13
VP-9F	5/31/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.35	1.85	61.28
VP-9F	6/6/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	46.13	0.07	59.50
VP-9F	6/13/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	43.40	2.80	62.23
VP-9F	6/20/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	44.62	1.58	61.01
VP-9F	6/26/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.2	1.00	60.43
VP-9F	7/3/2012	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.7	0.50	59.93
VP-9F	1/25/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	2/22/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	3/22/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	4/23/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	5/31/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	6/28/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	NM	NM	NM
VP-9F	7/30/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.76	0.44	59.87
VP-9F	8/30/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.79	0.41	59.84
VP-9F	9/27/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.82	0.38	59.81
VP-9F	10/29/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	45.89	0.31	59.74
VP-9F	11/26/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	46.01	0.19	59.62
VP-9F	12/23/2013	48.67	45.7 - 46.2	40.7 - 47.7	105.63	46.16	0.04	59.47
VP-9F	1/31/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	2/28/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	3/28/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-9F	4/29/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	5/27/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/24/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	7/30/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	8/27/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	9/24/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	10/30/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	11/24/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	12/9/2014	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	1/20/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	2/17/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	3/26/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	4/14/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	5/27/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/18/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	7/30/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	8/26/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	9/29/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	10/28/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	11/18/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	12/30/2015	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	1/27/2016	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	3/23/2016	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/22/2016	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	8/31/2016	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	12/27/2016	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	3/29/2017	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/28/2017	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	9/27/2017	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	12/27/2017	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	3/28/2018	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/27/2018	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	9/19/2018	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	12/27/2018	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	4/24/2019	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9F	6/26/2019	48.67	45.7 - 46.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	1/26/2011	48.67	46.7 - 47.2	40.7 - 47.7	105.63	43.76	3.44	61.87
VP-9G	3/23/2011	48.67	46.7 - 47.2	40.7 - 47.7	105.63	43.85	3.35	61.78
VP-9G	11/18/2011	48.67	46.7 - 47.2	40.7 - 47.7	105.63	44.31	2.89	61.32
VP-9G	4/10/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	44.32	2.88	61.31
VP-9G	5/11/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45	2.20	60.63
VP-9G	5/16/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	44.47	2.73	61.16
VP-9G	5/31/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	44.38	2.82	61.25
VP-9G	6/6/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	46.13	1.07	59.50
VP-9G	6/13/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	43.51	3.69	62.12
VP-9G	6/20/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	44.34	2.86	61.29
VP-9G	6/26/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.15	2.05	60.48
VP-9G	7/3/2012	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.7	1.50	59.93
VP-9G	1/25/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45	2.20	60.63
VP-9G	2/22/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.08	2.12	60.55
VP-9G	3/22/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.14	2.06	60.49
VP-9G	4/23/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.19	2.01	60.44
VP-9G	5/31/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.25	1.95	60.38
VP-9G	6/28/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.28	1.92	60.35
VP-9G	7/30/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.31	1.89	60.32
VP-9G	8/30/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.35	1.85	60.28
VP-9G	9/27/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.41	1.79	60.22
VP-9G	10/29/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.45	1.75	60.18
VP-9G	11/26/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.52	1.68	60.11
VP-9G	12/23/2013	48.67	46.7 - 47.2	40.7 - 47.7	105.63	45.63	1.57	60.00
VP-9G	1/31/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	46.12	1.08	59.51
VP-9G	2/28/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	46.44	0.76	59.19
VP-9G	3/28/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	47	0.20	58.63
VP-9G	4/29/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	5/27/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/24/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry

TABLE 10
PERCHED GROUNDWATER LEVEL MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Date Measured	Total Depth (ft bTOC)	Screened Interval (ft bTOC)	Filter Pack Sand Interval (ft bTOC)	TOC Elevation (NAVD88)	Depth to Water (ft bTOC)	Water Column (feet)	Perched Groundwater Elevation (NAVD88)
VP-9G	7/30/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	8/27/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	9/24/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	10/30/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	11/24/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	12/9/2014	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	1/20/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	2/17/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	3/26/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	4/14/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	5/27/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/18/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	7/30/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	8/26/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	9/29/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	10/28/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	11/18/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	12/30/2015	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	1/27/2016	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	3/23/2016	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/22/2016	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	8/31/2016	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	12/27/2016	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	3/29/2017	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/28/2017	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	9/27/2017	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	12/27/2017	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	3/28/2018	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/27/2018	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	9/19/2018	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	12/27/2018	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	4/24/2019	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry
VP-9G	6/26/2019	48.67	46.7 - 47.2	40.7 - 47.7	105.63	Dry	Dry	Dry

Abbreviations:

* = measurement error or well blockage likely explains unusual water level
(50.80) = no water detected at depth listed in parentheses
Dry = water not detected above the bottom of the screened interval
ft bTOC = feet below top of casing.
NA = not applicable
NAVD88 = feet above the North American Vertical Datum of 1988
NM = not measured
TOC = top of casing

TABLE 11
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN AND 1,4-DIOXANE IN PERCHED (OU2) GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screened Interval	Sample Date	Sample Type	PCE	TCE	cDCE	1,1-DCA	1,2-DCA	VC	1,1-DCE	1,2-DCP	1,2,3-TCP	tDCE	Benzene	Total VOCs	1,4-Dioxane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
DPE-1	8 - 43 (ft)	07/06/2012	Primary	**3.1**	**4.4**	**8.2**	**7.6**	< 0.5	< 0.5	< 0.5	**0.82**	**2.6**	< 0.5	**0.64**	**27.36**	**420**
DPE-1	8 - 43 (ft)	09/14/2012	Primary	**2.4**	**2.2**	**3.3**	**2**	< 0.5	< 0.5	**0.99**	< 0.5	**0.51**	< 0.5	< 0.5	**11.4**	**420**
DPE-1	8 - 43 (ft)	12/14/2012	Primary	**0.85**	**9.6**	**16**	**18**	**1**	**2.5**	< 0.5	< 0.5	< 0.5	**3.6**	**0.85**	**52.4**	**110 J**
DPE-1	8 - 43 (ft)	03/22/2013	Primary	< 1	**3.3**	**5.7**	**1.7**	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**10.7**	**25**
DPE-1	8 - 43 (ft)	08/07/2013	Primary	**2**	**0.96**	**1.6**	**2.7**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**7.26**	**98**
DPE-1	8 - 43 (ft)	10/29/2013	Primary	**0.65**	**2.4**	**1.9**	**0.32 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5.27**	**130**
DPE-1	8 - 43 (ft)	12/17/2013	Primary	< 0.5	**2.3**	**5.7**	**0.51**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.51**	**110**
DPE-1	8 - 43 (ft)	07/31/2014	Primary	**0.57**	**8.2**	**36**	**3.9**	**1.2**	< 0.5	< 0.3	**1.9**	< 0.3	**1.8**	**0.34 J**	**53.91**	**50**
DPE-1	8 - 43 (ft)	12/09/2014	Primary	< 0.5	**22**	**74**	**14**	**0.75**	**0.93**	**1.3**	< 0.5	< 0.3	**3.1**	< 0.2	**116.08**	**27**
DPE-1	8 - 43 (ft)	03/23/2016	Primary	**0.54**	**2.1**	**3.3**	**7.1**	< 0.3	**3.7**	< 0.3	< 0.5	< 0.3	**3.2**	**0.92**	**20.86**	**100**
DPE-2	32.8 - 47.3 (ft)	05/24/2012	Primary	< 0.5	< 0.5	**0.7**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.7**	< 0.97
DPE-2	32.8 - 47.3 (ft)	05/24/2012	Duplicate	< 0.5	< 0.5	**0.76**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.76**	< 0.99
DPE-2	32.8 - 47.3 (ft)	07/06/2012	Primary	**0.93**	**3.9**	**13**	**8**	< 0.5	< 0.5	< 0.5	**0.67**	< 0.5	**0.73**	< 0.5	**27.23**	**4**
DPE-2	32.8 - 47.3 (ft)	09/14/2012	Primary	**1.1**	**1.6**	**1.7**	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	< 0.5	**5.5**	**4.6**
DPE-2	32.8 - 47.3 (ft)	12/14/2012	Primary	**0.66**	**3**	**3.4**	**1.7**	< 0.5	< 0.5	**0.63**	< 0.5	< 0.5	**0.5**	< 0.5	**9.89**	**85 J**
DPE-2	32.8 - 47.3 (ft)	03/22/2013	Primary	< 1	**5.8**	**6.1**	< 1	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**11.9**	**23**
DPE-2	32.8 - 47.3 (ft)	08/07/2013	Primary	< 0.5	**16**	**25**	**1.3**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**1.3**	< 0.2	**43.6**	**9**
DPE-2	32.8 - 47.3 (ft)	10/29/2013	Primary	< 0.5	**5.8**	**1**	**0.46 J**	< 0.3	< 0.5	**0.46 J**	< 0.5	< 0.3	< 0.4	< 0.2	**7.72**	**2.2**
DPE-2	32.8 - 47.3 (ft)	12/17/2013	Primary	< 0.5	**4.6**	**9.2**	**0.73**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.45 J**	< 0.2	**14.98**	**11**
DPE-2	32.8 - 47.3 (ft)	07/31/2014	Primary	< 0.5	**1.7**	**0.5**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.2**	< 4
DPE-2	32.8 - 47.3 (ft)	12/09/2014	Primary	< 0.5	**5.4**	**12**	**0.77**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.65**	< 0.2	**18.82**	**2.6**
DPE-3	32.9 - 47.4 (ft)	05/23/2012	Primary	< 0.5	**2**	**12**	**4.3 J**	< 0.5	**0.63 J**	< 0.5	< 0.5	< 0.5	**0.81 J**	< 0.5	**19.74**	**4.9**
DPE-3	32.9 - 47.4 (ft)	07/06/2012	Primary	< 0.5	**3.1**	**4.7**	**2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**9.6**	**19.4**	**7.4**
DPE-3	32.9 - 47.4 (ft)	09/14/2012	Primary	< 0.5	**1.1**	**2.1**	**0.83**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**17**	**21.03**	**5.8 J**
DPE-3	32.9 - 47.4 (ft)	12/14/2012	Primary	< 1	**2.7**	**2.4**	**1.9**	< 1	< 1	< 1	< 1	< 1	< 1	**79**	**86**	**16 J**
DPE-3	32.9 - 47.4 (ft)	03/22/2013	Primary	< 1	**2.3**	**4.3**	**1.9**	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**8.5**	**31**
DPE-3	32.9 - 47.4 (ft)	08/07/2013	Primary	< 0.5	**3.6**	**6.8**	**0.66**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**11.06**	**25**
DPE-3	32.9 - 47.4 (ft)	10/29/2013	Primary	**0.55**	**34**	**7.1**	**0.37 J**	**1.1**	< 0.5	**1**	< 0.5	< 0.3	**0.6**	**0.54**	**45.26**	**1.9 J**
DPE-3	32.9 - 47.4 (ft)	12/17/2013	Primary	< 0.5	**2.8**	**8.4**	**1.5**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.62**	< 0.2	**13.32**	**55**
DPE-3	32.9 - 47.4 (ft)	07/31/2014	Primary	< 0.5	**1.1**	**6.9**	**0.77**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.77**	**30**
DPE-3	32.9 - 47.4 (ft)	12/09/2014	Primary	< 0.5	**21**	**73**	**16**	**0.72**	**0.91**	**1.1**	< 0.5	< 0.3	**2.5**	< 0.2	**115.23**	**28**
DPE-4	32.8 - 47.1 (ft)	09/14/2012	Primary	< 2	**4.8**	**40**	**12**	< 2	< 2	< 2	< 2	< 2	< 2	**190**	**246.8**	**8.8 J**
DPE-4	32.8 - 47.1 (ft)	12/14/2012	Primary	**1.1**	**33**	**42**	**8.6**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**22**	**106.7**	**8.9**
DPE-4	32.8 - 47.1 (ft)	03/22/2013	Primary	< 1	**7.3**	**26**	**8.6**	< 1	< 1	< 1	< 1	< 1 J	< 1	**54**	**95.9**	**35**
DPE-4	32.8 - 47.1 (ft)	10/29/2013	Primary	**0.52**	**2.3**	**7.9**	**12**	< 0.3	< 0.5	**0.46 J**	< 0.5	< 0.3	< 0.4	< 0.2	**23.18**	**21**
DPE-4	32.8 - 47.1 (ft)	12/17/2013	Primary	< 0.5	**3**	**9**	**2**	< 0.3	< 0.5	**0.3 J**	< 0.5	< 0.3	**0.58**	< 0.2	**14.88**	**48**
DPE-4	32.8 - 47.1 (ft)	07/31/2014	Primary	< 0.5	**9.3**	**41**	**5.5**	**1.2**	**0.67**	**0.56**	**2.3**	< 0.3	**2.1**	**0.37 J**	**63**	**22**
DPE-4	32.8 - 47.1 (ft)	12/09/2014	Primary	< 0.5	**20**	**71**	**17**	**0.62**	**2.3**	**1.2**	< 0.5	< 0.3	**2.2**	< 0.2	**114.32**	**31**

TABLE 11
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN AND 1,4-DIOXANE IN PERCHED (OU2) GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screened Interval	Sample Date	Sample Type	PCE	TCE	cDCE	1,1-DCA	1,2-DCA	VC	1,1-DCE	1,2-DCP	1,2,3-TCP	tDCE	Benzene	Total VOCs	1,4-Dioxane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
DPE-5	32.6 - 47.1 (ft)	05/22/2012	Primary	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	ND	**7.7 J**
DPE-5	32.6 - 47.1 (ft)	07/06/2012	Primary	< 0.5	**6.6**	**70**	**36**	< 0.5	< 0.5	**1.3**	< 0.5	< 0.5	< 0.5	**1.6**	**115.5**	**17**
DPE-5	32.6 - 47.1 (ft)	09/14/2012	Primary	< 2	**39**	**220**	**58**	< 2	< 2	**3.3**	< 2	< 2	**3.2**	**7.9**	**331.4**	**17 J**
DPE-5	32.6 - 47.1 (ft)	12/14/2012	Primary	< 2	**330**	**190**	**46**	< 2	< 2	**3.2**	< 2	< 2	**5**	< 2	**574.2**	**55 J**
DPE-5	32.6 - 47.1 (ft)	03/22/2013	Primary	< 1	**4.2**	**130**	**23**	< 1	< 1	< 1	< 1	< 1 J	**2.5**	< 1	**159.7**	**53**
DPE-5	32.6 - 47.1 (ft)	08/07/2013	Primary	< 0.5	**4**	**18**	**7.1**	**1.1**	**0.92**	< 0.3	< 0.5	< 0.3	**1.2**	< 0.2	**32.32**	**54**
DPE-5	32.6 - 47.1 (ft)	10/29/2013	Primary	< 2	**150**	**420**	**37**	< 1.2	< 2	**3.8**	< 2	< 1.2	**3.8**	< 0.8	**614.6**	**28**
DPE-5	32.6 - 47.1 (ft)	12/17/2013	Primary	< 0.5	**17**	**140**	**21**	< 0.3	< 0.5	**1.3**	< 0.5	< 0.3	**1.8**	< 0.2	**181.1**	**59**
DPE-5	32.6 - 47.1 (ft)	12/09/2014	Primary	< 0.5	**23**	**86**	**26**	< 0.3	**1.8**	**1.6**	< 0.5	< 0.3	**1.2**	< 0.2	**139.6**	**41**
DPE-5	32.6 - 47.1 (ft)	12/16/2015	Primary	< 0.5	**13**	**38**	**3.6**	**0.89**	< 0.5	< 0.3	**2.1**	< 0.3	**2.7**	< 0.2	**60.29**	**13**
DPE-6	32.6 - 47 (ft)	05/22/2012	Primary	< 0.5	**3.5**	**57**	**15**	**0.76**	**1.7**	**0.61**	< 0.5	< 0.5	**1.5**	< 0.5	**80.07**	**190**
DPE-6	32.6 - 47 (ft)	07/06/2012	Primary	**0.85**	**19**	**89**	**32**	**1.6**	**2.3**	**1.3**	< 0.5	**1.2**	**3.1**	**1.7**	**152.05**	**160**
DPE-6	32.6 - 47 (ft)	09/14/2012	Primary	< 10	**78**	**710**	**180**	< 10	**15**	< 10	< 10	< 10	**18**	**12**	**1013**	**200 J**
DPE-6	32.6 - 47 (ft)	12/14/2012	Primary	< 0.5	**58**	**55**	**26**	**1.2**	**2.5**	**1.1**	< 0.5	< 0.5	**4.2**	**52**	**200**	**92 J**
DPE-6	32.6 - 47 (ft)	03/22/2013	Primary	< 1	**25**	**180**	**54**	**3**	**12**	**2.1**	< 1	< 1 J	**6**	< 1	**282.1**	**230**
DPE-6	32.6 - 47 (ft)	08/07/2013	Primary	< 2.5	**17**	**370**	**97**	**8.8**	**17**	**4**	< 2.5	< 1.5	**12**	< 1	**525.8**	**91**
DPE-6	32.6 - 47 (ft)	10/29/2013	Primary	< 0.5	**22**	**390**	**95**	**6.5**	**7.8**	**6**	< 0.5	< 0.3	**17**	**0.28 J**	**544.58**	**190**
DPE-6	32.6 - 47 (ft)	12/17/2013	Primary	< 0.5	**9.6**	**260**	**73**	**6.4**	**13**	**3.6**	< 0.5	< 0.3	**9.1**	**0.41 J**	**375.11**	**150**
DPE-6	32.6 - 47 (ft)	07/31/2014	Primary	< 0.5	**8.5**	**43**	**6.7**	**1.4**	**1.9**	< 0.3	**2.2**	< 0.3	**2**	**0.38 J**	**66.08**	**31**
DPE-6	32.6 - 47 (ft)	12/09/2014	Primary	< 0.5	**19**	**73**	**18**	< 0.3	**1.2**	**1.1**	< 0.5	< 0.3	**2.1**	< 0.2	**114.4**	**32**
DPE-7	8 - 48 (ft)	06/21/2012	Primary	**1.7**	**62**	**11**	**7.7**	< 0.5	< 0.5	**0.82**	< 0.5	< 0.5	**0.74**	< 0.5	**83.96**	**120 J**
DPE-7	8 - 48 (ft)	06/21/2012	Duplicate	**1.7**	**61**	**11**	**7.8**	< 0.5	< 0.5	**0.84**	< 0.5	< 0.5	**0.72**	< 0.5	**83.06**	**120 J**
DPE-7	8 - 48 (ft)	07/05/2012	Primary	**4**	**55**	**57**	**17**	< 0.5	< 0.5	**1.7**	< 0.5	< 0.5	**1.5**	< 0.5	**136.2**	**130**
DPE-7	8 - 48 (ft)	09/14/2012	Primary	< 0.5	**43**	**8.4**	**1**	< 0.5	< 0.5	**0.69**	< 0.5	< 0.5	**0.96**	< 0.5	**54.05**	**29**
DPE-7	8 - 48 (ft)	08/07/2013	Primary	**0.81**	**38**	**34**	**8.7**	< 0.3	< 0.5	**1.1**	< 0.5	< 0.3	**1.4**	< 0.2	**84.01**	**75**
DPE-7	8 - 48 (ft)	10/29/2013	Primary	**1.1**	**19**	**10**	**2.3**	< 0.3	< 0.5	**0.67**	< 0.5	< 0.3	**1.2**	< 0.2	**34.27**	**72**
DPE-7	8 - 48 (ft)	12/17/2013	Primary	**0.61**	**21**	**33**	**8.4**	**0.54**	< 0.5	**0.89**	< 0.5	< 0.3	**1.5**	< 0.2	**65.94**	**69**
DPE-7	8 - 48 (ft)	07/31/2014	Primary	**1.6**	**20**	**14**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**1.7**	< 0.2	**37.3**	**65**
DPE-7	8 - 48 (ft)	12/09/2014	Primary	< 0.5	**12**	**25**	**4.2**	< 0.3	< 0.5	**0.57**	< 0.5	< 0.3	**1.2**	< 0.2	**42.97**	**55**
DPE-8	32.6 - 47 (ft)	05/23/2012	Primary	**0.5**	**8**	**18**	**25**	**1.7**	**4.7**	< 0.5	**0.81**	**1.6**	**1.8**	< 0.5	**62.11**	**580**
DPE-8	32.6 - 47 (ft)	07/06/2012	Primary	**1.1**	**7.8**	**110**	**110**	**6.9**	**25**	**1.2**	**2.8**	< 0.5	**17**	**3**	**284.8**	**390**
DPE-8	32.6 - 47 (ft)	09/14/2012	Primary	**1**	**9.2**	**160**	**120**	**7.8**	**24**	**1.6**	**3.5**	< 1	**20**	**6.2**	**353.3**	**350 J**
DPE-8	32.6 - 47 (ft)	12/14/2012	Primary	< 0.5	**11**	**33**	**39**	**2.3**	**5.2**	**0.58**	< 0.5	< 0.5	**7.5**	**46**	**144.58**	**180 J**
DPE-8	32.6 - 47 (ft)	03/22/2013	Primary	< 1	**3.7**	**13**	**50**	**2.4**	**5.6**	< 1	**1.2**	< 1 J	**8.8**	**1.4**	**86.1**	**340**
DPE-8	32.6 - 47 (ft)	08/07/2013	Primary	< 0.5	**2.7**	**11**	**100**	**4.5**	**4.6**	< 0.3	**2.5**	< 0.3	**17**	**1**	**143.3**	**130**
DPE-8	32.6 - 47 (ft)	10/29/2013	Primary	< 0.5	**1.4**	**1.4**	**3.4**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.69**	< 0.2	**6.89**	**550**
DPE-8	32.6 - 47 (ft)	12/17/2013	Primary	< 0.5	**3**	**8**	**14**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**3**	**0.29 J**	**28.29**	**170**
DPE-8	32.6 - 47 (ft)	07/31/2014	Primary	< 0.5	< 0.2	< 0.2	**14**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**1.3**	< 0.2	**15.3**	**490**
DPE-8	32.6 - 47 (ft)	12/09/2014	Primary	< 0.5	**22**	**78**	**16**	**0.69**	**1.2**	**1.2**	< 0.5	< 0.3	**2.5**	< 0.2	**121.59**	**42**

TABLE 11
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN AND 1,4-DIOXANE IN PERCHED (OU2) GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screened Interval	Sample Date	Sample Type	PCE	TCE	cDCE	1,1-DCA	1,2-DCA	VC	1,1-DCE	1,2-DCP	1,2,3-TCP	tDCE	Benzene	Total VOCs	1,4-Dioxane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
DPE-9	32.9 - 47.5 (ft)	05/24/2012	Primary	**0.85**	**2.1**	**2.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**5.15**	< 0.97
DPE-9	32.9 - 47.5 (ft)	07/06/2012	Primary	**1.6**	**3.2**	**4.8**	**0.76**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.58**	**10.94**	**18**
DPE-9	32.9 - 47.5 (ft)	09/14/2012	Primary	**2.1**	**2.6**	**3**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.67**	**8.37**	**13**
DPE-9	32.9 - 47.5 (ft)	12/14/2012	Primary	**0.99**	**1.9**	**3.5**	**2.5**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.51**	**0.68**	**10.08**	**18 J**
DPE-9	32.9 - 47.5 (ft)	03/22/2013	Primary	< 1	**1**	**1.6**	< 1	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**2.6**	**21**
DPE-9	32.9 - 47.5 (ft)	08/07/2013	Primary	< 0.5	**2.3**	**4.1**	**0.55**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**6.95**	-
DPE-9	32.9 - 47.5 (ft)	08/08/2013	Primary	-	-	-	-	-	-	-	-	-	-	-	ND	**12**
DPE-9	32.9 - 47.5 (ft)	10/29/2013	Primary	< 0.5	**1.1**	**2.4**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.5**	**15**
DPE-9	32.9 - 47.5 (ft)	12/17/2013	Primary	< 0.5	**1.4**	**3.5**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**4.9**	**12**
DPE-9	32.9 - 47.5 (ft)	07/31/2014	Primary	< 0.5	**6.8**	**30**	**3.4**	**0.93**	< 0.5	**0.4 J**	**1.7**	< 0.3	**1.6**	**0.31 J**	**45.14**	**14**
DPE-9	32.9 - 47.5 (ft)	12/09/2014	Primary	< 0.5	**18**	**53**	**6.2**	**0.98**	< 0.5	**0.86**	< 0.5	< 0.3	**3**	< 0.2	**82.04**	**16**
DPE-10	33 - 47.4 (ft)	05/25/2012	Primary	< 0.5	**5**	**15**	**3.1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.62**	< 0.5	**23.72**	**21**
DPE-10	33 - 47.4 (ft)	07/06/2012	Primary	**0.72**	**9.5**	**27**	**8.9**	< 0.5	< 0.5	< 0.5	**1.1**	< 0.5	**1.2**	< 0.5	**48.42**	**23**
DPE-10	33 - 47.4 (ft)	09/14/2012	Primary	**0.79**	**5.6**	**10**	**1.6**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**0.86**	**18.85**	**23**
DPE-10	33 - 47.4 (ft)	12/14/2012	Primary	**0.68**	**4.9**	**8.1**	**8.3**	< 0.5	**1.1**	< 0.5	< 0.5	< 0.5	**1.4**	< 0.5	**24.48**	**190 J**
DPE-10	33 - 47.4 (ft)	03/22/2013	Primary	< 1	**3**	**5.5**	**2**	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**10.5**	**26**
DPE-10	33 - 47.4 (ft)	08/08/2013	Primary	< 0.5	**2.9**	**7.4**	**0.86**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**11.16**	**18**
DPE-10	33 - 47.4 (ft)	10/29/2013	Primary	< 0.5	**1.9**	**3**	**0.29 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5.19**	**13**
DPE-10	33 - 47.4 (ft)	12/17/2013	Primary	< 0.5	**3.9**	**10**	**0.74**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.5**	< 0.2	**15.14**	**19**
DPE-10	33 - 47.4 (ft)	07/31/2014	Primary	< 0.5	**12**	**54**	**5.9**	**1.6**	< 0.5	**0.85**	**3**	< 0.3	**2.6**	**0.53**	**80.48**	**17**
DPE-10	33 - 47.4 (ft)	12/09/2014	Primary	< 0.5	**24**	**78**	**7.8**	**1.4**	< 0.5	**0.95**	< 0.5	< 0.3	**4.1**	< 0.2	**116.25**	**19**
DPE-10	33 - 47.4 (ft)	06/17/2015	Primary	< 0.5	**25**	**67**	**5.9**	**3.6 J**	< 0.5	**1**	**3.7**	< 0.3	**4.2**	**0.53**	**110.93**	**20**
DPE-10	33 - 47.4 (ft)	3/23/2016	Primary	< 0.5	**15**	**53**	**4.1**	**1.1**	< 0.5	< 0.3	< 0.5	< 0.3	**3.3**	< 0.2	**76.5**	**380**
DPE-11	33 - 47.5 (ft)	05/23/2012	Primary	< 0.5	**2.8**	**23**	**9.5**	< 0.5	< 0.5	< 0.5	**1.1**	**1.1**	**0.97**	< 0.5	**38.47**	**110**
DPE-11	33 - 47.5 (ft)	05/23/2012	Duplicate	< 0.5	**3.3**	**25**	**8.1**	< 0.5	< 0.5	< 0.5	**1**	**0.84**	**1**	< 0.5	**39.24**	**140**
DPE-11	33 - 47.5 (ft)	07/06/2012	Primary	**0.82**	**5**	**56**	**18**	**0.76**	**0.64**	< 0.5	**1.7**	**1.9**	**2.5**	**0.82**	**88.14**	**130**
DPE-11	33 - 47.5 (ft)	09/14/2012	Primary	< 0.5	**3.3**	**25**	**5.5**	< 0.5	< 0.5	< 0.5	**0.82**	**0.88**	**1.2**	< 0.5	**36.7**	**230 J**
DPE-11	33 - 47.5 (ft)	12/14/2012	Primary	< 0.5	**6.5**	**17**	**6.6**	**0.51**	< 0.5	< 0.5	< 0.5	**0.55**	**1.2**	**5.4**	**37.76**	**270 J**
DPE-11	33 - 47.5 (ft)	03/22/2013	Primary	< 1	**5.3**	**12**	**3.1**	< 1	< 1	< 1	< 1	< 1 J	< 1	< 1	**20.4**	**43**
DPE-11	33 - 47.5 (ft)	08/07/2013	Primary	< 0.5	**4.7**	**18**	**5**	**1.1**	**0.57**	< 0.3	< 0.5	< 0.3	**0.89**	< 0.2	**30.26**	**19**
DPE-11	33 - 47.5 (ft)	10/29/2013	Primary	< 0.5	**2.3**	**5.8**	**1.5**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.52**	< 0.2	**10.12**	**160**
DPE-11	33 - 47.5 (ft)	12/17/2013	Primary	< 0.5	**4.4**	**18**	**3.1**	< 0.3	< 0.5	**0.61**	< 0.5	< 0.3	**1.5**	< 0.2	**27.61**	**150**
DPE-11	33 - 47.5 (ft)	07/31/2014	Primary	< 0.5	**1.7**	**6.2**	**1.3**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.2**	-
DPE-12	32.5 - 46.9 (ft)	05/23/2012	Primary	< 5	**24**	**350**	**88**	**7.1**	< 5	< 5	**5.5**	< 5	**8.5**	< 5	**483.1**	**420**
DPE-12	32.5 - 46.9 (ft)	07/06/2012	Primary	**0.53**	**14**	**180**	**64**	**5.3**	**2.6**	**1.6**	**3**	**1.8**	**4.5**	**1.4**	**278.73**	**340**
DPE-12	32.5 - 46.9 (ft)	09/14/2012	Primary	< 10	**84**	**840**	**190**	**15**	**16**	< 10	< 10	< 10	**20**	< 10	**1165**	**370 J**
DPE-12	32.5 - 46.9 (ft)	12/14/2012	Primary	< 0.5	**52**	**150**	**44**	**2.7**	**4.4**	**2.3**	< 0.5	< 0.5	**7.3**	**28**	**290.7**	**150 J**
DPE-12	32.5 - 46.9 (ft)	03/22/2013	Primary	< 1	**32 J**	**140 J**	**32 J**	**2.5 J**	**2.7 J**	**1.4 J**	< 1	< 1 J	**4.3 J**	< 1	**214.9**	**430 J**
DPE-12	32.5 - 46.9 (ft)	10/29/2013	Primary	< 0.5	**11**	**38**	**9.1**	**0.39 J**	**1.1**	**0.48 J**	< 0.5	< 0.3	**1.5**	< 0.2	**61.57**	**160**
DPE-12	32.5 - 46.9 (ft)	12/17/2013	Primary	< 0.5	**27**	**300**	**60**	**4.2**	**6.2**	**3.2**	< 0.5	< 0.3	**9.2**	**0.86**	**410.66**	**190**
DPE-12	32.5 - 46.9 (ft)	07/31/2014	Primary	< 0.5	**6.7**	**35**	**5.1**	**1.2**	**0.62**	< 0.3	**1.5**	< 0.3	**1.6**	**0.3 J**	**52.02**	**30**
DPE-12	32.5 - 46.9 (ft)	12/09/2014	Primary	< 0.5	**21**	**82**	**17**	**0.74**	**0.97**	**1.2**	< 0.5	< 0.3	**2.8**	< 0.2	**125.71**	**32**

TABLE 11
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN AND 1,4-DIOXANE IN PERCHED (OU2) GROUNDWATER SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Screened Interval	Sample Date	Sample Type	PCE	TCE	cDCE	1,1-DCA	1,2-DCA	VC	1,1-DCE	1,2-DCP	1,2,3-TCP	tDCE	Benzene	Total VOCs	1,4-Dioxane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
DPE-13	33 - 47.5 (ft)	05/25/2012	Primary	< 0.5	**42**	**5.4**	**1.4**	< 0.5	< 0.5	**0.72**	< 0.5	< 0.5	**0.69**	< 0.5	**50.21**	**31**
DPE-13	33 - 47.5 (ft)	07/05/2012	Primary	**1.1**	**55**	**22**	**5.4**	**1.8**	< 0.5	**1.6**	< 0.5	< 0.5	**1.8**	< 0.5	**88.7**	**77**
DPE-13	33 - 47.5 (ft)	09/14/2012	Primary	**14**	**53**	**31**	**13**	< 0.5	< 0.5	**1.4**	< 0.5	< 0.5	**1.3**	**0.52**	**114.22**	**89**
DPE-13	33 - 47.5 (ft)	12/14/2012	Primary	< 0.5	**47**	**12**	**0.61**	< 0.5	< 0.5	**0.76**	< 0.5	< 0.5	**1.4**	< 0.5	**61.77**	**21 J**
DPE-13	33 - 47.5 (ft)	03/22/2013	Primary	< 1	**46 J**	**11 J**	< 1	< 1	< 1	< 1	< 1	< 1 J	**1.7 J**	< 1	**58.7**	**24 J**
DPE-13	33 - 47.5 (ft)	08/07/2013	Primary	< 0.5	**26**	**11**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**1.1**	< 0.2	**38.1**	**20**
DPE-13	33 - 47.5 (ft)	10/29/2013	Primary	< 0.5	**4.4**	**7.4**	**1.3**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**13.1**	**63**
DPE-13	33 - 47.5 (ft)	12/17/2013	Primary	< 0.5	**20**	**11**	< 0.2	< 0.3	< 0.5	**0.6**	< 0.5	< 0.3	**1.4**	< 0.2	**33**	**28**
DPE-13	33 - 47.5 (ft)	07/31/2014	Primary	< 0.5	**9.1**	**10**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.99**	< 0.2	**20.09**	**9.1**
DPE-13	33 - 47.5 (ft)	12/09/2014	Primary	< 0.5	**16**	**26**	**4**	< 0.3	< 0.5	**0.81**	< 0.5	< 0.3	**1.6**	< 0.2	**48.41**	**47**
DPE-14	33.9 - 48.4 (ft)	07/05/2012	Primary	< 0.5	**35**	**13**	**1.3**	**3.9**	< 0.5	**1.3**	< 0.5	< 0.5	**2.3**	< 0.5	**56.8**	**77**
DPE-14	33.9 - 48.4 (ft)	09/14/2012	Primary	**0.5**	**31**	**11**	**0.54**	**2.9**	< 0.5	**1.1**	< 0.5	< 0.5	**1.9**	**0.75**	**49.69**	**64**
DPE-14	33.9 - 48.4 (ft)	12/14/2012	Primary	**0.6**	**32**	**11**	< 0.5	**2.7**	< 0.5	**0.91**	< 0.5	< 0.5	**1.7**	< 0.5	**48.91**	**73 J**
DPE-14	33.9 - 48.4 (ft)	03/22/2013	Primary	< 1	**33**	**10**	< 1	**2.7**	< 1	< 1	< 1	< 1 J	**2.1**	< 1	**47.8**	**97**
DPE-14	33.9 - 48.4 (ft)	08/07/2013	Primary	< 0.5	**8**	**4.4**	< 0.2	**1.3**	< 0.5	< 0.3	< 0.5	< 0.3	**0.63**	< 0.2	**14.33**	**46**
DPE-14	33.9 - 48.4 (ft)	10/29/2013	Primary	< 0.5	**12**	**5.9**	< 0.2	**0.54**	< 0.5	< 0.3	< 0.5	< 0.3	**0.82**	< 0.2	**19.26**	**60**

Notes:

1. Results are reported in micrograms per liter (µg/L).
2. Samples were analyzed for volatile organic compounds (VOCs) using Environmental Protection Agency (EPA) Method 8260B and 1,4-dioxane using EPA Method 8270C-isotope dilution.
3. Detected concentrations are shown in BOLD font.

Abbreviations:

- = not applicable
< = not detected at or above the laboratory reporting limit shown.
ft bgs = feet below ground surface
J = The associated result is quantitatively uncertain. J qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
ND = Not detected greater than the laboratory reporting limit

1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
1,2,3-TCP = 1,2,3-Trichloropropane
tDCE = trans-1,2-Dichloroethene
VC = Vinyl chloride
1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
VOCs = volatile organic compounds
1,2,3-TCP = 1,2,3-Trichloropropane

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
LINF	03/15/2012	**0.68**	**2.5**	**18**	**5.9**	**2.7**	**1.8**	**0.63**	< 0.5	< 0.5	**1.6**	**1.7**	**19**	**54.51**
LINF	04/25/2012	**1.3**	**22**	**42**	**16**	**3.4**	**2.1**	**0.9**	**0.92**	< 0.5	**2.3**	**0.66**	**89 J**	**180.58**
LINF	05/22/2012	**1.1**	**38**	**9.6**	**3.9**	**1.7**	< 0.5	**0.67**	< 0.5	< 0.5	**0.89**	< 0.5	**140**	**195.86**
LINF	06/22/2012	**1.8**	**31**	**10**	**3.5**	**0.96**	< 0.5	**0.79**	< 0.5	< 0.5	**1**	**0.6**	**90**	**139.65**
LINF	07/05/2012	**1**	**34**	**23**	**5.9**	**1.6**	< 0.5	**0.67**	< 0.5	< 0.5	**1.4**	< 0.5	**140**	**207.57**
LINF	07/23/2012	< 0.5	**15**	**26**	**5.3**	**1.6**	**2.5**	**1.6**	< 0.5	< 0.5	**1.3**	**1.3**	< 100	**54.6**
LINF	08/07/2012	**1.1**	**31**	**13**	**3.5**	**0.97**	< 0.5	**0.52**	< 0.5	< 0.5	**0.86**	< 0.5	**110**	**160.95**
LINF	08/17/2012	< 0.5	**14**	**25**	**5.1**	**1.5**	**3.4**	**2**	< 0.5	< 0.5	**1.5**	**1.5**	**15 J**	**69**
LINF	08/24/2012	< 0.5	**13**	**27**	**5.8**	**1.4**	**3**	**1.6**	< 0.5	< 0.5	**1.4**	**1.2**	**19 J**	**73.4**
LINF	09/07/2012	< 0.5	**19**	**41**	**7**	**1.3**	**2**	**2.4**	< 0.5	< 0.5	**2.1**	**1.5**	**20 J**	**96.3**
LINF	09/14/2012	< 0.5	**13**	**40**	**5.9**	**1.5**	**2.4**	**1.7**	**0.8**	< 0.5	**1.9**	**1.4**	**15 J**	**83.6**
LINF	10/16/2012	< 0.5	**21**	**36**	**5.4**	**1.5**	**1.6**	**1.9**	< 0.5	< 0.5	**1.9**	**1.9**	< 100 J	**71.2**
LINF	11/20/2012	< 0.5	**23**	**21**	**5.2**	**1.1**	< 0.5	**0.55**	< 0.5	< 0.5	**0.75**	< 0.5	**57 J**	**108.6**
LINF	12/14/2012	< 0.5	**8.9**	**19**	**2.4**	**0.89**	**0.75**	**0.65**	< 0.5	< 0.5	**0.75**	**1.3**	**21 J**	**55.64**
LINF	01/16/2013	< 0.5	**8**	**27**	**3.3**	**1.4**	**1.4 J**	**0.91**	< 0.5	< 0.5	**0.97**	**1.8**	**20**	**64.78**
LINF	02/28/2013	< 0.5	**8.8**	**40**	**4.1**	**2.1**	**2.1**	**1.7**	< 0.5	< 0.5	**2.1**	**4.6**	**14**	**79.5**
LINF	04/05/2013	< 1	**8.3**	**31**	**3.4**	**1.8**	**1.6**	**1.5**	< 1	< 1	**1.7**	**2.1**	**20**	**71.4**
LINF	04/23/2013	< 1	**11**	**39**	**4.2**	**2**	**1.7**	**2.5**	< 1	< 1	**2.1**	**3**	**20**	**85.5**
LINF	05/21/2013	< 0.5	**9**	**43**	**5.2**	**1.7**	**1.8**	**2.4**	< 0.5	< 0.3	**2.6**	**2.6**	**18**	**86.3**
LINF	06/25/2013	< 0.5	**9.4**	**39**	**5.3**	**1.7**	**2.2**	**2.4**	< 0.5	< 0.3	**2.4**	**2.2**	**17**	**81.6**
LINF	07/30/2013	**0.75**	**12**	**35**	**4.3**	**1.5**	**2.5**	**2**	**0.58**	**1.1**	**2.3**	**0.61**	**16**	**78.64**
LINF	08/29/2013	< 0.5	**7.5**	**36**	**4.4**	**1.6**	**1.2**	**1.8**	< 0.5	< 0.3	**1.9**	**1.6**	**16**	**72**
LINF	09/24/2013	< 0.5	**6.3**	**30**	**3**	< 0.3	**1.6**	**1.6**	< 0.5	< 0.3	**1.8**	**1.2**	**16**	**61.5**
LINF	10/29/2013	< 0.5	**6.3**	**25**	**2.7**	**1**	**1.1**	**1.6**	< 0.5	< 0.3	**1.7**	**1.2**	**21**	**61.6**
LINF	11/25/2013	< 0.5	**7.7**	**34**	**3.8**	**1.4**	**1.5**	**2.3**	< 0.5	< 0.3	**2.6**	**1.6**	**18**	**72.9**
LINF	12/16/2013	< 0.5	**7.6**	**33 J**	**4**	**2**	**1.4**	< 0.3	< 0.5	< 0.3	**2.1**	**1.7**	**20**	**71.8**
LINF	01/27/2014	< 0.5	**5.8**	**34**	**3.2**	**1.3**	**1.6**	**2.6**	< 0.5	< 0.3	**2.2**	**1.8**	**17**	**69.5**
LINF	02/24/2014	< 0.5	**4.4**	**33**	**3.4**	**1.4**	**0.85**	**1.7**	< 0.5	< 0.3	**2.2**	**1.8**	**18**	**66.75**
LINF	03/24/2014	< 0.5	**3.6**	**35**	**3.1**	**1.4**	**0.95**	**1.6**	< 0.5	< 0.3	**2**	**1.9**	**17**	**66.55**
LINF	04/29/2014	< 0.5	**2.4**	**30**	**2.4**	**1.1**	**0.78**	**1.2**	< 0.5	< 0.3	**1.6**	**1.6**	**18**	**59.08**
LINF	05/29/2014	< 0.5	**3.4**	**30**	**2.4**	**1.2**	**0.78**	**1.2**	< 0.5	< 0.3	**2**	**1.5**	**16**	**58.48**
LINF	06/26/2014	< 0.5	**3.4**	**27**	**2.7**	**1.3**	**1**	**1.2**	< 0.5	< 0.3	**2.2**	**1.4**	**16**	**56.2**
LGACI	12/14/2012	< 0.5	< 0.5	< 0.5	**1.3**	**0.53**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	**1.83**
LGACI	01/16/2013	< 0.5	< 0.5	< 0.5	**2.3**	**1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	**3.3**
LGACI	02/28/2013	< 0.5	< 0.5	< 0.5	**3.2**	**1.6**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.8**	**6.6**
LGACI	04/05/2013	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**5.8**	**5.8**
LGACI	04/23/2013	< 1	< 1	< 1	**4**	**1.7**	< 1	< 1	< 1	< 1	< 1	< 1	**1.9**	**7.6**
LGACI	05/21/2013	< 0.5	< 0.2	< 0.2	**2.8**	**0.78**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**3.58**
LGACI	06/25/2013	< 0.5	< 0.2	< 0.2	**4.3**	**1.4**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.7 J**	**7.4**

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
LGACI	07/30/2013	**0.5**	< 0.2	**0.34 J**	**3.6**	**1.2**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.5 J**	**7.14**
LGACI	08/29/2013	< 0.5	< 0.2	< 0.2	**3.2**	**1.3**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.2 J**	**5.7**
LGACI	09/24/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.1 J**	**1.1**
LGACI	10/29/2013	< 0.5	**0.21 J**	**0.54**	**3.1**	**0.91**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.5**	**7.26**
LGACI	11/25/2013	< 0.5	**0.33 J**	**0.69**	**2.9**	**1.1**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.9**	**8.92**
LGACI	12/16/2013	< 0.5	< 0.2	**0.33 J**	**3**	**1.3**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.6**	**7.23**
LGACI	01/27/2014	< 0.5	< 0.2	**2.2**	**0.39 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**17**	**19.59**
LGACI	02/24/2014	< 0.5	< 0.2	**0.39 J**	**2.4**	**1.1**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**3.89**
LGACI	03/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.7 J**	**1.7**
LGACI	04/29/2014	< 0.5	< 0.2	< 0.2	**1.6**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.3 J**	**2.9**
LGACI	05/29/2014	< 0.5	< 0.2	< 0.2	**1.9**	**0.85**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.2 J**	**3.95**
LGACI	06/26/2014	< 0.5	< 0.2	< 0.2	**0.46 J**	**0.88**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**1.34**
LGACI (DPE-INF)	07/31/2014	< 0.5	**5**	**8.3**	**1.4**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.64**	< 0.2	**40**	**55.34**
LGACI (DPE-INF)	08/27/2014	< 0.5	**4.8**	**9.1**	**1.1**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**36**	**51**
LGACI (DPE-INF)	09/22/2014	< 0.5	**4.8**	**9.6**	**1.8**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.63**	< 0.2	**45**	**61.83**
LGACI (DPE-INF)	10/23/2014	< 0.5	**5.5**	**8.6**	**1.4**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.56**	< 0.2	**39**	**55.06**
LGACI (DPE-INF)	11/24/2014	< 0.5	**4.5**	**7.8**	**1.5**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**50**	**63.8**
LGACI (DPE-INF)	12/10/2014	< 0.5	**6.3**	**11**	**2.1**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.66**	< 0.2	**48**	**68.06**
LGACI (DPE-INF)	01/20/2015	< 0.5	**5.6**	**11**	**1.8**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.57**	< 0.2	**72**	**90.97**
LGACI (DPE-INF)	02/17/2015	< 0.5	**4.7**	**8.9**	**0.92**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.51**	< 0.2	**52**	**67.03**
LGACI (DPE-INF)	03/26/2015	< 0.5	**2.3**	**2.7**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**18**	**23**
LGACI (DPE-INF)	04/30/2015	< 0.5	**0.78**	**3.3**	**0.41 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**10**	**14.49**
LGACI (DPE-INF)	05/28/2015	< 0.5	**0.31 J**	**0.32 J**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**7.4**	**8.03**
LGACI (DPE-INF)	06/16/2015	< 0.5	**1.8**	**12**	**1.3**	**1.3 J**	**0.95**	**0.7**	< 0.5	< 0.3	**0.86**	**0.82**	**20**	**39.73**
LGACI (DPE-INF)	07/07/2015	< 0.5	**1**	**3.6**	**0.45 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**18**	**23.05**
LGACI (DPE-INF)	08/26/2015	< 0.5	**1.3**	**3.6**	**0.48 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**10**	**15.38**
LGACI (DPE-INF)	09/16/2015	< 0.5	**1**	**3**	**0.38 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5**	**9.38**
LGACI (DPE-INF)	10/14/2015	< 0.5	< 0.2	**0.44 J**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**26**	**26.44**
LGACI (DPE-INF)	11/18/2015	< 0.5	**0.86**	**3.9**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**12**	**16.76**
LGACI (DPE-INF)	12/09/2015	< 0.5	**1.4**	**3.5**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**46**	**50.9**
LGACI (DPE-INF)	01/13/2016	< 0.5	< 0.2	**2.1**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**42**	**44.1**
LGACI (DPE-INF)	02/17/2016	< 0.5	**0.47 J**	**1.1**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**51**	**52.57**
LGACI (DPE-INF)	03/23/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**34**	**34**
LGACI (DPE-INF)	04/20/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**30**	**30**
LGACI (DPE-INF)	05/18/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**23**	**23**
LGACI (DPE-INF)	06/08/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**12**	**12**
LGACI (DPE-INF)	07/20/2016	< 0.5	< 0.2	**0.48 J**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**13**	**13.48**
LGACI (DPE-INF)	08/17/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.4**	**8.4**
LGACI (DPE-INF)	09/28/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**4.4**	**4.4**
LGACI (DPE-INF)	10/12/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.4**	**3.4**

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
EW-INF	07/31/2014	< 0.5	**4**	**30**	**3.2**	**1.3**	**1.9**	**2.2**	< 0.5	< 0.3	**2**	**2.9**	**14**	**61.5**
EW-INF	08/27/2014	< 0.5	**4.2**	**32**	**4**	**2**	**2.5**	**2.2**	< 0.5	< 0.3	**1.9**	**2.3**	**16**	**67.1**
EW-INF	09/22/2014	< 0.5	**3.5**	**33**	**3.5**	**1.7**	**2.3**	**2.4**	< 0.5	< 0.3	**2.2**	**2.3**	**17**	**67.9**
EW-INF	10/23/2014	< 0.5	**3.4**	**35**	**3.6**	**1.6**	**2.5**	**2.3**	< 0.5	< 0.3	**2.4**	**2.4**	**16**	**69.2**
EW-INF	11/24/2014	< 0.5	**3.2**	**35**	**4.2**	**2.3**	**3.2**	**2.9**	< 0.5	< 0.3	**2.4**	**2.4**	**16**	**71.6**
EW-INF	12/10/2014	< 0.5	**2.3**	**31**	**2.7**	**1.3**	**1.9**	**2**	< 0.5	< 0.3	**2**	**2.1**	**16**	**61.3**
EW-INF	01/20/2015	< 0.5	**2.7**	**32**	**3.6**	**1**	**2.4**	**2.4**	< 0.5	< 0.3	**2.4**	**2.2**	**16**	**64.7**
EW-INF	02/17/2015	< 0.5	**3**	**33**	**2.8**	**1.3**	**2.2**	**2.2**	< 0.5	< 0.3	**2.2**	**2.2**	**16**	**64.9**
EW-INF	03/26/2015	< 0.5	**2.8**	**31**	**2.9**	**1.8**	**2.6**	**2**	< 0.5	< 0.3	**1.9**	**1.9**	**16**	**62.9**
EW-INF	05/28/2015	**0.83**	**4.8**	**30**	**3.8**	**1.9**	**2.3**	**1.7**	< 0.5	< 0.3	**2.6**	**2.3**	**18**	**68.23**
EW-INF	06/16/2015	< 0.5	**4**	**37**	**2.8**	**2.3 J**	**2.7**	**2.7**	< 0.5	< 0.3	**2.4**	**2**	**18**	**73.9**
EW-INF	07/07/2015	< 0.5	**4.4**	**40**	**4.2**	**2.2**	**4.7**	**3.3**	**0.55**	< 0.3	**3.3**	**2.9**	**19**	**84.55**
EW-INF	08/26/2015	< 0.5	**3.4**	**43**	**4.1**	**1.7**	**2.6**	**2**	< 0.5	< 0.3	**3.1**	**2.9**	**19**	**81.8**
EW-INF	09/16/2015	< 0.5	**1.5**	**17**	**2.6**	**0.83**	**0.55**	**0.89**	< 0.5	< 0.3	< 0.4	**1.6**	**16**	**40.97**
EW-INF	10/14/2015	< 0.5	**3.2**	**31**	**3**	**0.97**	**2.3**	**2.4**	< 0.5	< 0.3	**3.5**	**2.9**	**11**	**60.27**
EW-INF	11/18/2015	< 0.5	**4.3**	**35**	**1.8**	**2.7**	**1.6**	**0.93**	< 0.5	< 0.3	**4.4**	**1.9**	**13**	**65.63**
EW-INF	12/09/2015	< 0.5	**3.6**	**27**	**0.91**	**2.5**	**1.2**	**1.4**	< 0.5	< 0.3	**3.9**	**1.9**	**10**	**52.41**
EW-INF	01/13/2016	< 0.5	**4**	**30**	**1.6**	**2.4**	< 0.5	**0.91**	< 0.5	< 0.3	**3**	**2.1**	**11**	**55.01**
EW-INF	02/17/2016	< 0.5	**2.7**	**27**	**1.5**	**1.4**	**1.2**	**1.6**	< 0.5	< 0.3	**4.2**	**1.8**	**14**	**55.4**
EW-INF	03/23/2016	< 0.5	**4.1**	**31**	**0.54**	**1.8**	**0.54**	**0.36 J**	< 0.5	< 0.3	**4.8**	**2**	**13**	**58.14**
EW-INF	04/20/2016	< 0.5	**2.5**	**30**	**1.2**	**2**	**0.88**	**1**	< 0.5	< 0.3	**4.5**	**2.2**	**15**	**59.28**
EW-INF	05/18/2016	< 0.5	**1.9**	**37**	**0.93**	**2.7**	**1.2**	**1.4**	< 0.5	< 0.3	**4.5**	**1.9**	**16**	**67.53**
EW-INF	06/08/2016	< 0.5	**4**	**40**	**1.9**	**2.3**	**1.2**	**1.9**	< 0.5	< 0.3	**6.2**	**2.1**	**9.8**	**69.4**
EW-INF	07/20/2016	< 0.5	**3.9**	**39**	**2**	**2.2**	**1.2**	**1.8**	< 0.5	< 0.3	**5.5**	**2.4**	**7.3**	**65.3**
EW-INF	08/17/2016	< 0.5	**3.9**	**48**	**2.4**	**2.3**	**1.6**	**2.2**	< 0.5	< 0.3	**7.2**	**2.2**	**11**	**80.8**
EW-INF	09/28/2016	< 0.5	**3.3**	**44**	**2.4**	**2.3**	**1.3**	**2.1**	< 0.5	< 0.3	**5.8**	**2.3**	**9.7**	**73.2**
EW-INF	10/12/2016	< 0.5	**3.5**	**43**	**2.2**	**2.2**	**1.3**	**2**	< 0.5	< 0.3	**6.2**	**3.4**	**9.6**	**73.4**
EW-INF	11/16/2016	< 0.5	**2.9**	**47**	**2.7**	**1.8**	**1.3**	**2.8**	< 0.5	< 0.3	**6.3**	**3**	**13**	**80.8**
EW-INF	12/14/2016	< 0.5	**2.3**	**43**	**1.6**	**2.2**	**0.97**	**1.3**	< 0.5	< 0.3	**5.1**	**2.2**	**11**	**69.67**
EW-INF	01/25/2017	< 0.5	**4.2**	**38**	**2.1**	**1.3**	**1.8**	**2**	< 0.5	< 0.3	**5.6**	**1.5**	**12**	**68.5**
EW-INF	02/22/2017	< 0.5	**2.6**	**47**	**2.2**	**1.9**	**1.5**	**1.7**	< 0.5	< 0.3	**4.6**	**2.1**	**13**	**76.6**
EW-INF	03/15/2017	< 0.5	**2.1**	**48**	**2.2**	**2.1**	**2**	**2**	< 0.5	< 0.3	**6.4**	**1.7**	**11**	**77.5**
EW-INF	04/12/2017	< 0.5	**2**	**50**	**2.1**	**1.4**	**0.97**	**0.96**	< 0.5	< 0.3	**6.6**	**1.9**	**11**	**76.93**
EW-INF	05/17/2017	< 0.5	**1.8**	**39**	**1.8**	**2.3**	**1.8**	**1.6**	< 0.5	< 0.3	**5.4**	**1.3**	**11**	**66**
EW-INF	06/21/2017	< 0.5	**3.9**	**45**	**2.4**	**1.2**	**1.1**	**1.2**	< 0.5	< 0.3	**5.1**	**1.7**	**14**	**75.6**
EW-INF	07/26/2017	< 0.5	**1.7**	**52**	**1.9**	**1.4**	**1.8**	**1.2**	< 0.5	< 0.3	**5.4**	**2.1**	**10**	**77.5**
EW-INF	08/16/2017	< 0.5	**1.8**	**50**	**2.8**	**1.6**	**1.6**	**1.9**	< 0.5	< 0.3	**6.6**	**1.8**	**12**	**80.1**
EW-INF	09/22/2017	< 0.5	**4.2**	**85**	**4.4**	**2.7**	**4.1**	**2.8**	< 0.5	< 0.3	**7.4**	**2.8**	**11**	**124.4**
EW-INF	10/11/2017	< 0.5	**2.6**	**49**	**2.5**	**2.3**	**1.2**	**1.6**	< 0.5	< 0.3	**5.5**	**4.1**	**11**	**79.8**

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Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
EW-INF	11/29/2017	< 0.5	**2.5**	**49**	**2.2**	**2.1**	**1.2**	**1.4**	< 0.5	< 0.3	**4.5**	**1.9**	**9.2**	**74**
EW-INF	12/13/2017	< 0.5	**6.5**	**57**	**3.5**	**1.9**	**0.97**	**1.6**	< 0.5	< 0.3	**5.8**	**1.3**	**13**	**91.57**
EW-INF	01/31/2018	< 0.5	**1.5**	**47**	**2.1**	**2.2**	**1.1**	**0.97**	< 0.5	< 0.3	**4.3**	**1.8**	**9.9**	**70.87**
EW-INF	02/28/2018	< 0.5	**1.4**	**40**	**1.8**	**2.1**	**1**	**1.2**	< 0.5	< 0.3	**3.5**	**1.8**	**7**	**59.8**
EW-INF	03/28/2018	< 0.5	**3.8**	**46**	**3**	**2.2**	**0.97**	**1.5**	< 0.5	< 0.3	**4.9**	**2**	**9.8**	**74.17**
EW-INF	04/30/2018	< 0.5	**1.4**	**37**	**2.1**	**3**	**1.2**	**1.3**	< 0.5	< 0.3	**5.3**	**2**	**6.6**	**59.9**
EW-INF	05/16/2018	< 0.5	**1.2**	**31**	**1.8**	**2.7**	< 0.5	**1.4**	< 0.5	< 0.3	**5.8**	**1.4**	**5.4**	**50.7**
EW-INF	06/20/2018	< 0.5	**4.4**	**43**	**3.4**	**1.9**	**1.1**	**1.7**	< 0.5	< 0.3	**5**	**1.8**	**7.8**	**70.1**
EW-INF	07/18/2018	< 0.5	**2.4**	**38 J**	**2.7**	**3.3**	**1**	**1.5**	< 0.5	< 0.3	**5**	**2.8**	**6.4**	**63.1**
EW-INF	08/15/2018	< 0.5	**3.1**	**41**	**2.4**	**1.9**	**1.4**	**1.3**	< 0.5	< 0.3	**5.1**	**1.8**	**9.8**	**67.8**
EW-INF	09/19/2018	< 0.5	**2.7**	**41**	**2.2**	**2.3**	**1.1**	**1**	< 0.5	< 0.3	**4.6**	**1.6**	**11**	**67.5**
EW-INF	10/24/2018	< 0.5	**2.3**	**34**	**2**	**1.8**	**1.1**	**1**	< 0.5	< 0.3	**6.9**	**1.7**	**7.6**	**58.4**
EW-INF	11/14/2018	< 0.5	**1.6**	**32**	**1.6**	**1**	**0.84**	**1.2**	< 0.5	< 0.3	**4.6**	**1.2**	**8**	**52.04**
EW-INF	12/05/2018	< 0.5	**1.7**	**35**	**1.7**	**2**	< 0.5	**0.94**	< 0.5	< 0.3	**5.1**	**1.7**	**7.5**	**55.64**
EW-INF	01/09/2019	< 0.5	**2.3**	**40**	**1.9**	**2.5**	< 0.5	**0.86**	< 0.5	< 0.3	**5.3**	**1.8**	**8.5**	**63.16**
EW-INF	02/20/2019	< 0.5	**1.3**	**30**	**1.4**	**1.9**	**0.89**	**0.69**	< 0.5	< 0.3	**4.3**	**1.2**	**7.3**	**48.98**
EW-INF	03/20/2019	< 0.5	**0.8**	**25**	**1.1**	**1.6**	**1.3**	< 0.3	< 0.5	< 0.3	**4.9**	< 0.2	**4.8**	**39.5**
EW-INF	04/24/2019	< 0.5	**1.2**	**35**	**1.5**	< 0.3	**0.92**	< 0.3	< 0.5	< 0.3	**5**	< 0.2	**6.9 J**	**50.52**
EW-INF	05/29/2019	< 0.5	**1.4**	**26**	**1.8**	< 0.3	**1.7**	**0.94**	< 0.5	< 0.3	**4.6**	**0.86**	**9**	**46.3**
EW-INF	06/12/2019	< 0.5	**1.8**	**35**	**2**	**1.4**	**0.79**	**0.98**	< 0.5	< 0.3	**5**	**1.2**	**8.4**	**56.57**
HIPOXD	04/25/2012	< 0.5	< 0.5	< 0.5	< 0.5	**120**	**4.9**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96 J	**124.9**
HIPOXD	05/22/2012	< 0.5	< 0.5	< 0.5	< 0.5	**130**	**4.9**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.97	**134.9**
HIPOXD	07/23/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	ND
HIPOXD	08/17/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
HIPOXD	08/24/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
HIPOXD	09/07/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
HIPOXD	09/14/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95 J	ND
LGACM	03/15/2012	< 0.5	**1.4**	**10**	**4.5**	**2.2**	< 0.5	< 0.5	< 0.5	< 0.5	**0.7**	**0.98**	**16**	**35.78**
LGACM	04/25/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96 J	ND
LGACM	05/22/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.97	ND
LGACM	06/22/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96 J	ND
LGACM	07/05/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	ND
LGACM	07/23/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACM	08/07/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACM	08/17/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	ND
LGACM	08/24/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACM	09/07/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**4.7**	**4.7**
LGACM	09/14/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**7.7 J**	**7.7**
LGACM	10/16/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**18**	**18**

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
LGACM	11/20/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	ND
LGACM	12/14/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 0.95	ND
LGACM	01/16/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**2.1**	**2.1**
LGACM	02/28/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**3.7**	**3.7**
LGACM	04/05/2013	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**5.2**	**5.2**
LGACM	04/23/2013	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**5.3**	**5.3**
LGACM	05/21/2013	< 0.5	< 0.2	< 0.2	**0.46 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2**	**2.46**
LGACM	06/25/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACM	07/30/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.8 J**	**1.8**
LGACM	08/29/2013	< 0.5	< 0.2	< 0.2	**0.43 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.2 J**	**1.63**
LGACM	09/24/2013	< 0.5	< 0.2	< 0.2	**1**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.2 J**	**2.2**
LGACM	10/29/2013	< 0.5	< 0.2	< 0.2	**0.43 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.6**	**3.03**
LGACM	11/25/2013	< 0.5	< 0.2	< 0.2	**0.95**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.4**	**3.35**
LGACM	12/16/2013	< 0.5	< 0.2	< 0.2 J	**1.3**	**0.64**	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.8**	**4.74**
LGACM	02/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACM	04/29/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.4 J**	**1.4**
LGACM	05/29/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.4 J**	**1.4**
LGACM	06/26/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.7 J**	**1.7**
LGACM	07/31/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**2.1**	**2.1**
LGACM	08/27/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACM	09/22/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5.1**	**5.1**
LGACM	10/23/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.1**	**3.1**
LGACM	11/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5**	**5**
LGACM	12/10/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**5.9**	**5.9**
LGACM	01/20/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.1**	**9.1**
LGACM	02/17/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**12**	**12**
LGACM	03/26/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**14**	**14**
LGACM	04/30/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**13**	**13**
LGACM	05/28/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.8**	**8.8**
LGACM	06/16/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**13**	**13**
LGACM	07/07/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**16**	**16**
LGACM	08/26/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**14**	**14**
LGACM	09/16/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**18**	**18**
LGACM	10/14/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**22**	**22**
LGACM	11/18/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.2**	**8.2**
LGACM	12/09/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**11**	**11**
LGACM	01/13/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.3**	**9.3**
LGACM	02/17/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.8**	**9.8**
LGACM	03/23/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**12**	**12**

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Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
LGACM	04/20/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**15**	**15**
LGACM	05/18/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**12**	**12**
LGACM	06/08/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.5**	**9.5**
LGACM	07/20/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.6**	**9.6**
LGACM	08/17/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**9.6**	**9.6**
LGACM	09/28/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.2**	**8.2**
LGACM	10/12/2016	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**8.8**	**8.8**
LGACE	04/25/2012	< 0.5	< 0.5	< 0.5	< 0.5	**54**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96 J	**54**
LGACE	05/22/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACE	06/22/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95 J	ND
LGACE	07/05/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.97	ND
LGACE	07/23/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACE	08/07/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.97	ND
LGACE	08/17/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACE	08/24/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACE	09/07/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.96	ND
LGACE	09/14/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1 J**	**1**
LGACE	10/16/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.95	ND
LGACE	11/20/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.8**	**1.8**
LGACE	12/14/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**13**	**13**
LGACE	01/16/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**4**	**4**
LGACE	02/28/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	**1.1**	**1.1**
LGACE	04/05/2013	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**1.9**	**1.9**
LGACE	04/23/2013	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	**5.4**	**5.4**
LGACE	05/21/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.2**	**3.2**
LGACE	06/25/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	07/30/2013	**0.52**	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.5 J**	**2.02**
LGACE	08/29/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.2 J**	**1.2**
LGACE	09/24/2013	< 0.5	< 0.2	< 0.2	**2.3**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.3 J**	**3.6**
LGACE	10/29/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	11/25/2013	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.2**	**3.2**
LGACE	12/16/2013	< 0.5	< 0.2	< 0.2 J	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**3.3**	**3.3**
LGACE	01/27/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.1 J**	**1.1**
LGACE	02/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	03/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1 J**	**1**
LGACE	04/29/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.5 J**	**1.5**
LGACE	05/29/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1 J**	**1**
LGACE	06/26/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	07/31/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
LGACE	08/27/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	09/22/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	10/23/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	11/24/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	12/10/2014	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	01/20/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	02/17/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	03/26/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	04/30/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	05/28/2015	< 0.5	**4.6**	**31**	**3.8**	**2**	**2.3**	**2**	< 0.5	< 0.3	**2.5**	**2.3**	**18**	**68.5**
LGACE	06/16/2015	< 0.5	**1.4**	**12**	**1.5**	**1.1 J**	**1.3**	**0.75**	< 0.5	< 0.3	**0.83**	**0.7**	**9**	**28.58**
LGACE	07/07/2015	< 0.5	**0.96**	**17**	**2.2**	**1.1**	**2.8**	**1.1**	< 0.5	< 0.3	**1.1**	**0.68**	**15**	**41.94**
LGACE	08/26/2015	< 0.5	**0.4 J**	**6.5**	**0.74**	< 0.3	**0.66**	**0.37 J**	< 0.5	< 0.3	**0.47 J**	**0.37 J**	**1.8 J**	**11.31**
LGACE	09/16/2015	< 0.5	< 0.2	**1.9**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	**0.28 J**	< 1	**2.18**
LGACE	10/14/2015	< 0.5	< 0.2	**2.3**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	**1.9 J**	**4.2**
LGACE	11/18/2015	< 0.5	**1.3**	**17**	**0.82**	**1.7**	**1.2**	< 0.3	< 0.5	< 0.3	**2.5**	**0.75**	**12**	**37.27**
LGACE	12/09/2015	< 0.5	< 0.2	< 0.2	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	ND
LGACE	01/13/2016	< 0.5	< 0.2	**2**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**2**
LGACE	02/17/2016	< 0.5	< 0.2	**4.3**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**4.3**
LGACE	03/23/2016	< 0.5	< 0.2	**1.4**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**1.4**
LGACE	04/20/2016	< 0.5	< 0.2	**2**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**2**
LGACE	05/18/2016	< 0.5	< 0.2	**4.2**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	< 0.4	< 0.2	< 1	**4.2**
LGACE	06/08/2016	< 0.5	< 0.2	**3.5**	< 0.2	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.55**	< 0.2	< 1	**4.05**
LGACE	07/20/2016	< 0.5	**0.6**	**6**	**0.52**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.91**	< 0.2	< 1	**8.03**
LGACE	08/17/2016	< 0.5	< 0.2	**4.6**	**0.37 J**	< 0.3	< 0.5	< 0.3	< 0.5	< 0.3	**0.69**	< 0.2	< 1	**5.66**
LGACE	09/28/2016	< 0.5	**1.5**	**26**	**1.4**	**1.6**	**0.64**	**1**	< 0.5	< 0.3	**3**	**1.1**	**8.1**	**44.34**
LGACE	10/12/2016	< 0.5	**2.2**	**33**	**1.7**	**1.9**	**1**	**1.3**	< 0.5	< 0.3	**4.3**	**2.3**	**9**	**56.7**
TOTAL-EFF	07/31/2014	< 0.5	**4.1**	**28**	**2.7**	**1.1**	**2**	**2.2**	< 0.5	< 0.3	**2**	**2.9**	**14**	**59**
TOTAL-EFF	08/27/2014	< 0.5	**3.3**	**26**	**3.2**	**1.6**	**1.5**	**1.4**	< 0.5	< 0.3	**1.3**	**1.8**	**16**	**56.1**
TOTAL-EFF	09/22/2014	< 0.5	**3.1**	**29**	**3.2**	**1.6**	**1.9**	**1.8**	< 0.5	< 0.3	**1.9**	**2**	**16**	**60.5**
TOTAL-EFF	10/23/2014	< 0.5	**3.2**	**33**	**3.6**	**1.7**	**2.1**	**2**	< 0.5	< 0.3	**2.1**	**2.2**	**16**	**65.9**
TOTAL-EFF	11/24/2014	< 0.5	**3.6**	**38**	**4.4**	**2.8**	**3.2**	**2.6**	< 0.5	< 0.3	**2.6**	**2.8**	**16**	**76**
TOTAL-EFF	12/10/2014	< 0.5	**2.6**	**35**	**3.6**	**1.4**	**2.2**	**2.2**	< 0.5	< 0.3	**2.4**	**2.2**	**16**	**67.6**
TOTAL-EFF	01/20/2015	< 0.5	**2.4**	**30**	**2.5**	**1.3**	**1.9**	**2**	< 0.5	< 0.3	**1.9**	**2**	**16**	**60**
TOTAL-EFF	02/17/2015	< 0.5	**2.9**	**33**	**3**	**1.4**	**2.1**	**2**	< 0.5	< 0.3	**2.2**	**2**	**16**	**64.6**
TOTAL-EFF	03/26/2015	< 0.5	**2.7**	**26**	**2.3**	**1.7**	**2.1**	**1.5**	< 0.5	< 0.3	**1.6**	**1.7**	**16**	**55.6**
TOTAL-EFF	05/28/2015	< 0.5	**4.4**	**29**	**3.6**	**2.1**	**2.1**	**1.7**	< 0.5	< 0.3	**2.4**	**2.1**	**19**	**66.4**
TOTAL-EFF	06/16/2015	< 0.5	**4.5**	**29**	**3.6**	**2.9 J**	**3**	**1.8**	< 0.5	< 0.3	**2.7**	**2**	**19**	**68.5**
TOTAL-EFF	07/07/2015	< 0.5	**4.2**	**40**	**4.4**	**2.4**	**5.1**	**3.5**	**0.5**	< 0.3	**3.1**	**2.8**	**19**	**85**

TABLE 12
ANALYTICAL RESULTS FOR CHEMICALS OF CONCERN IN GROUNDWATER TREATMENT SYSTEM SAMPLES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
TOTAL-EFF	08/26/2015	< 0.5	**3.5**	**41**	**4.1**	**1.5**	**3**	**2.2**	< 0.5	< 0.3	**2.9**	**2.9**	**18**	**79.1**
TOTAL-EFF	09/16/2015	< 0.5	**3.3**	**33**	**3.9**	**1.1**	**3.9**	**2.4**	< 0.5	< 0.3	**2.1**	**3.2**	**17**	**69.9**
TOTAL-EFF	10/14/2015	< 0.5	**2.8**	**30**	**2.9**	**1.1**	**2**	**2.1**	< 0.5	< 0.3	**3**	**2.7**	**11**	**57.6**
TOTAL-EFF	11/18/2015	< 0.5	**4**	**32**	**1.3**	**2.7**	**1.4**	**1.1**	< 0.5	< 0.3	**4**	**1.8**	**12**	**60.3**
TOTAL-EFF	12/09/2015	< 0.5	**3.5**	**27**	**1.2**	**2.1**	**1**	**1.2**	< 0.5	< 0.3	**3.5**	**1.8**	**9.8**	**51.1**
TOTAL-EFF	01/13/2016	< 0.5	**3.9**	**30**	**1.7**	**3**	< 0.5	**0.78**	< 0.5	< 0.3	**3.2**	**2.2**	**12**	**56.78**
TOTAL-EFF	02/17/2016	< 0.5	**2.7**	**32**	< 0.2	**2.5**	**1.3**	< 0.3	< 0.5	< 0.3	**4.3**	**1.7**	**14**	**58.5**
TOTAL-EFF	03/23/2016	< 0.5	**3.7**	**35**	**0.5**	**2.4**	**0.52**	**0.5**	< 0.5	< 0.3	**4.9**	**1.8**	**12**	**61.32**
TOTAL-EFF	04/20/2016	< 0.5	**2.4**	**29**	**1.3**	< 0.3	**0.89**	**1.1**	< 0.5	< 0.3	**4.1**	**2**	**15**	**55.79**
TOTAL-EFF	05/18/2016	< 0.5	**1.5**	**33**	**0.99**	**2.7**	< 0.5	< 0.3	< 0.5	< 0.3	**4.1**	**1.7**	**16**	**59.99**
TOTAL-EFF	06/08/2016	< 0.5	**3.4**	**35**	**1.8**	**2.5**	**0.98**	**1.5**	< 0.5	< 0.3	**5.4**	**2.6**	**10**	**63.18**
TOTAL-EFF	07/20/2016	< 0.5	**3.3**	**34**	**1.7**	**2.4**	**0.9**	**1.3**	< 0.5	< 0.3	**5**	**2**	**8.7**	**59.3**
TOTAL-EFF	08/17/2016	< 0.5	**3.2**	**40**	**2**	**2.6**	**1.2**	**1.6**	< 0.5	< 0.3	**5.3**	**2.5**	**11**	**69.4**
TOTAL-EFF	09/28/2016	< 0.5	**2.7**	**36**	**2**	**2**	**0.99**	**1.6**	< 0.5	< 0.3	**4.4**	**1.7**	**9.6**	**60.99**
TOTAL-EFF	10/12/2016	< 0.5	**3.2**	**40**	**2.2**	**2.8**	**1.2**	**1.6**	< 0.5	< 0.3	**5.7**	**2.4**	**12**	**71.1**
TOTAL-EFF	11/16/2016	< 0.5	**2.6**	**41**	**2.1**	**1.6**	**1.1**	**2.2**	< 0.5	< 0.3	**6.3**	**2.7**	**13**	**72.6**
TOTAL-EFF	12/14/2016	< 0.5	**2.7**	**51**	**1.8**	**2.4**	**1.4**	**1.7**	< 0.5	< 0.3	**6.2**	**2.4**	**11**	**80.6**
TOTAL-EFF	01/25/2017	< 0.5	**3.1**	**33**	**2**	**1.6**	**0.81**	**1.2**	< 0.5	< 0.3	**3.8**	**1.3**	**12**	**58.81**
TOTAL-EFF	02/22/2017	< 0.5	**1.9**	**38**	**1.8**	**1.8**	**0.91**	**1.1**	< 0.5	< 0.3	**4.4**	**2.4**	**12**	**64.31**
TOTAL-EFF	03/15/2017	< 0.5	**1.7**	**38**	**1.8**	**1.9**	**1.2**	**1.2**	< 0.5	< 0.3	**5.7**	**1.3**	**12**	**64.8**
TOTAL-EFF	04/12/2017	< 0.5	**1.6**	**40**	**1.7**	**1.3**	< 0.5	**0.75**	< 0.5	< 0.3	**3.1**	**1.3**	**12**	**61.75**
TOTAL-EFF	05/17/2017	< 0.5	**1.4**	**30**	**1.4**	**1.7**	**0.98**	< 0.3	< 0.5	< 0.3	**3.5**	**0.95**	**11**	**50.93**
TOTAL-EFF	06/21/2017	< 0.5	**2.9**	**37**	**1.5**	**0.83**	**0.57**	**0.9**	< 0.5	< 0.3	**3.5**	**0.99**	**15**	**63.19**
TOTAL-EFF	07/26/2017	< 0.5	**1.4**	**47**	**1.8**	**1.3**	**1.2**	**1.3**	< 0.5	< 0.3	**4.4**	**1.7**	**11**	**71.1**
TOTAL-EFF	08/16/2017	< 0.5	**1.4**	**44**	**1.7**	**1.6**	**1**	**1.2**	< 0.5	< 0.3	**3.4**	**1.3**	**11**	**66.6**
TOTAL-EFF	09/22/2017	< 0.5	**3.2**	**69**	**3.4**	**2.5**	**2.3**	**1.8**	< 0.5	< 0.3	**5.5**	**2**	**11**	**100.7**
TOTAL-EFF	10/11/2017	< 0.5	**2.3**	**44**	**2.2**	**2.2**	**0.77**	**1.3**	< 0.5	< 0.3	**4.3**	**2**	**11**	**70.07**
TOTAL-EFF	11/29/2017	< 0.5	**1.8**	**39**	**1.8**	**1.9**	**0.53**	**0.83**	< 0.5	< 0.3	**3**	**1.1**	**9.3**	**59.26**
TOTAL-EFF	12/13/2017	< 0.5	**4.4**	**46**	**2.9**	**1.8**	< 0.5	**1.1**	< 0.5	< 0.3	**3.9**	**0.89**	**13**	**73.99**
TOTAL-EFF	01/31/2018	< 0.5	**1.1**	**37**	**1.5**	**1.9**	**0.5**	**0.67**	< 0.5	< 0.3	**2.6**	**1.2**	**9.4**	**55.87**
TOTAL-EFF	02/28/2018	< 0.5	**1.1**	**36**	**1.4**	**1.9**	**0.68**	**1.1**	< 0.5	< 0.3	**3.6**	**1.5**	**7.3**	**54.58**
TOTAL-EFF	03/28/2018	< 0.5	**2.9**	**37**	**2**	**2**	< 0.5	**1**	< 0.5	< 0.3	**2.8**	**1.4**	**10**	**59.1**
TOTAL-EFF	04/30/2018	< 0.5	**1**	**29**	**1.6**	**2.6**	**0.85**	**0.87**	< 0.5	< 0.3	**3.6**	**1.4**	**6**	**46.92**
TOTAL-EFF	05/16/2018	< 0.5	**0.85**	**21**	**1.5**	**2.4**	< 0.5	**1**	< 0.5	< 0.3	**4.4**	**0.76**	**5.2**	**37.11**
TOTAL-EFF	06/20/2018	< 0.5	**3**	**35**	**2.6**	**2.3**	< 0.5	**0.98**	< 0.5	< 0.3	**3.2**	**1.2**	**8.3**	**56.58**
TOTAL-EFF	07/18/2018	< 0.5	**2.8**	**42**	**3**	**3.8**	**1.1**	**1.9**	< 0.5	< 0.3	**5.7**	**3.2**	**7.3**	**70.8**
TOTAL-EFF	08/15/2018	< 0.5	**2.6**	**38**	**2.3**	**1.8**	**0.78**	**0.88**	< 0.5	< 0.3	**4**	**1.4**	**10**	**61.76**
TOTAL-EFF	09/19/2018	< 0.5	**2.5**	**38**	**2.1**	**2.1**	**0.84**	**0.97**	< 0.5	< 0.3	**4.1**	**1.5**	**10**	**62.11**
TOTAL-EFF	10/24/2018	< 0.5	**2.2**	**33**	**1.7**	**1.6**	**1.8**	**1.1**	< 0.5	< 0.3	**7.1**	**1.6**	**7.8**	**57.9**

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SOUTH GATE, CALIFORNIA

Location ID	Sample Date	PCE µg/L	TCE µg/L	cDCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	VC µg/L	1,1-DCE µg/L	1,2-DCP µg/L	1,2,3-TCP µg/L	tDCE µg/L	Benzene µg/L	1,4-Dioxane µg/L	Total COCs µg/L
TOTAL-EFF	11/14/2018	< 0.5	**1.3**	**26**	**1.3**	**1**	**0.56**	**0.77**	< 0.5	< 0.3	**3.3**	**0.91**	**8.4**	**43.54**
TOTAL-EFF	12/05/2018	< 0.5	**1.1**	**29**	**1.5**	**1.7**	< 0.5	**0.64**	< 0.5	< 0.3	**3.6**	**1.3**	**7.1**	**45.94**
TOTAL-EFF	01/09/2019	< 0.5	**1.6**	**31**	**1.4**	**1.7**	< 0.5	**0.6**	< 0.5	< 0.3	**3.5**	**1.5**	**8.4**	**49.7**
TOTAL-EFF	02/20/2019	< 0.5	**0.87**	**24**	**1.1**	**1.8**	< 0.5	< 0.3	< 0.5	< 0.3	**2.6**	**0.82**	**7.4**	**38.59**
TOTAL-EFF	03/20/2019	< 0.5	**0.53**	**21**	**0.8**	**1.5**	< 0.5	< 0.3	< 0.5	< 0.3	**3.8**	< 0.2	**4.9**	**32.53**
TOTAL-EFF	04/24/2019	< 0.5	**0.81**	**28**	**1.1**	**1.6**	< 0.5	< 0.3	< 0.5	< 0.3	**3.1**	< 0.2	**7.2 J**	**41.81**
TOTAL-EFF	05/29/2019	< 0.5	**1.2**	**24**	**1.6**	< 0.3	**1.1**	**0.67**	< 0.5	< 0.3	**3.4**	**0.68**	**9.6**	**42.25**
TOTAL-EFF	06/12/2019	< 0.5	**1.6**	**32**	**1.9**	**1.4**	**0.51**	**0.79**	< 0.5	< 0.3	**3.7**	**0.89**	**8.6**	**51.39**

Notes:

1. Results are reported in micrograms per liter (µg/L).
2. Samples were analyzed for volatile organic compounds (VOCs) using Environmental Protection Agency (EPA) Method 8260B and 1,4-dioxane using EPA Method 8270C-isotope dilution.
3. Detected concentrations are shown in BOLD font.
4. Additional VOCs that are not COCs have been detected. Analytical results for non-COCs are included in the Appendix of Laboratory Analytical Reports.

Abbreviations:

< = not detected at or above the laboratory reporting limit shown.
µg/L = micrograms per liter
J = The J qualifier indicates that the associated result is quantitatively uncertain. J qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
< # J = The UJ qualifier indicates that the associated analyte is considered not detected at or greater than the estimated concentration listed. UJ qualifiers may indicate added during validation either a high or low bias related to a QC element that exceeds required limits.
LINF = water influent to the groundwater treatment system
LGACI = inlet to the primary liquid phase granular activated carbon (GAC) vessel following outlet of HiPOX Treatment Unit
DPE-INF = influent to the GAC vessel from the dual phase extraction wells.
EW-INF = groundwater pumped from groundwater extraction wells.
HIPOXD = inlet to HiPOX Treatment Unit when temporarily located downstream of GAC vessels
LGACM = inlet to the secondary liquid phase granular activated carbon vessel
LGACE = treated water effluent
TOTAL-EFF = combination of EW-INF and LGACE that is discharged to the sewer
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethene
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
1,2,3-TCP = 1,2,3-Trichloropropane
PCE = Tetrachloroethene
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
VC = Vinyl Chloride
COCs = Chemicals of Concern

TABLE 13

SOIL VAPOR EXTRACTION TREATMENT SYSTEM OPERATIONS SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Influent Sampling Date	Cumulative Hours of Operation (hrs)	System Flow (scfm)	Total Influent COCs Concentration[1] (µg/m3)	Average COC Mass Removal Rate (lbs/day)	Incremental Mass Removal (lbs)	Cumulative Mass of COCs Removed (lbs)
2/23/2011	28	274	193.7	4.77	5.5	5.5
3/22/2011	607	172	103.9	1.61	76.9	82.4
4/12/2011	1,018	225	46.0	0.93	21.8	104.2
4/27/2011	1,364	179	41.0	0.66	11.4	115.6
5/17/2011	1,811	186	23.1	0.39	9.7	125.3
6/7/2011	2,270	217	30.4	0.59	9.4	134.7
6/21/2011	2,606	274	30.2	0.74	9.4	144.1
7/19/2011	3,096	246	68.0	1.51	23.0	167.0
8/23/2011	3,832	307	4.4	0.12	25.0	192.0
9/20/2011	4,419	200	4.9	0.09	2.5	194.5
9/21/2011	4,419	200	3.3	0.06	0.0	194.5
10/11/2011	4,904	192	8.0	0.14	2.0	196.5
1/13/2012	5,336	229	4.5	0.09	2.1	198.6
2/21/2012	5,529	413	5.5	0.21	1.2	199.8
3/27/2012	6,190	320	10.9	0.31	7.2	207.0
4/24/2012	6,832	188	8.4	0.14	6.1	213.1
5/22/2012	7,401	298	12.0	0.32	5.5	218.6
6/12/2012	7,764	217	19.4	0.38	5.3	223.9
7/20/2012	8,180	231	68.9	1.43	15.7	239.6
8/7/2012	8,594	165	45.1	0.67	18.1	257.7
9/7/2012	9,261	271	42.6	1.04	23.7	281.4
10/16/2012	10,138	253	18.1	0.41	26.5	308.0
12/14/2012	11,309	450	7.5	0.30	17.5	325.5
4/2/2013	12,156	309	12.8	0.35	11.6	337.1
4/23/2013	12,499	305	10.5	0.29	4.6	341.7
5/21/2013	13,157	316	9.6	0.27	7.7	349.4
6/26/2013	13,942	234	8.6	0.18	7.4	356.8
7/30/2013	14,683	231	9.3	0.19	5.8	362.5
9/12/2013	15,194	651	7.4	0.43	6.6	369.2
9/24/2013	15,496	490	9.0	0.40	5.2	374.4
10/29/2013	16,249	490	18.6	0.82	19.1	393.5
11/25/2013	16,775	496	15.8	0.70	16.7	410.1
12/16/2013	17,213	436	17.7	0.69	12.8	422.9
1/27/2014	18,168	497	9.2	0.41	22.0	444.9
2/24/2014	18,586	498	6.2	0.28	6.0	450.9

TABLE 13

SOIL VAPOR EXTRACTION TREATMENT SYSTEM OPERATIONS SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Influent Sampling Date	Cumulative Hours of Operation (hrs)	System Flow (scfm)	Total Influent COCs Concentration[1] (µg/m3)	Average COC Mass Removal Rate (lbs/day)	Incremental Mass Removal (lbs)	Cumulative Mass of COCs Removed (lbs)
3/24/2014	19,193	442	3.1	0.12	5.1	455.9
4/29/2014	19,882	484	1.6	0.07	2.8	458.7
5/29/2014	20,511	460	5.2	0.22	3.8	462.5
6/26/2014	21,059	485	3.9	0.17	4.4	466.9
7/29/2014	21,762	499	1.5	0.07	3.5	470.4
9/22/2014	22,810	490	1.9	0.08	3.3	473.7
10/23/2014	23,380	490	2.6	0.11	2.3	476.0
11/24/2014	24,013	499	5.6	0.25	4.8	480.8
12/10/2014	24,369	498	16.2	0.72	7.2	488.1
1/20/2015	25,311	488	7.0	0.31	20.3	508.3
2/17/2015	25,840	446	4.3	0.17	5.3	513.6
3/26/2015	26,578	489	3.8	0.16	5.2	518.8
4/30/2015	27,342	474	1.9	0.08	3.9	522.7
5/28/2015	27,857	432	0.9	0.03	1.2	523.9
6/16/2015	28,170	476	0.8	0.03	0.4	524.3
7/7/2015	28,665	482	0.3	0.01	0.5	524.8
8/26/2015	29,705	417	0.3	0.01	0.5	525.4
9/16/2015	30,060	449	0.8	0.03	0.3	525.7
10/14/2015	30,580	468	0.8	0.03	0.7	526.4
11/18/2015	31,287	139	2.4	0.03	0.9	527.3
12/9/2015	31,767	500	1.6	0.07	1.0	528.4
1/14/2016	32,111	498	0.8	0.03	0.8	529.1
2/17/2016	32,822	468	2.2	0.09	1.9	531.0
3/23/2016	33,556	305	1.0	0.03	1.8	532.8
4/20/2016	34,171	469	1.2	0.05	1.0	533.8
7/20/2016	34,604	452	2.3	0.10	1.3	535.2
10/19/2016	35,048	450	2.0	0.08	1.6	536.8
10/26/2016	35,187	450	3.0	0.12	0.6	537.4
11/2/2016	35,349	493	10.5	0.46	2.0	539.3
11/16/2016	35,685	473	7.7	0.33	5.5	544.9
12/7/2016	36,158	451	4.1	0.16	4.8	549.7
12/14/2016	36,324	458	1.8	0.08	0.8	550.5
12/21/2016	36,449	416	3.3	0.12	0.5	551.1
12/27/2016	36,449	416	1.8	0.07	0.0	551.1
3/22/2017	36,933	362	2.0	0.07	1.4	552.4

TABLE 13

SOIL VAPOR EXTRACTION TREATMENT SYSTEM OPERATIONS SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Influent Sampling Date	Cumulative Hours of Operation (hrs)	System Flow (scfm)	Total Influent COCs Concentration[1] (µg/m3)	Average COC Mass Removal Rate (lbs/day)	Incremental Mass Removal (lbs)	Cumulative Mass of COCs Removed (lbs)
4/5/2017	36,986	380	2.2	0.07	0.2	552.6
4/5/2017	36,991	430	6.8	0.26	0.0	552.6
4/12/2017	37,150	447	4.8	0.19	1.5	554.1
4/12/2017	37,155	144	3.3	0.04	0.0	554.1
4/19/2017	37,323	166	0.0	0.00	0.2	554.3
4/19/2017	37,327	344	1.0	0.03	0.0	554.3
4/26/2017	37,442	291	0.8	0.02	0.1	554.4
4/26/2017	37,447	369	6.4	0.21	0.0	554.4
5/3/2017	37,606	341	2.8	0.08	1.0	555.4
5/3/2017	37,610	143	1.0	0.01	0.0	555.4
5/10/2017	37,711	135	0.9	0.01	0.0	555.5
5/10/2017	37,714	405	1.3	0.05	0.0	555.5
5/17/2017	37,878	370	1.5	0.05	0.3	555.8
5/17/2017	37,882	380	4.7	0.16	0.0	555.8
5/24/2017	37,968	400	2.8	0.10	0.5	556.3
5/24/2017	37,974	136	1.0	0.01	0.0	556.3
10/4/2017	37,981	617	2.5	0.14	0.0	556.3
10/11/2017	38,142	600	2.7	0.14	0.9	557.3
10/25/2017	38,479	605	2.5	0.13	2.0	559.2
11/8/2017	38,813	596	2.3	0.12	1.8	561.0
11/29/2017	39,312	585	1.9	0.10	2.3	563.4
12/13/2017	39,649	575	2.1	0.11	1.4	564.8
12/27/2017	39,986	405	0.5	0.02	0.9	565.7
1/31/2018	40,322	435	1.6	0.06	0.6	566.2
5/2/2018	40,495	500	1.5	0.07	0.5	566.7
5/16/2018	40,826	520	1.3	0.06	0.9	567.6
6/20/2018	41,661	550	1.8	0.09	2.6	570.2
7/18/2018	42,322	550	1.9	0.10	2.6	572.8
8/15/2018	42,992	530	2.4	0.11	2.9	575.7
9/19/2018	43,824	518	2.1	0.10	3.6	579.3
10/3/2018	44,159	440	2.1	0.08	1.2	580.6
10/3/2018	44,164	440	0.1	0.01	0.0	580.6
10/10/2018	44,327	450	1.1	0.04	0.2	580.8
10/24/2018	44,658	490	0.8	0.04	0.5	581.3
11/14/2018	45,169	500	0.9	0.04	0.8	582.1

TABLE 13

SOIL VAPOR EXTRACTION TREATMENT SYSTEM OPERATIONS SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Influent Sampling Date	Cumulative Hours of Operation (hrs)	System Flow (scfm)	Total Influent COCs Concentration[1] (µg/m3)	Average COC Mass Removal Rate (lbs/day)	Incremental Mass Removal (lbs)	Cumulative Mass of COCs Removed (lbs)
12/27/2018	45,172	525	1.3	0.06	0.0	582.1
1/9/2019	45,480	505	1.5	0.07	0.8	583.0
2/20/2019	45,482	500	0.9	0.04	0.0	583.0
3/6/2019	45,818	550	0.7	0.03	0.5	583.5
5/1/2019	46,159	500	1.3	0.06	0.7	584.1
6/12/2019	46,168	500	1.1	0.05	0.0	584.2
6/26/2019	46,497	543	1.6	0.08	0.9	585.0

Notes:

1. Unless noted otherwise, the total influent COCs concentration is the sum of COCs concentrations detected using EPA Method TO-15 for vapor samples collected from the influent to the vapor treatment system.

Abbreviations:

-- = not sampled or measured
µg/m^3 = micrograms per cubic meter
COCs = chemicals of concern
GAC = granular activated carbon
hrs = hours
lbs = pounds
NM = not measured
scfm = standard cubic feet per minute

TABLE 14

GROUNDWATER TREATMENT SYSTEM OPERATION SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

System Inspection Date	Flow Totalizer (gallons)	Influent Concentration (Total COCs; µg/L)	Incremental Mass Removal (pounds)	Total Mass of COCs Removed (pounds)
3/4/2011	0	--		0
3/15/2011	1,375	10,626	0.12	0.1
3/29/2011	1,775	19,400	0.05	0.2
4/12/2011	3,975	8,770	0.26	0.4
5/17/2011	7,275	5,450	0.20	0.6
6/7/2011	8,775	8,960	0.09	0.7
7/19/2011	12,175	5,840	0.21	0.9
8/23/2011	16,175	4,237	0.17	1.1
10/11/2011	20,075	1,198	0.09	1.2
03/15/2012	30,994	55	0.06	1.2
4/25/2012	36,030	181	0.00	1.2
5/22/2012	71,341	196	0.06	1.3
6/22/2012	120,667	140	0.07	1.4
7/5/2012	148,485	208	0.04	1.4
7/23/2012	216,494	55	0.07	1.5
8/7/2012	243,504	161	0.02	1.5
8/17/2012	250,371	69	0.01	1.5
8/24/2012	276,954	73	0.02	1.5
9/7/2012	418,656	96	0.10	1.6
9/14/2012	452,233	84	0.03	1.7
10/16/2012	611,707	71	0.10	1.8
11/20/2012	740,370	109	0.10	1.9
12/14/2012	811,655	56	0.05	1.9
1/16/2013	1,016,607	65	0.10	2.0
2/28/2013	1,290,225	80	0.16	2.2
4/5/2013	2,017,356	71	0.46	2.6
4/23/2013	2,243,948	86	0.15	2.8
5/21/2013	2,475,955	86	0.17	2.9
6/25/2013	3,393,601	82	0.64	3.6
7/30/2013	3,988,635	79	0.40	4.0
8/29/2013	4,688,389	72	0.44	4.4
9/24/2013	5,572,076	62	0.49	4.9
10/29/2013	6,420,241	62	0.44	5.4
11/25/2013	7,101,908	73	0.38	5.7
12/16/2013	7,481,683	72	0.23	6.0
1/27/2014	8,582,951	70	0.65	6.6
2/24/2014	8,944,366	67	0.21	6.8

TABLE 14
GROUNDWATER TREATMENT SYSTEM OPERATION SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

System Inspection Date	Flow Totalizer (gallons)	Influent Concentration (Total COCs; µg/L)	Incremental Mass Removal (pounds)	Total Mass of COCs Removed (pounds)
3/24/2014	9,759,449	67	0.45	7.3
4/29/2014	10,653,962	59	0.47	7.7
5/29/2014	11,588,139	58	0.46	8.2
6/26/2014	12,224,153	56	0.30	8.5
7/31/2014	12,497,046	62	0.13	8.6
8/27/2014	12,927,483	67	0.23	8.9
9/22/2014	13,451,784	68	0.30	9.2
10/23/2014	14,051,000	69	0.34	9.5
11/24/2014	14,616,789	72	0.33	9.8
12/10/2014	14,889,891	61	0.15	10.0
1/20/2015	15,737,681	65	0.45	10.4
2/17/2015	16,241,552	65	0.27	10.7
3/26/2015	16,780,233	63	0.29	11.0
5/28/2015	17,547,750	68	0.42	11.4
6/16/2015	17,828,036	74	0.17	11.6
7/7/2015	18,300,222	85	0.31	11.9
8/26/2015	19,334,338	82	0.72	12.6
9/16/2015	19,741,474	41	0.21	12.8
10/14/2015	19,798,462	60	0.02	12.8
11/18/2015	20,246,266	66	0.24	13.1
12/9/2015	20,701,101	52	0.22	13.3
1/13/2016	21,120,790	55	0.19	13.5
2/17/2016	21,887,116	55	0.35	13.8
3/23/2016	22,511,434	58	0.30	14.1
4/20/2016	23,037,308	59	0.26	14.4
5/18/2016	23,565,845	68	0.28	14.7
6/8/2016	24,006,342	69	0.25	14.9
7/20/2016	24,909,268	65	0.51	15.4
8/17/2016	25,590,396	81	0.42	15.9
9/28/2016	26,514,206	73	0.59	16.4
10/12/2016	26,866,701	73	0.22	16.7
11/16/2016	27,694,404	81	0.53	17.2
12/14/2016	28,183,864	70	0.31	17.5
1/25/2017	28,916,757	69	0.42	17.9
2/22/2017	29,287,594	77	0.22	18.2
3/15/2017	29,538,469	78	0.16	18.3
4/12/2017	29,983,434	77	0.29	18.6

TABLE 14
GROUNDWATER TREATMENT SYSTEM OPERATION SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

System Inspection Date	Flow Totalizer (gallons)	Influent Concentration (Total COCs; µg/L)	Incremental Mass Removal (pounds)	Total Mass of COCs Removed (pounds)
5/17/2017	30,641,564	66	0.39	19.0
6/21/2017	31,313,414	76	0.40	19.4
7/26/2017	31,845,894	78	0.34	19.7
8/16/2017	32,111,164	80	0.17	19.9
9/22/2017	32,589,134	124	0.41	20.3
10/11/2017	32,887,644	80	0.25	20.6
11/29/2017	33,734,174	74	0.54	21.1
12/13/2017	33,943,214	92	0.14	21.3
1/31/2018	34,696,749	71	0.51	21.8
2/28/2018	35,113,039	60	0.23	22.0
3/28/2018	35,485,559	74	0.21	22.2
4/30/2018	35,918,619	60	0.24	22.4
5/16/2018	36,255,869	51	0.16	22.6
6/20/2018	36,760,619	70	0.25	22.9
7/18/2018	37,230,869	63	0.26	23.1
8/15/2018	37,716,039	68	0.26	23.4
9/19/2018	38,277,424	68	0.32	23.7
10/24/2018	38,850,179	58	0.30	24.0
11/14/2018	39,172,624	52	0.15	24.1
12/5/2018	39,475,324	56	0.14	24.3
1/9/2019	39,984,584	63	0.25	24.5
2/20/2019	40,601,024	49	0.29	24.8
3/20/2019	40,937,032	40	0.12	24.9
4/24/2019	41,315,539	51	0.14	25.1
5/29/2019	41,823,204	46	0.21	25.3
6/12/2019	42,026,939	57	0.09	25.4

Note:

1. Influent concentration is the sum of COC concentrations detected and reported by Environmental Protection Agency (EPA) Method 8260B and the 1,4-dioxane concentration detected and reported by EPA Method 8270C-isotope dilution for water samples collected from the influent to the groundwater treatment system.

Abbreviations:

-- = not sampled
µg/L = micrograms per liter
COCs = compounds of concern

TABLE 15
VALIDATION SUMMARY
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Matrix	Number of Primary Samples	Number of Duplicate Samples	Number of Results	Number of Results with no Qualifiers		Number of Results Qualified with a U				Number of Results Qualified with a J				Number of Results Qualified with a UJ				Number of Results Qualified with a E			
				Total	% of Results	Laboratory	Validation	Final	% of Results	Laboratory	Validation	Final	% of Results	Laboratory	Validation	Final	% of Results	Laboratory	Validation	Final	% of Results
GWTS	12	0	804	91	11.32%	711	0	705	87.69%	2	2	4	0.50%	0	6	6	0.75%	0	0	0	0.00%
SVTS	14	0	768	76	9.90%	692	0	690	89.84%	0	0	0	0.00%	0	2	2	0.26%	0	0	0	0.00%
GW OU1	54	7	4087	270	6.61%	3748	0	3720	91.02%	69	8	77	1.88%	0	26	26	0.64%	0	0	0	0.00%
Qtrly SV	17	0	917	222	24.21%	691	0	674	73.50%	0	5	5	0.55%	0	17	7	0.76%	4	0	0	0.00%

Note:
1. All samples were validated. See Data Validation Reports for details on validation qualifiers.
2. Final counts of qualified results may be less than the laboratory counts if a different qualifier was given during the validation process.

Abbreviations:
GW OU1 = Groundwater samples from OU1 extraction
GWTS = Groundwater Treatment System
E = The E qualifier indicates that the associated result is estimated above the calibration range of the instrument.
J = The J qualifier indicates that the associated result is quantitatively uncertain. J qualifiers added during validation indicate a data limitation related to a quality control element that exceeds required acceptance limits.
Qtrly SV = Quarterly Soil Vapor
U = not detected at or above the laboratory reporting limit
UJ = The reporting limit is estimated. UJ qualifiers added during validation may indicate either a high or low bias related to a quality control element that exceeds required acceptance limits.
SVTS = Soil Vapor Treatment System

TABLE 16
CONCENTRATION TREND ANALYSIS SUMMARY 2006 - 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Well Area	Aquifer	Screen Interval (ft bgs)	TCE [1,2]			cDCE[1,2]			1,4-Dioxane[1,2]		
				MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line	
				Trend Type	Slope	Intercept	Trend Type	Slope	Intercept	Trend Type	Slope	Intercept
MW-19	Up-gradient	Shallow Gaspur	67 - 77	Decreasing	-0.012	495.13	Decreasing	-0.002	103.92	Increasing	0.001	-26.68
MW-23	Up-gradient	Shallow Gaspur	69 - 79	Increasing	0.002	-88.91	Increasing	0.001	-50.76	Increasing	0.001	-43.98
MW-23A	Up-gradient	Shallow Gaspur	61 - 65	Decreasing	-0.004	190.25	Decreasing	-0.001	62.41	No Trend	0.000	10.56
MW-23B	Up-gradient	Lower Gaspur	95 - 105	Increasing	0.000	-4.38	Increasing	0.000	-2.00	No Trend	0.000	0.10
MW-57A	Up-gradient	Shallow Gaspur	60 - 70	Decreasing	-0.003	125.02	Decreasing	-0.006	259.08	Increasing	0.002	-72.38
MW-57B	Up-gradient	Intermediate Gaspur	85 - 90	No Trend	0.000	0.10	No Trend	0.000	0.10	Decreasing	-0.001	20.93
MW-58	Up-gradient	Shallow Gaspur	60 - 70	Decreasing	-0.004	163.48	No Trend	-0.003	136.69	No Trend	0.000	18.61
MW-63	Up-gradient	Shallow Gaspur	62.5 - 67.1	No Trend	0.000	-6.50	No Trend	0.002	-80.21	No Trend	-0.022	959.33
MW-64A	Up-gradient	Intermediate Gaspur	79.5 - 84.1	No Trend	0.000	0.10	No Trend	0.000	0.10	No Trend	-0.002	78.02
MW-64B	Up-gradient	Lower Gaspur	107.8 - 112.5	No Trend	-0.001	27.16	No Trend	-0.001	64.95	No Trend	0.000	0.10
EW-8	Phase 1 OU1 RAA	Lower Gaspur	99 - 109	Decreasing	-0.001	28.77	Decreasing	-0.014	628.48	Decreasing	-0.004	151.80
MW-1	Phase 1 OU1 RAA	Shallow/ Intermediate Gaspur	52 - 84	No Trend	0.000	0.55	No Trend	0.000	0.28	No Trend	0.000	-1.89
MW-15	Phase 1 OU1 RAA	Shallow/ Intermediate Gaspur	70 - 85	Decreasing	-0.009	379.46	Decreasing	-0.013	596.14	No Trend	-0.001	24.42
MW-15B	Phase 1 OU1 RAA	Lower Gaspur	93 - 103	Decreasing	-0.003	111.78	Decreasing	-0.024	1,089.90	Decreasing	-0.004	180.15
MW-17	Phase 1 OU1 RAA	Shallow Gaspur	69 - 79	Increasing	0.000	-15.66	Increasing	0.001	-31.35	Increasing	0.001	-34.15
MW-20	Phase 1 OU1 RAA	Shallow Gaspur	55 - 70	Decreasing	-0.054	2,255.02	No Trend	0.002	30.90	Increasing	0.027	-915.87
MW-20B	Phase 1 OU1 RAA	Intermediate Gaspur	80 - 90	Decreasing	-0.001	56.27	No Trend	0.002	-50.81	Increasing	0.002	-86.21
MW-21	Phase 1 OU1 RAA	Shallow Gaspur	55 - 75	Decreasing	-0.105	4,508.32	No Trend	0.034	-974.77	No Trend	0.000	190.00
MW-22	Phase 1 OU1 RAA	Shallow Gaspur	63 - 73	No Trend	0.000	5.11	Increasing	0.002	-85.51	Increasing	0.003	-102.79
MW-2A	Phase 1 OU1 RAA	Shallow Gaspur	58 - 62	Decreasing	-0.059	2,486.41	Decreasing	-0.041	1,925.83	Decreasing	-0.018	758.05
MW-2B	Phase 1 OU1 RAA	Shallow Gaspur	68 - 72	Decreasing	-0.001	32.74	Decreasing	-0.006	274.94	Decreasing	-0.004	195.21
MW-2C	Phase 1 OU1 RAA	Intermediate Gaspur	88 - 92	Decreasing	0.000	0.10	Decreasing	0.000	0.10	No Trend	0.000	0.10
MW-33A	Phase 1 OU1 RAA	Shallow Gaspur	55 - 65	Decreasing	-0.071	3,000.34	Increasing	0.022	-754.80	Decreasing	-0.039	1789.26
MW-33B	Phase 1 OU1 RAA	Intermediate Gaspur	80 - 90	Decreasing	-0.007	304.73	No Trend	-0.001	83.71	No Trend	0.001	-38.79
MW-4	Phase 1 OU1 RAA	Shallow/ Intermediate Gaspur	50 - 82	Decreasing	-0.001	60.58	Decreasing	-0.003	112.69	No Trend	0.001	-32.05
MW-4B	Phase 1 OU1 RAA	Intermediate Gaspur	88 - 92	Decreasing	0.000	10.36	Increasing	0.017	-700.47	No Trend	0.000	0.10
MW-59A	Phase 1 OU1 RAA	Shallow Gaspur	58 - 62	Decreasing	-0.088	3,755.36	Decreasing	-0.267	11,527.48	Increasing	0.020	-799.57
MW-59B	Phase 1 OU1 RAA	Intermediate Gaspur	75 - 79	No Trend	0.000	2.97	Decreasing	-0.001	24.26	Decreasing	-0.002	77.82
MW-59C	Phase 1 OU1 RAA	Intermediate Gaspur	88 - 92	No Trend	0.000	0.10	No Trend	0.000	0.10	No Trend	0.000	0.10
MW-60A	Phase 1 OU1 RAA	Shallow Gaspur	72 - 77	Decreasing	-0.009	391.81	Decreasing	-0.019	822.45	Decreasing	-0.003	138.30
MW-60B	Phase 1 OU1 RAA	Lower Gaspur	92 - 101	Decreasing	-0.002	77.90	Decreasing	-0.019	833.25	Decreasing	-0.005	219.47

TABLE 16
CONCENTRATION TREND ANALYSIS SUMMARY 2006 - 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Well Area	Aquifer	Screen Interval (ft bgs)	TCE [1,2]			cDCE[1,2]			1,4-Dioxane[1,2]		
				MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line	
				Trend Type	Slope	Intercept	Trend Type	Slope	Intercept	Trend Type	Slope	Intercept
MW-61A	Phase 1 OU1 RAA	Shallow Gaspur	66 - 76	Decreasing	0.000	16.91	Increasing	0.022	-883.20	No Trend	0.003	-119.07
MW-61B	Phase 1 OU1 RAA	Intermediate Gaspur	83 - 88	No Trend	0.000	0.10	Increasing	0.001	-38.10	Decreasing	-0.001	57.39
MW-62A	Phase 1 OU1 RAA	Shallow Gaspur	68 - 77	Decreasing	-0.001	50.24	Decreasing	-0.004	195.48	No Trend	0.000	-17.33
MW-62B	Phase 1 OU1 RAA	Lower Gaspur	101 - 106	Decreasing	-0.005	203.12	Decreasing	-0.024	1,008.49	No Trend	0.000	0.10
PZ-7A	Phase 1 OU1 RAA	Shallow Gaspur	70 - 75	Decreasing	-0.001	53.05	No Trend	-0.001	55.99	No Trend	0.000	2.20
PZ-7B	Phase 1 OU1 RAA	Intermediate Gaspur	88 - 93	Decreasing	-0.001	27.20	Decreasing	-0.006	259.11	No Trend	0.000	-0.61
MW-24	Phase 2 OU1 RAA	Shallow Gaspur	70-85	Decreasing	-0.001	36.78	No Trend	0.000	12.90	No Trend	0.000	0.10
MW-25	Phase 2 OU1 RAA	Intermediate Gaspur	75-90	Decreasing	-0.002	95.71	No Trend	-0.001	57.65	No Trend	0.000	1.70
MW-25B	Phase 2 OU1 RAA	Lower Gaspur	95-105	Decreasing	-0.001	48.81	Decreasing	-0.011	472.59	Decreasing	-0.001	38.20
MW-27	Phase 2 OU1 RAA	Intermediate Gaspur	75-90	Decreasing	-0.001	22.42	Decreasing	-0.001	55.61	No Trend	0.000	0.10
MW-28	Phase 2 OU1 RAA	Lower Gaspur	104-114	Decreasing	-0.003	112.01	No Trend	0.001	-0.65	Decreasing	-0.003	121.65
MW-29	Phase 2 OU1 RAA	Intermediate Gaspur	75-90	Decreasing	-0.003	116.16	Decreasing	-0.008	381.87	Decreasing	-0.002	98.49
MW-29A[5]	Phase 2 OU1 RAA	Shallow Gaspur	56-66	No Trend	0.000	0.10	No Trend	0.000	0.10	No Trend	0.000	0.10
MW-30	Phase 2 OU1 RAA	Lower Gaspur	104-114	Decreasing	-0.024	997.03	Increasing	0.013	-489.04	Increasing	0.001	-11.76
MW-36	Phase 2 OU1 RAA	Intermediate Gaspur	77-87	Decreasing	-0.003	122.26	Decreasing	-0.002	96.76	No Trend	0.000	0.10
MW-37	Phase 2 OU1 RAA	Lower Gaspur	99.5-109.5	No Trend	0.000	16.78	No Trend	0.008	-257.98	No Trend	0.001	-21.56
MW-16	Exposition	Exposition	118-128	No Trend	0.000	0.10	Increasing	0.0006	-23.21	Increasing	0.0002	-7.76
MW-18	Exposition	Exposition	118-128	No Trend	0.000	0.10	Increasing	0.0003	-11.01	Increasing	0.000	0.10
MW-26	Exposition	Exposition	122-132	No Trend	0.000	0.10	No Trend	0.000	0.10	No Trend	0.000	0.10
MW-32	Exposition	Exposition	122-132	No Trend	0.000	1.70	No Trend	0.0001	-4.06	No Trend	0.000	0.10
MW-55	Exposition	Exposition	128-138	Decreasing	-0.0003	14.59	Increasing	0.018	-704.62	Increasing	0.002	-87.29
MW-31	SAIA	Intermediate Gaspur	75-90	Decreasing	-0.010	413.85	No Trend	0.000	2.22	No Trend	0.000	-47.97
MW-31A	SAIA	Shallow Gaspur	54.5-64.5	No Trend	0.000	0.10	Decreasing	-0.003	146.11	Decreasing	0.000	0.10
MW-31B	SAIA	Lower Gaspur	97-107	Decreasing	-0.010	426.75	Increasing	0.015	-558.10	Increasing	0.002	-74.95
MW-34	SAIA	Shallow Gaspur	58-68	No Trend	0.003	-80.89	No Trend	0.000	500.00	No Trend	-0.001	24.01
MW-35	SAIA	Lower Gaspur	95-105	Decreasing	-0.008	355.76	No Trend	-0.016	-625.56	No Trend	0.000	7.40
MW-38	SAIA	Shallow Gaspur	56.5-66.5	Decreasing	0.000	9.52	Decreasing	0.000	15.25	No Trend	0.000	0.10
MW-39	SAIA	Intermediate Gaspur	78-88	Decreasing	-0.004	188.18	No Trend	0.010	-358.71	No Trend	-0.001	55.80
MW-40	SAIA	Lower Gaspur	100-110	Decreasing	-0.002	103.19	No Trend	-0.009	410.95	Increasing	0.005	-198.77
MW-41	SAIA	Lower Gaspur	89-99	Decreasing	-0.004	180.29	No Trend	-0.003	155.34	No Trend	-0.001	60.74
MW-42	SAIA	Shallow Gaspur	56-66	No Trend	0.01	0.10	No Trend	0.264	-9,905.18	No Trend	0.017	-695.32

TABLE 16
CONCENTRATION TREND ANALYSIS SUMMARY 2006 - 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Well ID	Well Area	Aquifer	Screen Interval (ft bgs)	TCE [1,2]			cDCE[1,2]			1,4-Dioxane[1,2]		
				MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line		MK Trend Analysis[3]	T-S Trend Line	
				Trend Type	Slope	Intercept	Trend Type	Slope	Intercept	Trend Type	Slope	Intercept
MW-43	SAIA	Intermediate Gaspur	77-87	No Trend	-0.01	528.75	No Trend	0.012	-469.62	No Trend	0.002	-59.43
MW-44	SAIA	Lower Gaspur	96-106	Decreasing	-0.014	575.56	No Trend	-0.020	834.49	No Trend	0.003	-101.99
MW-45	SAIA	Intermediate Gaspur	79-89	No Trend	0.000	10.07	No Trend	0.022	-869.75	No Trend	0.001	-52.11
MW-46	SAIA	Shallow Gaspur	57-67	No Trend	0.000	40.09	No Trend	0.139	-5,712.98	No Trend	0.001	-54.00
MW-47	SAIA	Intermediate Gaspur	77-87	No Trend	-0.036	1,503.39	No Trend	0.008	171.75	No Trend	0.002	-95.26
MW-48	SAIA	Lower Gaspur	98-108	No Trend	-0.009	402.12	No Trend	0.018	-681.79	No Trend	0.005	-196.57
MW-49	SAIA	Shallow Gaspur	60-70	No Trend	-0.011	443.34	No Trend	-0.004	205.95	No Trend	0.000	0.10
MW-50	SAIA	Intermediate Gaspur	78-88	No Trend	-0.002	72.02	Decreasing	-0.071	3,472.69	No Trend	0.000	-15.37
MW-51	SAIA	Lower Gaspur	98-108	Decreasing	-0.004	162.96	Increasing	0.035	-1,393.78	Increasing	0.004	-166.30
MW-52	SAIA	Shallow Gaspur	66-76	No Trend	-0.001	38.85	No Trend	0.004	-163.78	No Trend	0.000	0.10
MW-53	SAIA	Lower Gaspur	90-100	Decreasing	-0.004	175.21	No Trend	0.003	-81.19	No Trend	-0.002	95.32
MW-54	SAIA	Lower Gaspur	108-113	Decreasing	-0.004	165.11	Increasing	0.017	-667.64	No Trend	0.003	-104.11
MW-56	SAIA	Shallow Gaspur	62-72	No Trend	-1.461	61,243.04	No Trend	-0.01	767.94	No Trend	0.00	0.10
Decreasing Trend (Total)[4]				**34**	**65%**		**21**	**40%**		**13**	**25%**	
Up-Gradient				4	40%		3	30%		1	10%	
Phase 1 OU1 RAA				21	78%		14	52%		9	33%	
Phase 2 OU1 RAA				8	80%		4	40%		3	30%	
Exposition				1	20%		0	0%		0	0%	
Increasing Trend (Total)[4]				**3**	**6%**		**12**	**23%**		**12**	**23%**	
Up-Gradient				2	20%		2	20%		3	30%	
Phase 1 OU1 RAA				1	4%		6	22%		5	19%	
Phase 2 OU1 RAA				0	0%		1	10%		1	10%	
Exposition				0	0%		3	60%		3	60%	
No Trend (Total)[4]				**15**	**29%**		**19**	**37%**		**27**	**52%**	
Up-Gradient				4	40%		5	50%		6	60%	
Phase 1 OU1 RAA				5	19%		7	26%		13	48%	
Phase 2 OU1 RAA				2	20%		5	50%		6	60%	
Exposition				4	80%		2	40%		2	40%	
Totals				52	100%		52	100%		52	100%	

TABLE 16
CONCENTRATION TREND ANALYSIS SUMMARY 2006 - 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Notes:

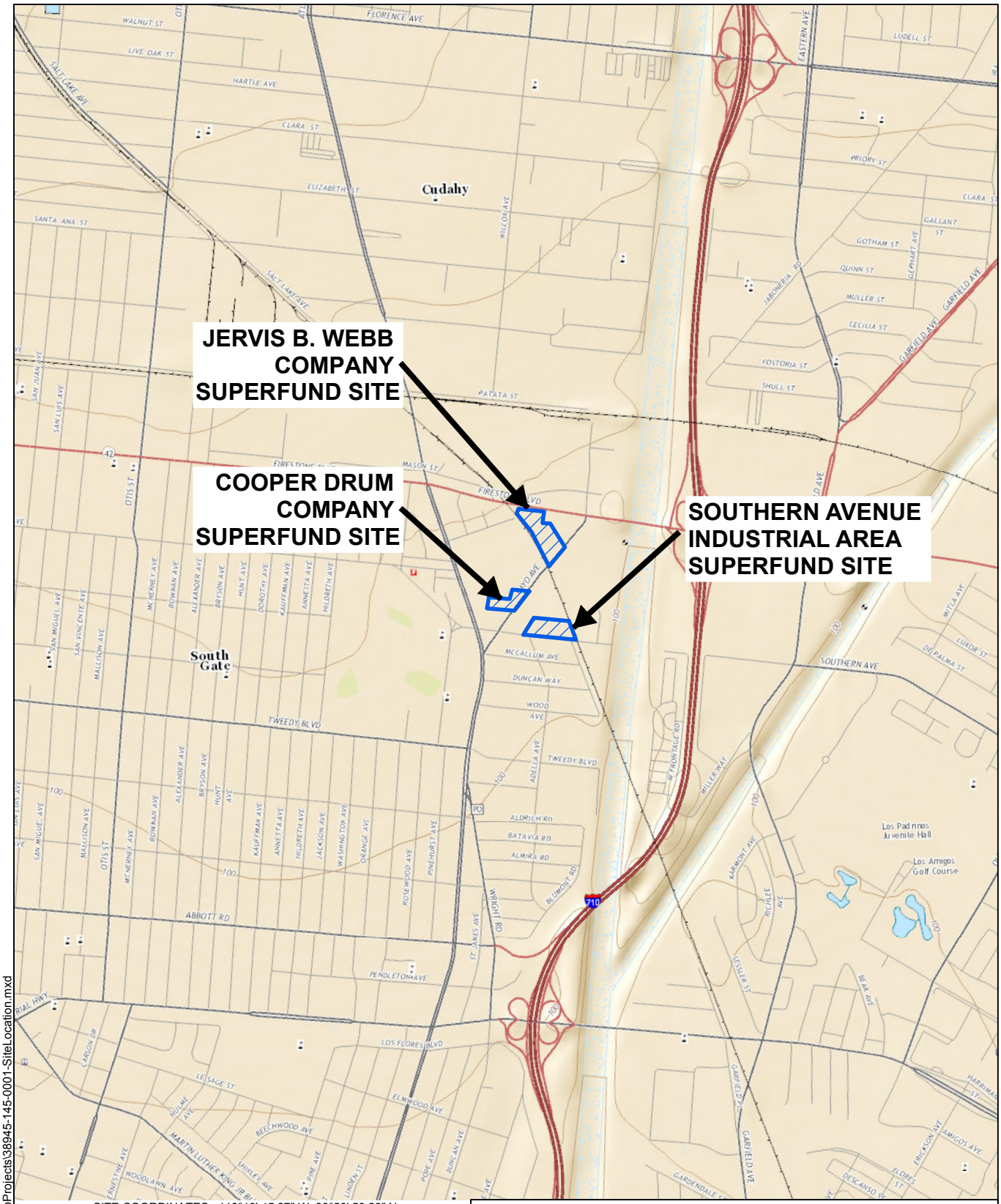
1. Groundwater analytical results included data from 2006 to 2017.
2. Non-detect values were included in the trend analysis as 0.1 µg/L.
3. MK trend analysis reported with a 95% confidence interval.
4. Totals do not include SAIA groundwater monitoring wells.
5. MW-29A did not have COC detections, so trend analysis is not valid for this well.

Decreasing = Statistically significant evidence of a decreasing trend at the specified level of significance.
Increasing = Statistically significant evidence of an increasing trend at the specified level of significance.
No Trend = Insufficient evidence to identify a significant trend at the specified level of significance.

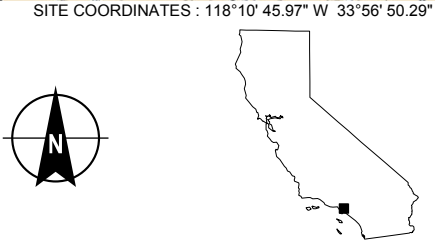
Abbreviations:

cDCE = cis-1,2-Dichloroethene
ft bgs = feet below ground surface
MK = Mann-Kendall
OU = Operable Unit
RAA = Remedial Action Area
SAIA = Southern Avenue Industrial Area
T-S = Theil-Sen
TCE = Trichloroethene

FIGURES



SITE COORDINATES : 118°10' 45.97" W 33°56' 50.29" N



USGS TOPO MAP : SOUTH GATE, CA

HALEY ALDRICH

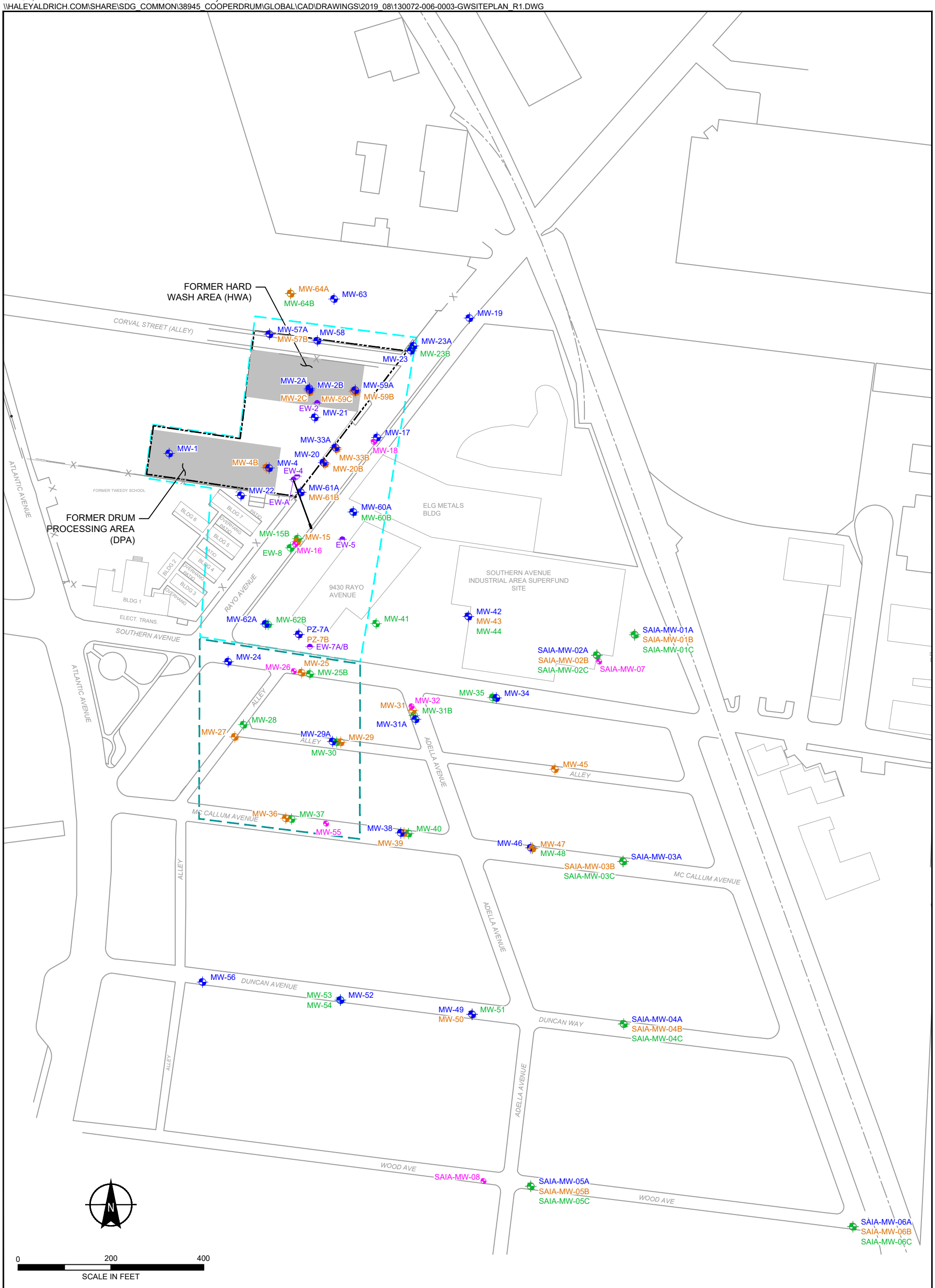
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

SITE LOCATION MAP

SCALE: 1:24,000
AUGUST 2019

FIGURE 1

G:\38945_CooperDrum\Global\GIS\MapProjects\38945-145-0001-SiteLocation.mxd



LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- EXISTING EXTRACTION WELL (NOT OPERATIONAL)
- PROPERTY BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

EXTRACTION WELLS AND MONITORING WELL POINTS FOR OU1

SCALE: AS SHOWN
AUGUST 2019

FIGURE 2

CORVAL STREET (ALLEY)

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

FORMER TWEEDY SCHOOL

RAYO AVENUE

BLDG 6

BLDG 7

PATIO

OVERHANG

PATIO

BLDG 5

PATIO

BLDG 4

BLDG 2

PP

DPE-2 SVE-7 VP-7 DPE-3 SVE-8 VP-15 DPE-4 DPE-5 DPE-9 SVE-6 VP-5 VP-6 VP-8 SVE-3 VP-9 VP-10 DPE-1 DPE-8 VP-12 DPE-6 DPE-10 VP-11 DPE-12 SVE-5 DPE-11 SVE-4

SVE-9 VP-13 DPE-14 SVE-10

DPE-7 SVE-12 VP-14 DPE-13 SVE-11

LEGEND

- PROPERTY BOUNDARY
- DPE-2 EXISTING DUAL PHASE EXTRACTION WELL LOCATION
- SVE-7 EXISTING SOIL VAPOR EXTRACTION WELL LOCATION
- VP-7 EXISTING VAPOR MONITORING POINT LOCATION (ACCESSIBLE)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. WELLS SVE-1 AND SVE-2 WERE RENAMED TO DPE-1 AND DPE-7 WHEN THEY WERE RECONFIGURED TO OPERATE AS DUAL PHASE EXTRACTION WELLS.
3. WELL LOCATIONS BASED ON INFORMATION PROVIDED BY URS OR CALVADA SURVEYING, INC.
4. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
5. PIEZOMETERS PZ-05 AND PZ-06 ARE CO-LOCATED WITH VP-05 AND VP-06, RESPECTIVELY

N

0 60 120

SCALE IN FEET

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

EXTRACTION WELLS AND MONITORING WELL POINTS FOR OU2

SCALE: AS SHOWN
AUGUST 2019

FIGURE 3

MOBINI, DARIUSH Printed: 6/27/2019 2:26 PM Layout: FIG2
G:\38945_COOPERDRUM\GLOBAL\CAD\DRAWINGS\2019_0613\0072_024_0001_WELL_LOCATIONS.DWG

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

MW-64A
MW-64B
MW-63 42.24
MW-57A 41.99
MW-57B
MW-58 41.87
MW-2A DRY
MW-2B 41.47
MW-2C
MW-59A* 43.31
MW-59B
MW-59C
EW-2
MW-21 41.40
MW-1* 43.24
MW-4B
MW-4 41.18
MW-22 41.03
EW-4
MW-61A 41.08
MW-61B
EW-A
MW-60A 40.98
MW-60B
MW-33A DRY
MW-17 41.16
MW-18
MW-20 41.34
MW-33B
MW-20B
MW-15
MW-15B
MW-16
EW-8
EW-5* 44.79
MW-23 41.66
MW-23A 41.76
MW-23B
MW-19 41.68
MW-62A 40.75
MW-62B
PZ-7B
PZ-7A 40.60
EW-7A/B
MW-41
MW-42 40.58
MW-43
MW-44
MW-24 40.68
MW-26
MW-25
MW-25B
MW-35
MW-34 40.34
MW-32
MW-31
MW-31B
MW-31A 40.37
MW-28
MW-27
MW-29A 40.44
MW-29
MW-30
MW-45
MW-36
MW-37
MW-55
MW-38 40.40
MW-39
MW-40
MW-46 40.00
MW-47
MW-48
MW-56 39.97
MW-53
MW-54
MW-52 39.65
MW-51
MW-50
MW-49 39.60
SAIA-MW-01A
NM
SAIA-MW-01B
SAIA-MW-01C
SAIA-MW-02A
NM
SAIA-MW-02B
SAIA-MW-02C
SAIA-MW-07
SAIA-MW-03A
NM
SAIA-MW-03B
SAIA-MW-03C
SAIA-MW-04A
NM
SAIA-MW-04B
SAIA-MW-04C
SAIA-MW-08
SAIA-MW-05A
NM
SAIA-MW-05B
SAIA-MW-05C
SAIA-MW-06A
NM
SAIA-MW-06B
SAIA-MW-06C

42.0
41.5
41.0
40.5
40.0

CORVAL STREET (ALLEY)
ATLANTIC AVENUE
FORMER TWEEDY SCHOOL
BLDG 6
BLDG 7
PATIO
OVERHANG PATIO
BLDG 5
PATIO
BLDG 4
OVERHANG PATIO
BLDG 3
OVERHANG
BLDG 2
BLDG 1
ELECT. TRANS.
RAYO AVENUE
9430 RAYO AVENUE
ELG METALS BLDG
SOUTHERN AVENUE INDUSTRIAL AREA SUPERFUND SITE
SOUTHERN AVENUE
ALLEY
ADELLA AVENUE
MC CALLUM AVENUE
DUNCAN AVENUE
DUNCAN WAY
WOOD AVE

N

0 200 400
SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)
- PROPERTY BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 10 JUNE 2019.
4. CONTOURS ARE BASED ONLY ON GROUNDWATER ELEVATION VALUES FOR THE SHALLOW GASPUR AQUIFER.
5. * : WELL WAS NOT USED FOR CONTOURING

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

SHALLOW GASPUR GROUNDWATER ELEVATION MAP JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 4

FORMER HARD WASH AREA (HWA)
FORMER DRUM PROCESSING AREA (DPA)
MW-64B
MW-64A 43.03
MW-63
43.0
42.5
42.0
MW-57B 41.93
MW-57A
MW-58
MW-23A
MW-23
MW-23B
MW-19
MW-59C* 41.44
MW-2A
MW-2B
MW-59A
MW-2C 41.67
MW-59B 41.53
41.5
EW-2
MW-21
MW-33B 41.21
MW-33A
MW-17
MW-18
MW-20
MW-20B 41.23
MW-1
MW-4B 41.36
MW-4
EW-4
41.0
MW-22
MW-61A
MW-61B 40.98
EW-A
MW-60A
MW-60B
ELG METALS BLDG
MW-15 40.75
MW-15B
EW-5
EW-8
MW-16
SOUTHERN AVENUE INDUSTRIAL AREA SUPERFUND SITE
9430 RAYO AVENUE
MW-42
MW-44
MW-43 40.64
MW-62A
MW-62B
MW-41
PZ-7A
PZ-7B 40.47
EW-7A/B
40.5
SAIA-MW-01B NM
SAIA-MW-01A
SAIA-MW-01C
SAIA-MW-02B NM
SAIA-MW-02A
SAIA-MW-02C
SAIA-MW-07
MW-24
MW-26
MW-25B
MW-25 40.40
MW-35
MW-34
MW-32
MW-31 40.26
MW-31B
MW-31A
MW-28
MW-27 40.32
MW-29A
MW-29 40.14
MW-30
MW-45 40.21
MW-36 40.22
MW-37
MW-55
MW-38
MW-40
MW-39 40.08
40.0
MW-46
MW-47
39.97
MW-48
SAIA-MW-03A
SAIA-MW-03B NM
SAIA-MW-03C
MW-56
MW-53
MW-54
MW-52
MW-49
MW-51
MW-50 39.52
39.5
SAIA-MW-04B NM
SAIA-MW-04A
SAIA-MW-04C
SAIA-MW-08
SAIA-MW-05B NM
SAIA-MW-05A
SAIA-MW-05C
SAIA-MW-06B NM
SAIA-MW-06A
SAIA-MW-06C
ATLANTIC AVENUE
CORVAL STREET (ALLEY)
SOUTHERN AVENUE
RAYO AVENUE
ALLEY
ADELLA AVENUE
MC CALLUM AVENUE
DUNCAN AVENUE
DUNCAN WAY
WOOD AVE
FORMER TWEEDY SCHOOL
BLDG 1
BLDG 2
BLDG 3
BLDG 4
BLDG 5
BLDG 6
BLDG 7
PATIO
OVERHANG
ELECT. TRANS.
N

0 200 400
SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)
- PROPERTY BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

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2. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 10 JUNE 2019.
4. CONTOURS ARE BASED ONLY ON GROUNDWATER ELEVATION VALUES FOR THE INTERMEDIATE GASPUR AQUIFER.
5. * WELL WAS NOT USED FOR CONTOURING.

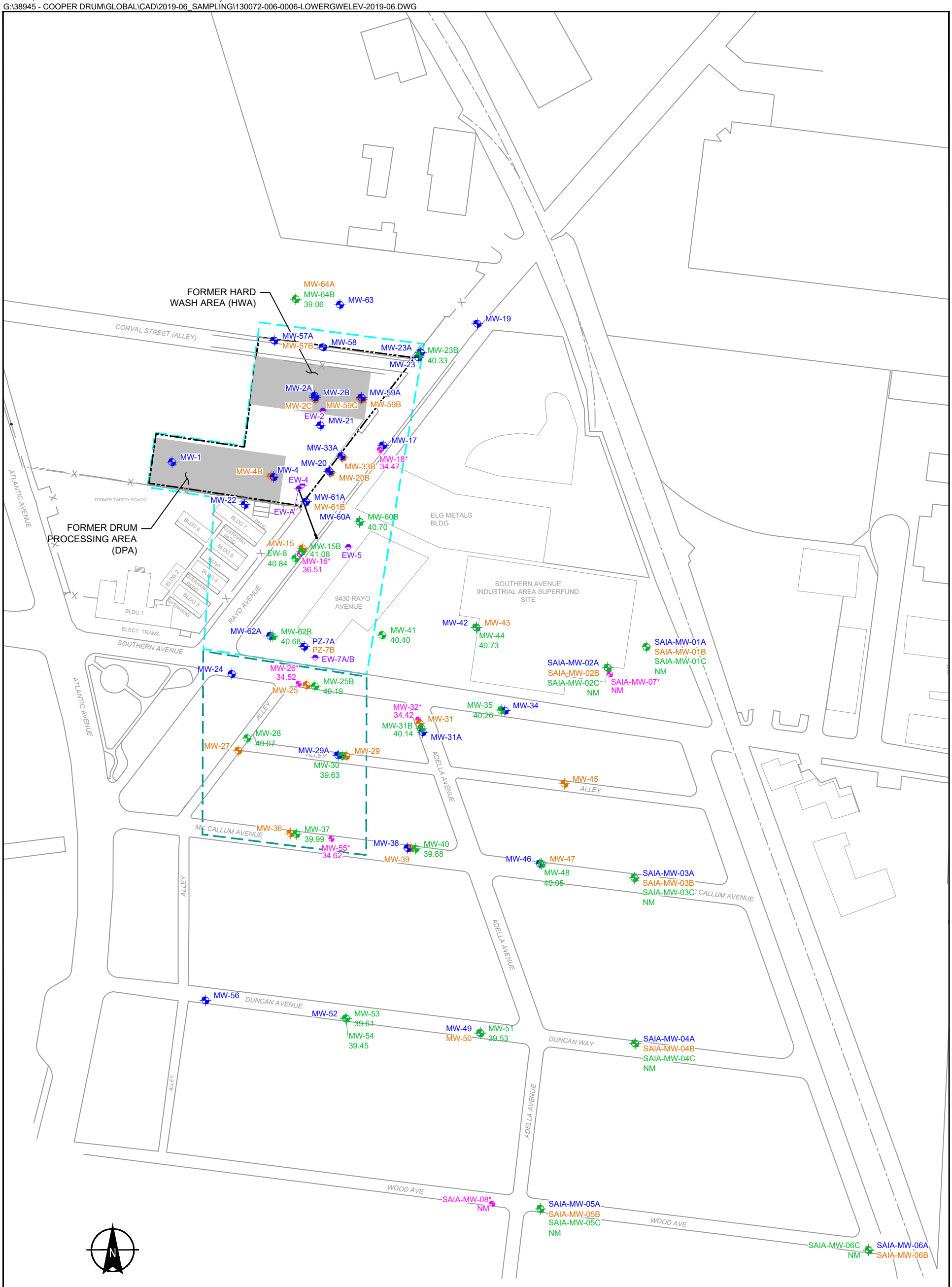
HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

INTERMEDIATE GASPUR GROUNDWATER ELEVATION MAP JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 5



LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- 52 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (MSL)
- PROPERTY BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 10 JUNE 2019.
4. * : WELL WAS NOT USED FOR CONTOURING
5. NM: NOT MEASURED

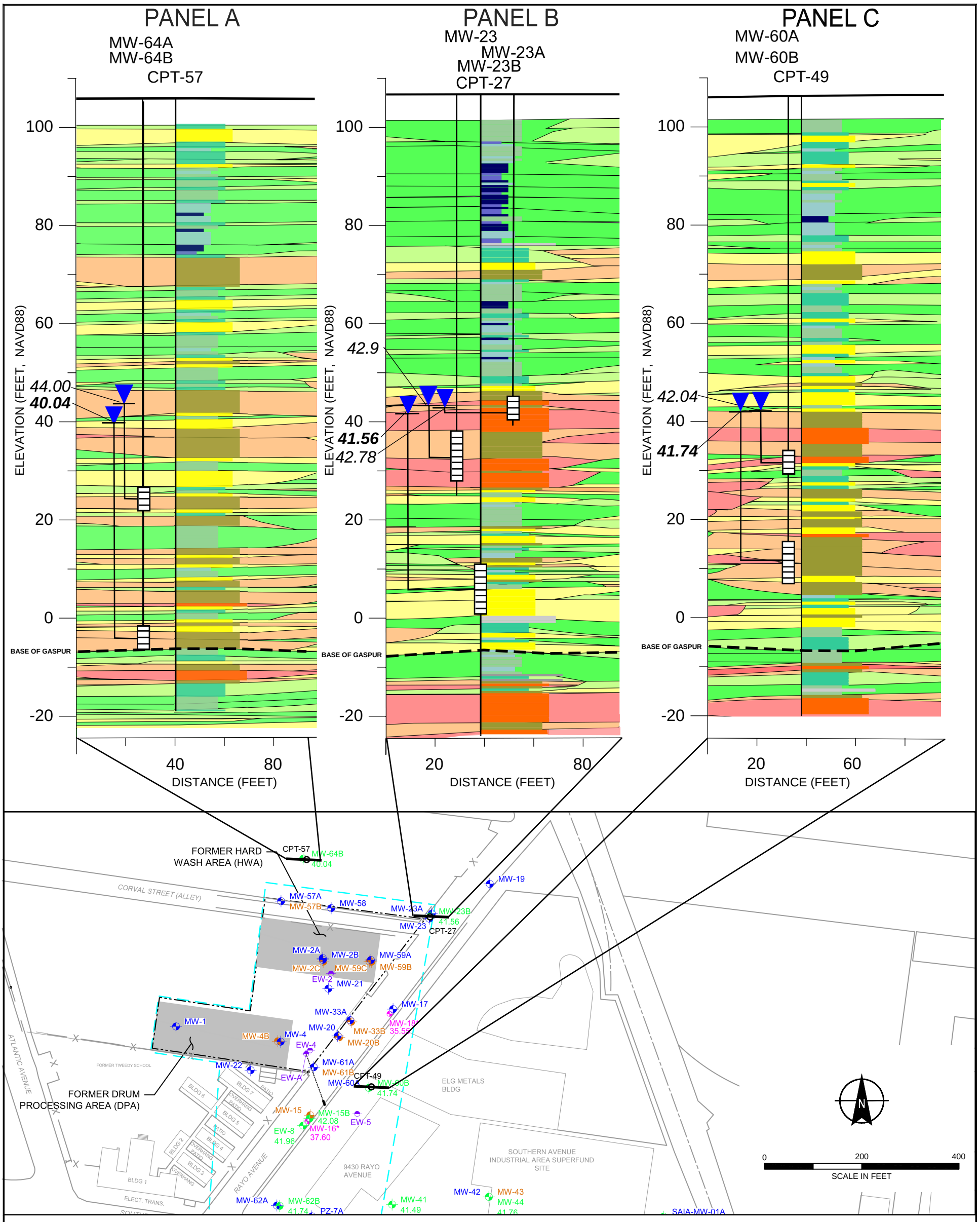
HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

LOWER GASPUR AND EXPOSITION AQUIFER GROUNDWATER ELEVATION MAP - JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 6A



LEGEND

CONE PENETRATION TESTING (CPT) SOIL BEHAVIOR TYPE (SBT) OF ROBERTSON ET AL. 1986

- 1 - SENSITIVE FINE GRAINED
- 2 - ORGANIC MATERIAL
- 3 - CLAY
- 4 - SILTY CLAY TO CLAY
- 5 - CLAYEY SILT TO SILTY CLAY
- 6 - SANDY SILT TO CLAYEY SILT
- 7 - SILTY SAND TO SANDY SILT
- 8 - SAND TO SILTY SAND
- 9 - SAND
- 10 - GRAVELLY SAND TO SAND
- 11 - VERY STIFF FINE GRAINED (*)
- 12 - SAND TO CLAYEY SAND (*)

*OVERCONSOLIDATED OR CEMENTED

GEOLOGIC EXPLANATION

FACIES	DEPOSITIONAL ENVIRONMENT	
CHANNEL FACIES ASSOCIATION	1	CHANNEL-FILL/BAR AND BASAL CHANNEL
	2	CHANNEL-FILL/BAR
	3	CHANNEL-FILL/BAR/MARGIN
FLOOD-PLAIN AND CHANNEL MARGIN FACIES ASSOCIATION	4	CREVASSE SPLAY/LEVEE
	5	OVERBANK

BORING LOG SYMBOLS

44.00 **WATER LEVEL** — GROUNDWATER LEVEL REPORTED IN FEET MSL MEASURED ON 6/28/2018. LOWER GASPUR VALUES ARE **BOLD.**

HYDROPUNCH SAMPLING INTERVAL

WELL SCREEN

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL

52 — LOWER GASPUR GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)

- PROPERTY BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.

3. GROUNDWATER ELEVATION MEASUREMENTS MADE ON 28 JUNE 2018.
4. * : WELL WAS NOT USED FOR CONTOURING
5. NM: NOT MEASURED

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

COMPARISON OF SCREEN INTERVALS AND GROUNDWATER ELEVATIONS AT SELECT WELLS

SCALE: AS SHOWN
AUGUST 2019

FIGURE 6B

MW-2B	6/14/2019
TCE	2.5
cDCE	18
1,4-Dioxane	1.7 J

MW-57A	6/12/2019
TCE	< 0.3
cDCE	2.5
1,4-Dioxane	9.1

MW-58	6/12/2019
TCE	< 0.3
cDCE	3.4
1,4-Dioxane	1.7 J

MW-63	6/11/2019
TCE	0.54
cDCE	4
1,4-Dioxane	14

EW-2	6/13/2019
TCE	0.48 J
cDCE	7.3
1,4-Dioxane	7

MW-23A	6/14/2019
TCE	2
cDCE	1.7
1,4-Dioxane	1.6 J

MW-21	6/11/2019
TCE	1.1
cDCE	59
1,4-Dioxane	36

MW-19	6/12/2019
TCE	2.3
cDCE	9.1
1,4-Dioxane	2.2

MW-4	6/13/2019
TCE	1
cDCE	10
1,4-Dioxane	3.2

MW-23	6/11/2019
TCE	14
cDCE	6.2
1,4-Dioxane	5.6

MW-1	6/14/2019
TCE	< 0.3/< 0.3
cDCE	< 0.3/< 0.3
1,4-Dioxane	1.4 J/1.2 J

MW-17	6/13/2019
TCE	16
cDCE	6.7
1,4-Dioxane	7.8

MW-20	6/11/2019
TCE	12
cDCE	44
1,4-Dioxane	280

EW-4	6/14/2019
TCE	< 0.3
cDCE	1.1
1,4-Dioxane	< 1

MW-22	6/12/2019
TCE	3.3
cDCE	16
1,4-Dioxane	12

MW-60A	6/12/2019
TCE	0.66
cDCE	1.9
1,4-Dioxane	9.5

MW-61A	6/13/2019
TCE	< 0.3/< 0.3
cDCE	40/42
1,4-Dioxane	5 J/4.9 J

MW-62A	6/12/2019
TCE	< 0.3
cDCE	19
1,4-Dioxane	2.8

EW-5	6/12/2019
TCE	8.8
cDCE	43
1,4-Dioxane	32

PZ-7A	6/12/2019
TCE	1.1
cDCE	26
1,4-Dioxane	3

EW-7A	6/12/2019
TCE	0.57
cDCE	23
1,4-Dioxane	3.8

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

MW-64A MW-64B MW-63 MW-57A MW-57B MW-58 MW-19 MW-23A MW-23B MW-23 MW-2A MW-2B MW-59A MW-59B MW-2C MW-59C EW-2 MW-21 MW-17 MW-33A MW-18 MW-20 MW-33B MW-20B MW-4B MW-4 EW-4 EW-A MW-1 MW-22 MW-61A MW-61B MW-60A MW-60B MW-15B MW-15 EW-5 EW-8 MW-16 MW-62A MW-62B PZ-7A PZ-7B EW-7A/B MW-41 MW-42 MW-43 MW-44 SAIA-MW-01A SAIA-MW-01B SAIA-MW-01C SAIA-MW-02A SAIA-MW-02B SAIA-MW-02C SAIA-MW-07 MW-24 MW-26 MW-25 MW-25B MW-35 MW-34 MW-32 MW-31 MW-31B MW-31A MW-28 MW-27 MW-29A MW-29 MW-30 MW-45 MW-36 MW-37 MW-55 MW-38 MW-40 MW-39 MW-46 MW-47 MW-48 SAIA-MW-03A SAIA-MW-03B SAIA-MW-03C MW-56 MW-53 MW-54 MW-52 MW-49 MW-50 MW-51 SAIA-MW-04A SAIA-MW-04B SAIA-MW-04C SAIA-MW-08 SAIA-MW-05A SAIA-MW-05B SAIA-MW-05C SAIA-MW-06A SAIA-MW-06B SAIA-MW-06C

CORVAL STREET (ALLEY) ATLANTIC AVENUE FORMER TWEEDY SCHOOL BLDG 6 BLDG 7 OVERHANG PATIO BLDG 5 ATIO BLDG 4 OVERHANG PATIO BLDG 3 OVERHANG BLDG 2 BLDG 1 ELECT. TRANS. SOUTHERN AVENUE RAYO AVENUE 9430 RAYO AVENUE ELG METALS BLDG SOUTHERN AVENUE INDUSTRIAL AREA SUPERFUND SITE ALLEY ADELLA AVENUE MC CALLUM AVENUE ALLEY ADELLA AVENUE ALLEY MC CALLUM AVENUE DUNCAN AVENUE DUNCAN WAY ALLEY ADELLA AVENUE WOOD AVE WOOD AVE

N

0 200 400
SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- SITE BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

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2. SITE BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. CONCENTRATIONS ARE IN ug/l
4. ug/l = MICROGRAMS PER LITER
5. / = DUPLICATE RESULTS
6. < = NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT SHOWN
7. J = ESTIMATED VALUE
8. UJ = ESTIMATED VALUE; VALUE IS BELOW DETECTION LIMIT
9. cDCE = cis-1,2-DICHLOROETHENE
10. TCE = TRICHLOROETHENE
11. TBD: TO BE DETERMINED BASED ON A FUTURE DECISION DOCUMENT PROMULGATED BY EPA OR DURING THE FIRST FIVE YEAR REVIEW FOR THE SITE.

WELL ID	SAMPLING DATE	
MW-57A	6/10/2015	CLEAN UP LEVEL
TCE	1.1	5.0
cDCE	16	6.0
1,4-Dioxane	22	TBD

ANALYTE NAME

CONCENTRATION

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

TCE, cDCE, AND 1,4-DIOXANE SHALLOW GASPUR GROUNDWATER JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 7

MW-57B	6/12/2019
TCE	< 0.3
cDCE	< 0.3
1,4-Dioxane	< 1

MW-64A	6/11/2019
TCE	< 60
cDCE	< 60
1,4-Dioxane	6.4

MW-2C	6/14/2019
TCE	< 0.3
cDCE	< 0.3
1,4-Dioxane	< 1

MW-59C	6/12/2019
TCE	< 0.3
cDCE	< 0.3
1,4-Dioxane	< 1

MW-59B	6/13/2019
TCE	1
cDCE	0.99
1,4-Dioxane	6.9

MW-4B	6/13/2019
TCE	1.1 J/1 J
cDCE	55/55
1,4-Dioxane	< 1/< 1

MW-33B	6/13/2019
TCE	1.6
cDCE	34
1,4-Dioxane	11

MW-20B	6/11/2019
TCE	1.7
cDCE	26
1,4-Dioxane	20

MW-61B	6/13/2019
TCE	< 0.3
cDCE	7.8
1,4-Dioxane	< 1

MW-15	6/13/2019
TCE	< 0.3
cDCE	26
1,4-Dioxane	1.6 J

PZ-7B	6/12/2019
TCE	0.37 J/0.34 J
cDCE	20/19
1,4-Dioxane	4/3.8

MW-25	6/14/2019
TCE	0.46 J/0.48 J
cDCE	22/24
1,4-Dioxane	2.1/2

MW-29	6/11/2019
TCE	0.95
cDCE	21
1,4-Dioxane	2.4

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

MW-64A, MW-64B, MW-63, MW-57A, MW-57B, MW-58, MW-19, MW-23A, MW-23B, MW-23, MW-2A, MW-2B, MW-59A, MW-2C, MW-59C, MW-59B, EW-2, MW-21, MW-1, MW-4B, MW-4, EW-4, EW-A, MW-22, MW-33A, MW-20, MW-33B, MW-20B, MW-17, MW-18, MW-61A, MW-61B, MW-60A, MW-60B, MW-15B, MW-15, MW-16, EW-8, EW-5, MW-62A, MW-62B, PZ-7A, PZ-7B, EW-7A/B, MW-24, MW-26, MW-25, MW-25B, MW-41, MW-42, MW-43, MW-44, MW-35, MW-34, MW-31, MW-32, MW-31B, MW-31A, MW-28, MW-27, MW-29A, MW-29, MW-30, MW-45, MW-36, MW-37, MW-55, MW-38, MW-40, MW-39, MW-46, MW-47, MW-48, MW-56, MW-53, MW-54, MW-52, MW-49, MW-50, MW-51, MW-08, MW-05A, MW-05B, MW-05C, MW-06A, MW-06B, MW-06C

SAIA-MW-01A, SAIA-MW-01B, SAIA-MW-01C, SAIA-MW-02A, SAIA-MW-02B, SAIA-MW-02C, SAIA-MW-07, SAIA-MW-03A, SAIA-MW-03B, SAIA-MW-03C, SAIA-MW-04A, SAIA-MW-04B, SAIA-MW-04C

CORVAL STREET (ALLEY), ATLANTIC AVENUE, FORMER TWEEDY SCHOOL, BLDG 8, BLDG 7, PATIO, OVERHANG PATIO, BLDG 5, BLDG 4, BLDG 3, BLDG 2, BLDG 1, ELECT. TRANS., SOUTHERN AVENUE, RAYO AVENUE, 9430 RAYO AVENUE, ELG METALS BLDG, SOUTHERN AVENUE INDUSTRIAL AREA SUPERFUND SITE, ALLEY, ADELLA AVENUE, MC CALLUM AVENUE, DUNCAN AVENUE, DUNCAN WAY, WOOD AVE

N

0 200 400

SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- SITE BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

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2. SITE BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
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7. J = ESTIMATED VALUE
8. UJ = ESTIMATED VALUE; VALUE IS BELOW DETECTION LIMIT
9. cDCE = cis-1,2-DICHLOROETHENE
10. TCE = TRICHLOROETHENE
11. TBD: TO BE DETERMINED BASED ON A FUTURE DECISION DOCUMENT PROMULGATED BY EPA OR DURING THE FIRST FIVE YEAR REVIEW FOR THE SITE.

WELL ID — SAMPLING DATE

MW-57A	6/10/2015	CLEAN UP LEVEL
TCE	1.1	5.0
cDCE	16	6.0
1,4-Dioxane	22	TBD

ANALYTE NAME — CONCENTRATION

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

TCE, cDCE, AND 1,4-DIOXANE INTERMEDIATE GASPUR GROUNDWATER - JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 8

MW-64B	6/11/2019
TCE	< 0.3
cDCE	3.1
1,4-Dioxane	< 1

EW-A	6/13/2019
TCE	0.61
cDCE	50
1,4-Dioxane	13

MW-23B	6/11/2019
TCE	0.39 J
cDCE	0.42 J
1,4-Dioxane	< 1

MW-60B	6/12/2019
TCE	0.6
cDCE	18
1,4-Dioxane	6.6

MW-15B	6/13/2019
TCE	0.48 J
cDCE	35
1,4-Dioxane	2

EW-8	6/13/2019
TCE	0.49 J
cDCE	32
1,4-Dioxane	1.7 J

MW-62B	6/12/2019
TCE	1.7
cDCE	7.7
1,4-Dioxane	< 1

EW-7B	6/12/2019
TCE	1.6
cDCE	35
1,4-Dioxane	5.2

MW-25B	6/14/2019
TCE	< 0.3
cDCE	16
1,4-Dioxane	1.2 J

MW-28	6/11/2019
TCE	1/0.92
cDCE	16/17
1,4-Dioxane	1.4 J/1.7 J

MW-37	6/11/2019
TCE	2.2
cDCE	99
1,4-Dioxane	10

MW-41	6/11/2019
TCE	2.3
cDCE	33
1,4-Dioxane	3.2

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

CORVAL STREET (ALLEY)

ATLANTIC AVENUE

RAYO AVENUE

9430 RAYO AVENUE

ELG METALS BLDG

SOUTHERN AVENUE INDUSTRIAL AREA SUPERFUND SITE

ADELLA AVENUE

MC CALLUM AVENUE

DUNCAN AVENUE

DUNCAN WAY

WOOD AVE

ALLEY

FORMER TWEEDY SCHOOL

MW-64A, MW-64B, MW-63, MW-19, MW-57A, MW-57B, MW-58, MW-23A, MW-23B, MW-23, MW-2A, MW-2B, MW-59A, MW-2C, MW-59C, MW-59B, EW-2, MW-21, MW-17, MW-18, MW-1, MW-33A, MW-33B, MW-20, MW-20B, MW-4B, MW-4, EW-4, EW-A, MW-22, MW-61A, MW-61B, MW-60A, MW-60B, MW-15B, MW-15, MW-16, EW-8, EW-5, MW-62A, MW-62B, PZ-7A, PZ-7B, EW-7A/B, MW-24, MW-26, MW-25, MW-25B, MW-41, MW-42, MW-43, MW-44, SAIA-MW-01A, SAIA-MW-01B, SAIA-MW-01C, SAIA-MW-02A, SAIA-MW-02B, SAIA-MW-02C, SAIA-MW-07, MW-35, MW-34, MW-31, MW-32, MW-31B, MW-31A, MW-28, MW-27, MW-29A, MW-29, MW-30, MW-45, MW-36, MW-37, MW-55, MW-38, MW-40, MW-39, MW-46, MW-47, MW-48, SAIA-MW-03A, SAIA-MW-03B, SAIA-MW-03C, MW-56, MW-53, MW-54, MW-52, MW-49, MW-50, MW-51, SAIA-MW-04A, SAIA-MW-04B, SAIA-MW-04C, SAIA-MW-08, SAIA-MW-05A, SAIA-MW-05B, SAIA-MW-05C, SAIA-MW-06A, SAIA-MW-06B, SAIA-MW-06C

N

0 200 400

SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- SITE BOUNDARY
- RAILROAD
- ANGLED WELL
- PHASE 1 OU1 REMEDIAL ACTION AREA
- PHASE 2 OU1 REMEDIAL ACTION AREA

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. SITE BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. CONCENTRATIONS ARE IN ug/l
4. ug/l = MICROGRAMS PER LITER
5. / = DUPLICATE RESULTS
6. < = NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT SHOWN
7. J = ESTIMATED VALUE
8. UJ = ESTIMATED VALUE; VALUE IS BELOW DETECTION LIMIT
9. cDCE = cis-1,2-DICHLOROETHENE
10. TCE = TRICHLOROETHENE
11. TBD: TO BE DETERMINED BASED ON A FUTURE DECISION DOCUMENT PROMULGATED BY EPA OR DURING THE FIRST FIVE YEAR REVIEW FOR THE SITE.

WELL ID	SAMPLING DATE	
MW-57A	6/10/2015	CLEAN UP LEVEL
TCE	1.1	5.0
cDCE	16	6.0
1,4-Dioxane	22	TBD

ANALYTE NAME

CONCENTRATION

HALEY ALDRICH

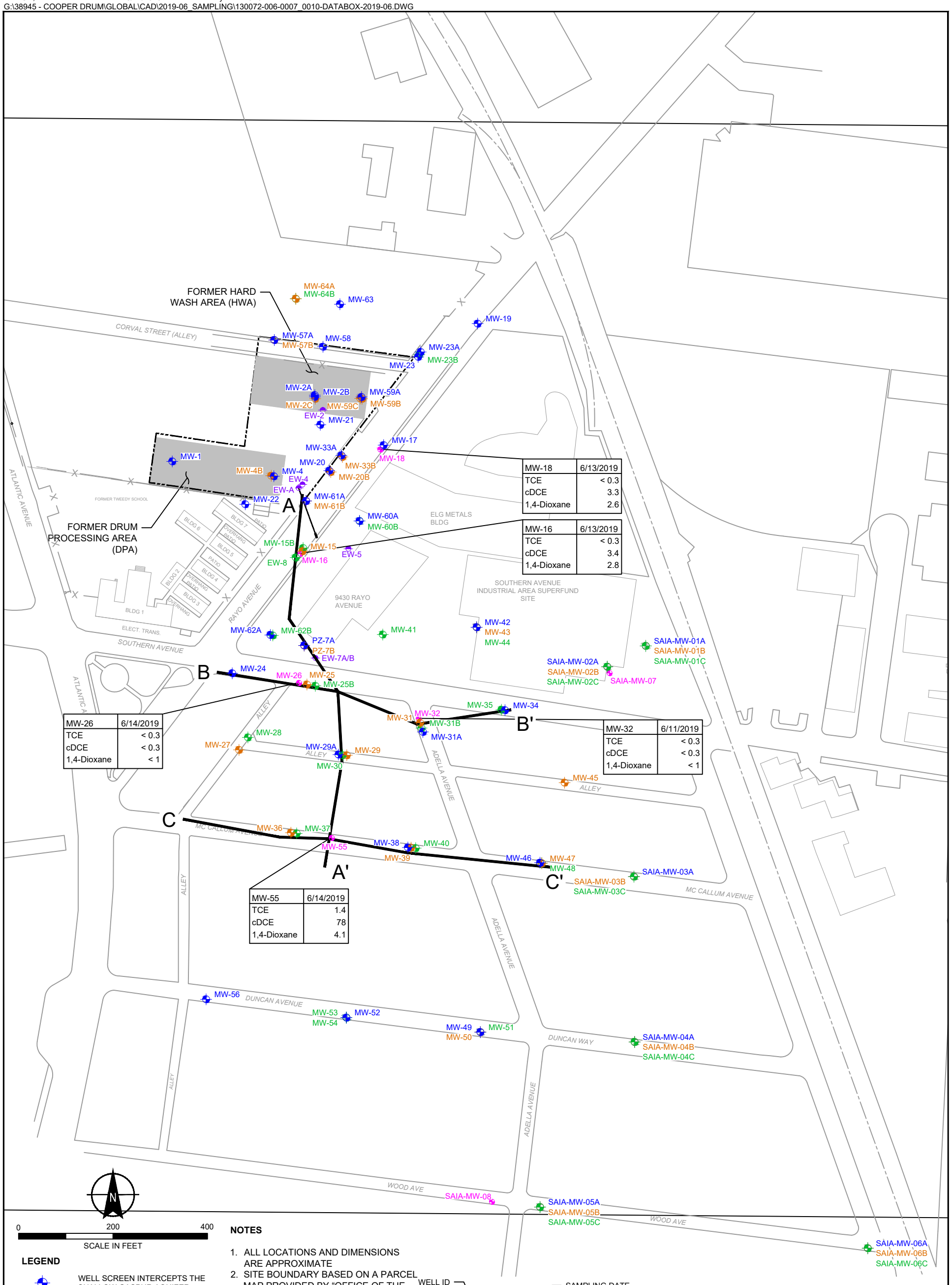
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

TCE, cDCE, AND 1,4-DIOXANE LOWER GASPUR GROUNDWATER JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 9

MARCH, HEATHER Printed: 8/14/2019 4:11 PM Layout: FIG10
G:\38945 - COOPER DRUM\GLOBAL\CAD\2019-06_SAMPLING\130072-006-0007_0010-DATABOX-2019-06.DWG



MW-18	6/13/2019
TCE	< 0.3
cDCE	3.3
1,4-Dioxane	2.6

MW-16	6/13/2019
TCE	< 0.3
cDCE	3.4
1,4-Dioxane	2.8

MW-26	6/14/2019
TCE	< 0.3
cDCE	< 0.3
1,4-Dioxane	< 1

MW-32	6/11/2019
TCE	< 0.3
cDCE	< 0.3
1,4-Dioxane	< 1

MW-55	6/14/2019
TCE	1.4
cDCE	78
1,4-Dioxane	4.1

N

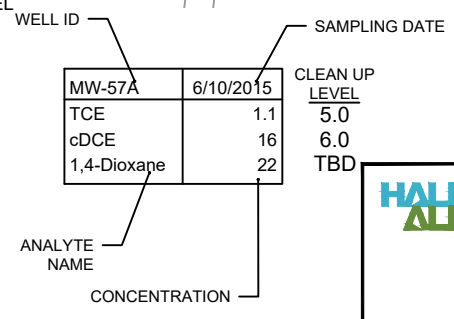
0 200 400
SCALE IN FEET

LEGEND

- WELL SCREEN INTERCEPTS THE SHALLOW GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE INTERMEDIATE GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE LOWER GASPUR AQUIFER
- WELL SCREEN INTERCEPTS THE EXPOSITION AQUIFER
- EXISTING EXTRACTION WELL
- SITE BOUNDARY
- RAILROAD
- ANGLED WELL
- CROSS SECTION LINES

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. SITE BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
3. CONCENTRATIONS ARE IN ug/l
4. ug/l = MICROGRAMS PER LITER
5. / = DUPLICATE RESULTS
6. < = NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT SHOWN
7. J = ESTIMATED VALUE
8. UJ = ESTIMATED VALUE; VALUE IS BELOW DETECTION LIMIT
9. cDCE = cis-1,2-DICHLOROETHENE
10. TCE = TRICHLOROETHENE
11. TBD: TO BE DETERMINED BASED ON A FUTURE DECISION DOCUMENT PROMULGATED BY EPA OR DURING THE FIRST FIVE YEAR REVIEW FOR THE SITE.
12. SECTION LINES ARE FOR CROSS SECTIONS SHOWN IN FIGURES 14A, 14B, AND 14C.



HALEY ALDRICH

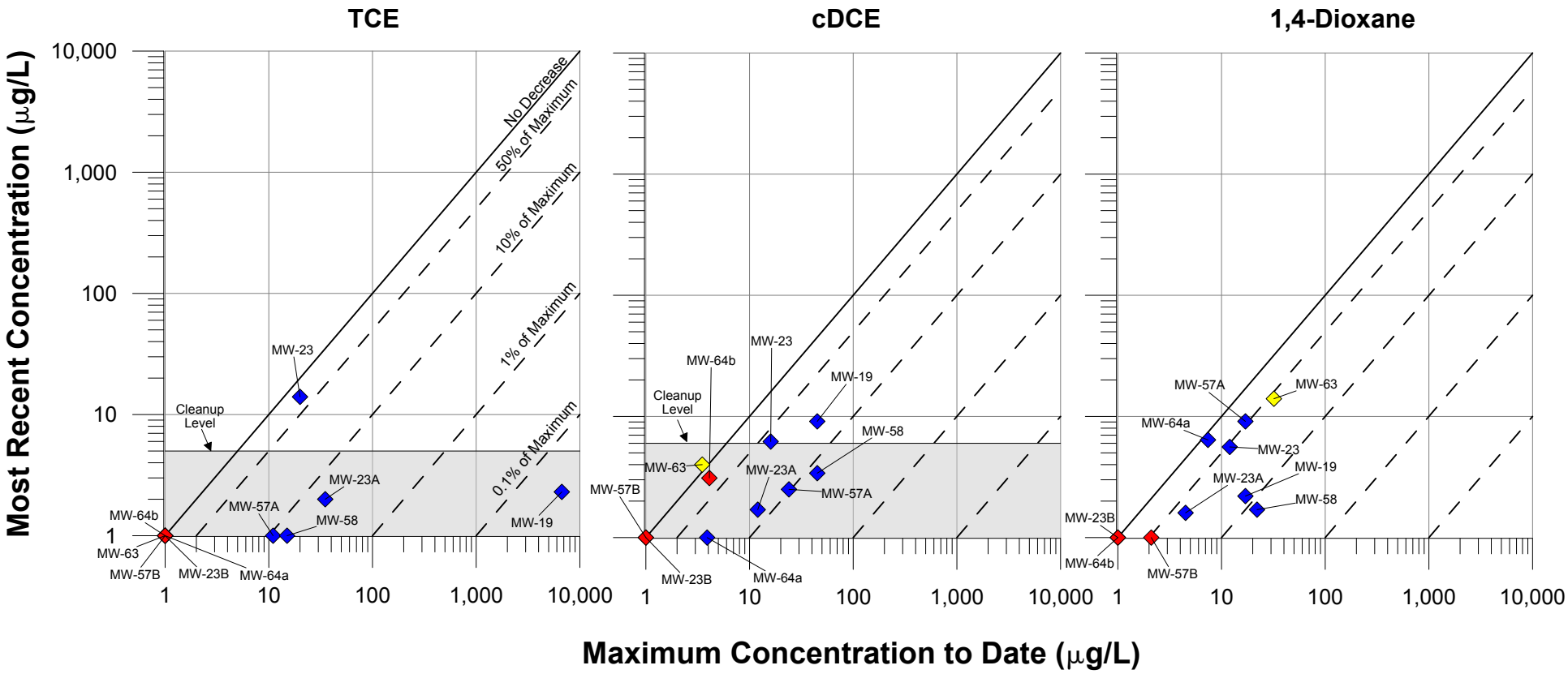
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

TCE, cDCE, AND 1,4-DIOXANE EXPOSITION GROUNDWATER JUNE 2019

SCALE: AS SHOWN
AUGUST 2019

FIGURE 10

Upgradient Wells



Abbreviations
cDCE = cis-1,2-dichloroethene
COCs = chemicals of concern
TCE = trichloroethene
µg/L = micrograms per liter

- Shallow Gaspur
- Lower Gaspur
- Intermediate Gaspur

HALEY ALDRICH

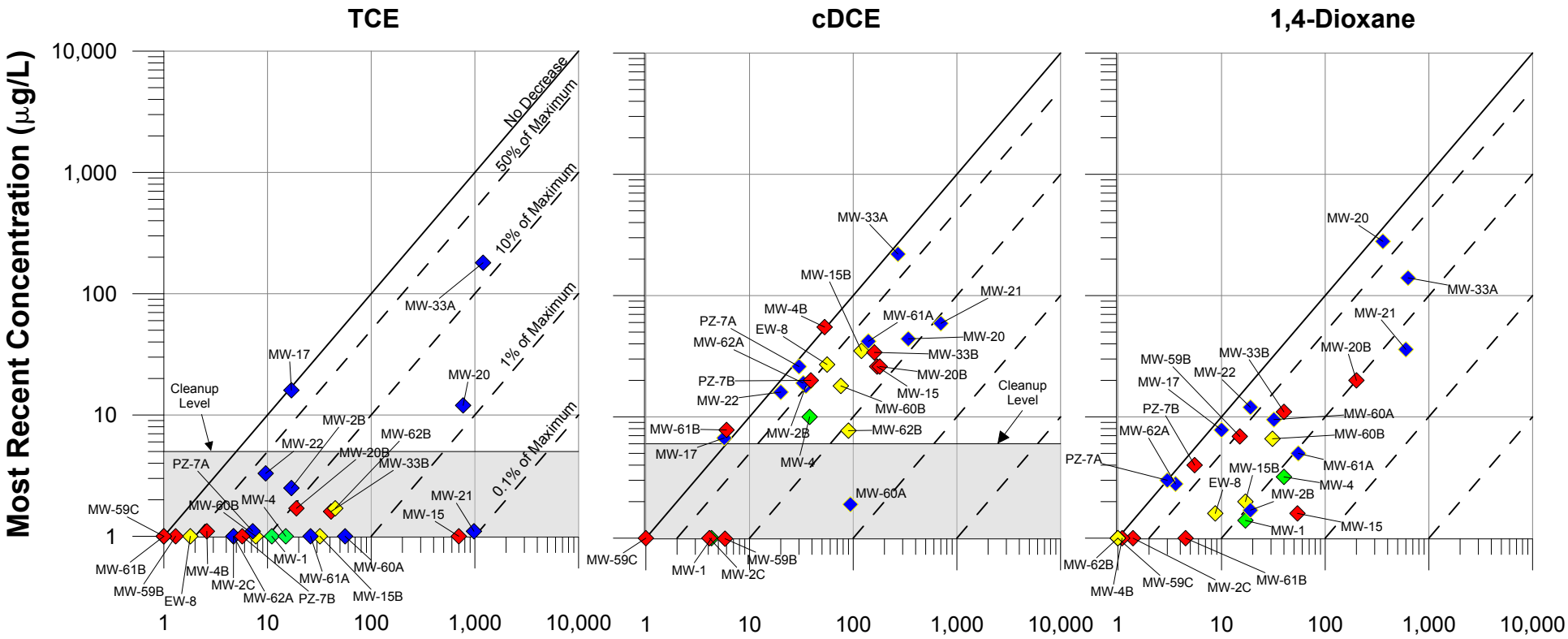
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

MOST RECENT TOTAL COCS VS.MAXIMUM HISTORICAL TOTAL COCS IN GROUNDWATER - UPGRADIENT LOCATIONS

AUGUST 2019

FIGURE 11

Phase 1 Remedial Action Wells



Abbreviations
cDCE = cis-1,2-dichloroethene
COCs = chemicals of concern
TCE = trichloroethene
µg/L = micrograms per liter

Notes
1. Non-detect concentrations depicted as having a concentration of 1µg/L for plotting purposes.

- Lower Gaspur
- Shallow/Intermediate
- Intermediate Gaspur
- Shallow Gaspur

HALEY ALDRICH

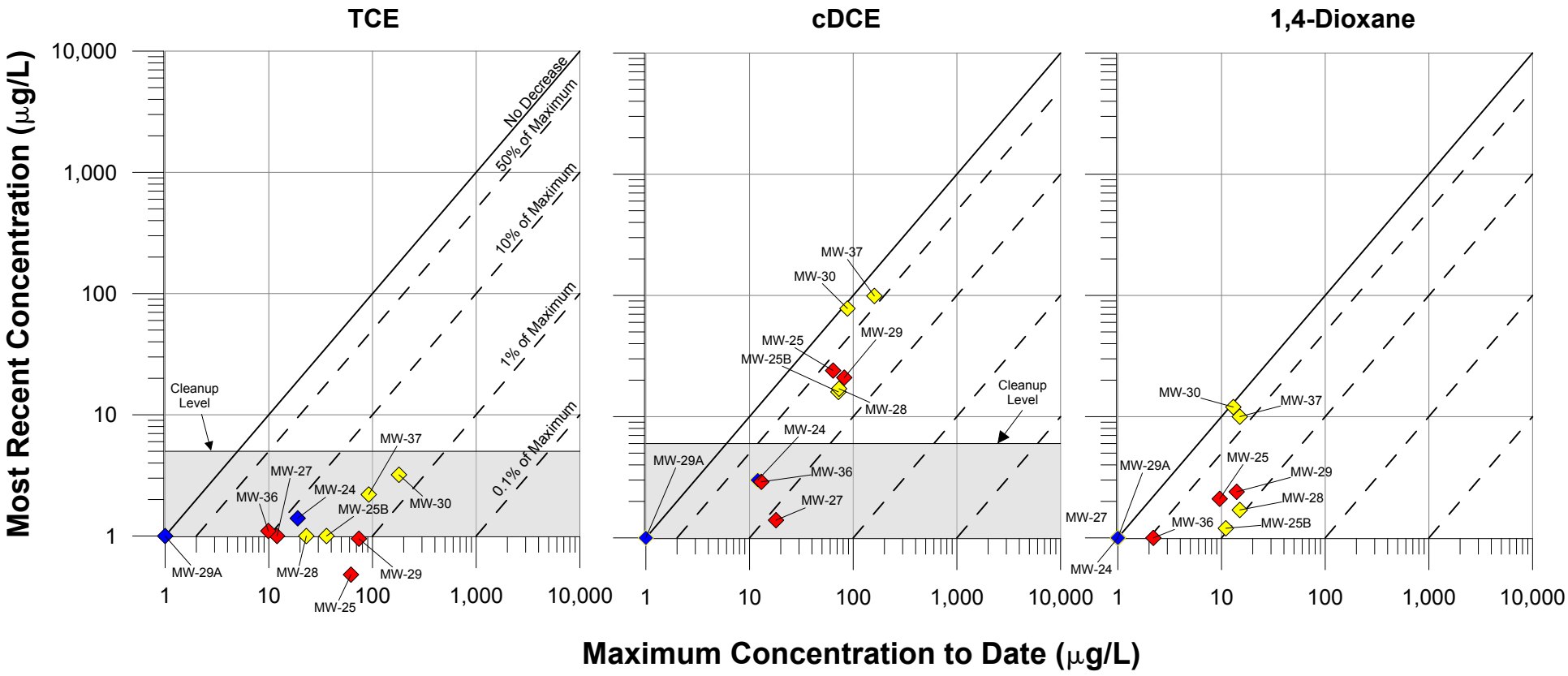
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

MOST RECENT TOTAL COCS VS.MAXIMUM HISTORICAL TOTAL COCS IN GROUNDWATER - PHASE 1 REMEDIAL ACTION AREA

AUGUST 2019

FIGURE 12

Phase 2 Remedial Action Area Wells



Abbreviations
cDCE = cis-1,2-dichloroethene
COCs = chemicals of concern
TCE = trichloroethene
µg/L = micrograms per liter

Notes
1. Non-detect concentrations depicted as having a concentration of 1µg/L for plotting purposes.

- Shallow Gaspur
- Intermediate Gaspur
- Lower Gaspur

HALEY ALDRICH

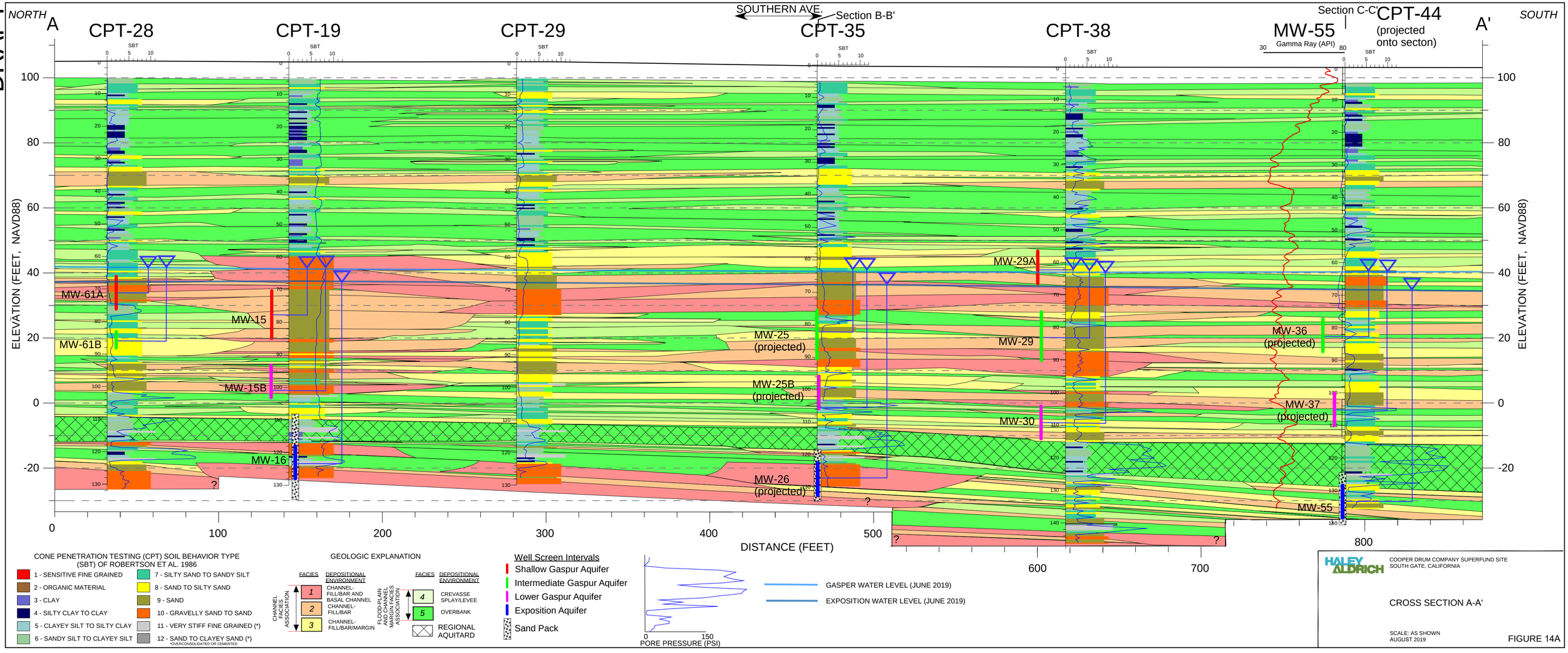
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

MOST RECENT TOTAL COCS VS.MAXIMUM HISTORICAL TOTAL COCS IN GROUNDWATER - PHASE 2 REMEDIAL ACTION AREA

AUGUST 2019

FIGURE 13

DRAFT



CONE PENETRATION TESTING (CPT) SOIL BEHAVIOR TYPE (SBT) OF ROBERTSON ET AL. 1986

- 1 - SENSITIVE FINE GRAINED
- 2 - ORGANIC MATERIAL
- 3 - CLAY
- 4 - SILTY CLAY TO CLAY
- 5 - CLAYEY SILT TO SILTY CLAY
- 6 - SANDY SILT TO CLAYEY SILT
- 7 - SILTY SAND TO SANDY SILT
- 8 - SAND TO SILTY SAND
- 9 - SAND
- 10 - GRAVELLY SAND TO SAND
- 11 - VERY STIFF FINE GRAINED (*)
- 12 - SAND TO CLAYEY SAND (*)

*OVERCONSOLIDATED OR CEMENTED

GEOLOGIC EXPLANATION

CHANNEL FACIES ASSOCIATION

FACIES	DEPOSITIONAL ENVIRONMENT
1	CHANNEL-FILL/BAR AND BASAL CHANNEL
2	CHANNEL-FILL/BAR
3	CHANNEL-FILL/BAR/MARGIN

FLOOD-PLAIN AND CHANNEL MARGIN FACIES ASSOCIATION

FACIES	DEPOSITIONAL ENVIRONMENT
4	CREVASSE SPLAY/LEVEE
5	OVERBANK
	REGIONAL AQUITARD

Well Screen Intervals
- Shallow Gaspur Aquifer
- Intermediate Gaspur Aquifer
- Lower Gaspur Aquifer
- Exposition Aquifer
- Sand Pack

PORE PRESSURE (PSI) 0 150

GASPER WATER LEVEL (JUNE 2019)
EXPOSITION WATER LEVEL (JUNE 2019)

HALEY ALDRICH

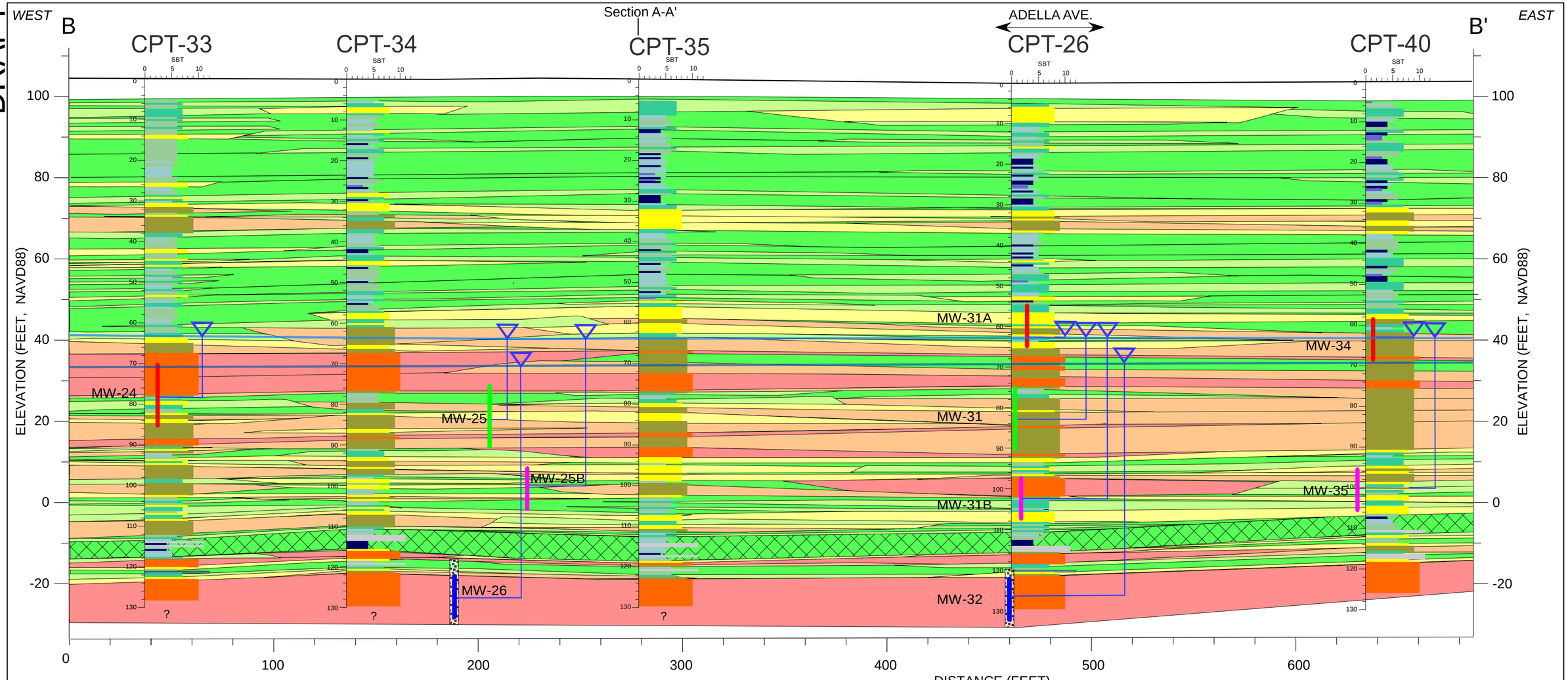
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CROSS SECTION A-A'

SCALE: AS SHOWN
AUGUST 2019

FIGURE 14A

DRAFT



CONE PENETRATION TESTING (CPT) SOIL BEHAVIOR TYPE (SBT) OF ROBERTSON ET AL. 1986

- 1 - SENSITIVE FINE GRAINED
- 2 - ORGANIC MATERIAL
- 3 - CLAY
- 4 - SILTY CLAY TO CLAY
- 5 - CLAYEY SILT TO SILTY CLAY
- 6 - SANDY SILT TO CLAYEY SILT
- 7 - SILTY SAND TO SANDY SILT
- 8 - SAND TO SILTY SAND
- 9 - SAND
- 10 - GRAVELLY SAND TO SAND
- 11 - VERY STIFF FINE GRAINED (*)
- 12 - SAND TO CLAYEY SAND (*)

*OVERCONSOLIDATED OR CEMENTED

GEOLOGIC EXPLANATION

CHANNEL FACIES ASSOCIATION	FACIES	DEPOSITIONAL ENVIRONMENT
	1	CHANNEL-FILL/BAR AND BASAL CHANNEL
	2	CHANNEL-FILL/BAR
	3	CHANNEL-FILL/BAR/MARGIN

FLOOD-PLAIN AND CHANNEL MARGIN FACIES ASSOCIATION	FACIES	DEPOSITIONAL ENVIRONMENT
	4	CREVASSE SPLAY/LEVEE
	5	OVERBANK

REGIONAL AQUITARD

Well Screen Intervals
- Shallow Gaspur Aquifer
- Intermediate Gaspur Aquifer
- Lower Gaspur Aquifer
- Exposition Aquifer

Sand Pack

PORE PRESSURE (PSI) 0 150

- GASPER WATER LEVEL (JUNE 2019)
- EXPOSITION WATER LEVEL (JUNE 2019)

HALEY ALDRICH

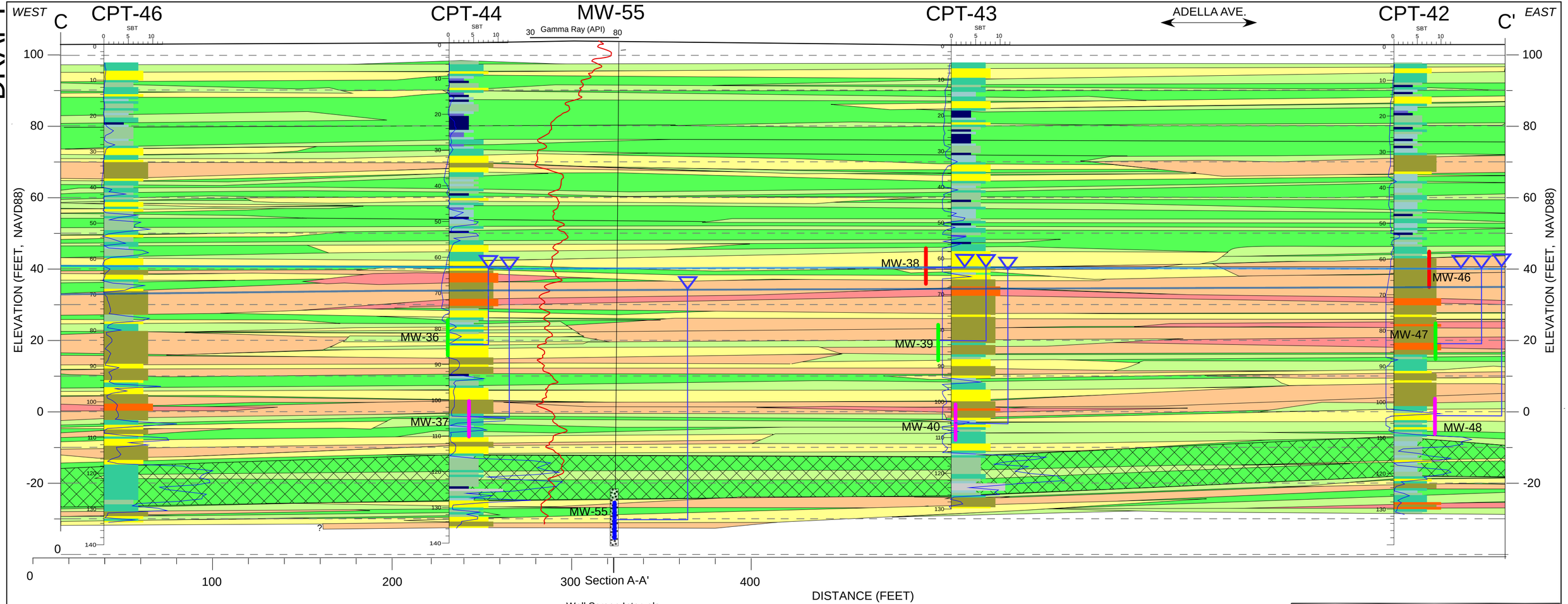
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CROSS SECTION B-B'

SCALE: AS SHOWN
AUGUST 2019

FIGURE 14B

DRAFT



CONE PENETRATION TESTING (CPT) SOIL BEHAVIOR TYPE (SBT) OF ROBERTSON ET AL. 1986

- 1 - SENSITIVE FINE GRAINED
- 2 - ORGANIC MATERIAL
- 3 - CLAY
- 4 - SILTY CLAY TO CLAY
- 5 - CLAYEY SILT TO SILTY CLAY
- 6 - SANDY SILT TO CLAYEY SILT
- 7 - SILTY SAND TO SANDY SILT
- 8 - SAND TO SILTY SAND
- 9 - SAND
- 10 - GRAVELLY SAND TO SAND
- 11 - VERY STIFF FINE GRAINED (*)
- 12 - SAND TO CLAYEY SAND (*)

*OVERCONSOLIDATED OR CEMENTED

GEOLOGIC EXPLANATION

	FACIES	DEPOSITIONAL ENVIRONMENT
CHANNEL FACIES ASSOCIATION	1	CHANNEL-FILL/BAR AND BASAL CHANNEL
	2	CHANNEL-FILL/BAR
	3	CHANNEL-FILL/BAR/MARGIN
FLOOD-PLAIN AND CHANNEL MARGIN FACIES ASSOCIATION	4	CREVASSE SPLAY/LEVEE
	5	OVERBANK
		REGIONAL AQUITARD

Well Screen Intervals
- Shallow Gaspur Aquifer
- Intermediate Gaspur Aquifer
- Lower Gaspur Aquifer
- Exposition Aquifer

Sand Pack

PORE PRESSURE (PSI) 0 150

- GASPER WATER LEVEL (JUNE 2019)
- EXPOSITION WATER LEVEL (JUNE 2019)

HALEY ALDRICH

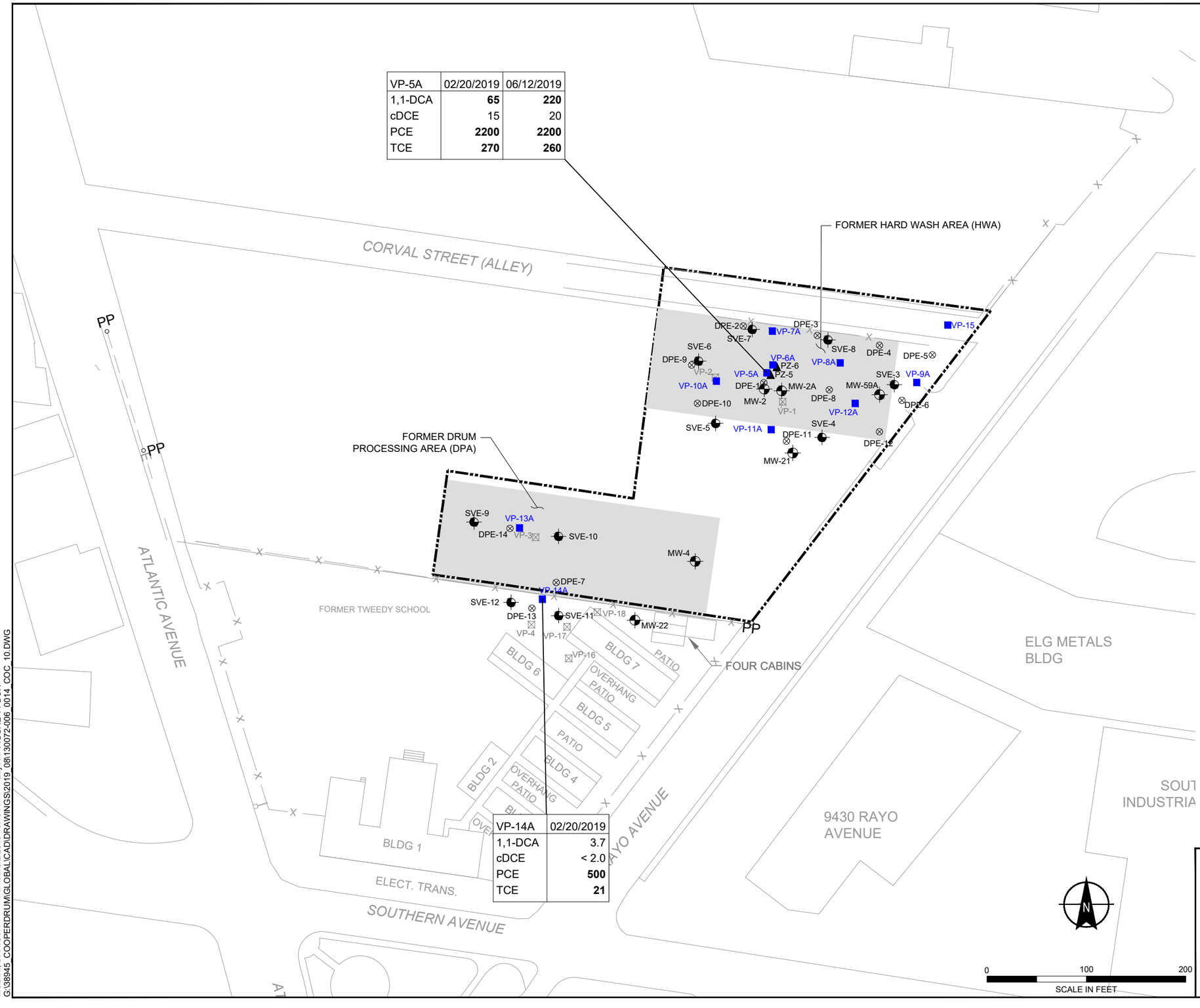
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CROSS SECTION C-C'

SCALE: AS SHOWN
AUGUST 2019

FIGURE 14C

VP-5A	02/20/2019	06/12/2019
1,1-DCA	**65**	**220**
cDCE	15	20
PCE	**2200**	**2200**
TCE	**270**	**260**



VP-14A	02/20/2019
1,1-DCA	3.7
cDCE	< 2.0
PCE	**500**
TCE	**21**

LEGEND

- PROPERTY BOUNDARY
- FENCE
- ELECTRIC LINE
- PP — POWER POLE
- DPE-2 — EXISTING DUAL PHASE EXTRACTION WELL LOCATION
- SVE-7 — EXISTING SOIL VAPOR EXTRACTION WELL LOCATION
- VP-1 — EXISTING VAPOR MONITORING POINT LOCATION (NOT ACCESSIBLE)
- VP-7 — EXISTING VAPOR MONITORING POINT LOCATION (ACCESSIBLE)
- PZ-5 — PIEZOMETER LOCATION
- MW-2 — EXISTING MONITORING WELL LOCATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WELLS SVE-1 AND SVE-2 WERE RENAMED TO DPE-1 AND DPE-7 WHEN THEY WERE RECONFIGURED TO OPERATE AS DUAL PHASE EXTRACTION WELLS.
3. WELL LOCATIONS BASED ON INFORMATION PROVIDED BY URS OR CALVADA SURVEYING, INC.
4. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
5. COC = CHEMICALS OF CONCERN
6. BGS = BELOW GROUND SURFACE
7. < = LESS THAN LABORATORY DETECTION LIMIT
8. 1,1-DCA = 1,1-DICHLOROETHANE
9. cDCE = cis-1,2-DICHLOROETHENE
10. PCE = TETRACHLOROETHENE
11. TCE = TRICHLOROETHENE
12. µg/m³ = MICROGRAMS PER CUBIC METER

LOCATION IDENTIFICATION	VP-5A	02/20/2019	06/12/2019	SAMPLING DATE
CHEMICAL NAME	1,1-DCA	**65**	**220**	
	cDCE	15	20	
	PCE	**2200**	**2200**	
	TCE	**270**	**260**	CONCENTRATION IN µg/m³

- **BOLDED** WHERE EXCEED EPA DEFAULT SCREENING LEVEL
- INTERIM J&E SCREENING LEVELS WERE NOT EXCEEDED

Compound	Screening Levels		
	2018 J&E 8.5 ft bgs (Industrial)	EPA Default (Industrial)	EPA Default (Residential)
1,1-DCA	19,000	256	60
cDCE	84,000	1,168	NA
PCE	8,400	67	16
TCE	9,200	100	16

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

COCs IN SOIL VAPOR - 10 FEET BGS

SCALE: AS SHOWN
AUGUST 2019

FIGURE 15

MOBINI, DARIUSH Printed: 8/2/2019 10:18 AM Layout: FIGURE 14-BOX
G:\38945_COOPERDRUMGLOBAL\CADD\RAWINGS\2019_08\130072-006_0014_COC_10.DWG

VP-10B	02/20/2019	06/12/2019
1,1-DCA	**220**	**61**
cDCE	480	100
PCE	**750**	**250**
TCE	**500**	**170**

VP-13B	02/20/2019	06/12/2019
1,1-DCA	6.9	< 2.0
cDCE	< 2.0	< 2.0
PCE	**1000**	**590**
TCE	**24**	**29**

VP-14B	02/20/2019	06/12/2019
1,1-DCA	< 2.0	9.7
cDCE	< 2.0	3.1
PCE	**51**	**75**
TCE	< 2.7	4.7

CORVAL STREET (ALLEY)

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

FORMER TWEEDY SCHOOL

ATLANTIC AVENUE

FOUR CABINS

ELG METALS BLDG

9430 RAYO AVENUE

SOUTHERN AVENUE

ELECT. TRAN

BLDG 1

BLDG 2

BLDG 4

BLDG 5

BLDG 6

BLDG 7

OVERHANG PATIO

PATIO

PP

DPE-2 SVE-7 VP-7B DPE-3 SVE-8 DPE-4 DPE-5 VP-15B SVE-6 DPE-9 VP-2 VP-6B PZ-6 VP-8B VP-5B PZ-5 SVE-3 VP-9B VP-10B DPE-1 MW-2A MW-59A MW-2 VP-1 DPE-8 DPE-6 DPE-10 VP-12B SVE-5 VP-11B SVE-4 DPE-11 DPE-12 MW-21

SVE-9 VP-13B DPE-14 VP-3 SVE-10 MW-4 DPE-7 VP-14B SVE-12 DPE-13 VP-4 SVE-11 VP-18 MW-22 VP-17 VP-16

N

0 100 200

SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- FENCE
- ELECTRIC LINE
- POWER POLE (PP)
- EXISTING DUAL PHASE EXTRACTION WELL LOCATION (DPE-2)
- EXISTING SOIL VAPOR EXTRACTION WELL LOCATION (SVE-7)
- EXISTING VAPOR MONITORING POINT LOCATION (NOT ACCESSIBLE) (VP-1)
- EXISTING VAPOR MONITORING POINT LOCATION (ACCESSIBLE) (VP-7)
- PIEZOMETER LOCATION
- EXISTING MONITORING WELL LOCATION (MW-2)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WELLS SVE-1 AND SVE-2 WERE RENAMED TO DPE-1 AND DPE-7 WHEN THEY WERE RECONFIGURED TO OPERATE AS DUAL PHASE EXTRACTION WELLS.
3. WELL LOCATIONS BASED ON INFORMATION PROVIDED BY URS OR CALVADA SURVEYING, INC.
4. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
5. COC = CHEMICALS OF CONCERN
6. BGS = BELOW GROUND SURFACE
7. < = LESS THAN LABORATORY DETECTION LIMIT
8. 1,1-DCA = 1,1-DICHLOROETHANE
9. cDCE = cis-1,2-DICHLOROETHENE
10. PCE = TETRACHLOROETHENE
11. TCE = TRICHLOROETHENE
12. µg/m³ = MICROGRAMS PER CUBIC METER

LOCATION IDENTIFICATION / CHEMICAL NAME	VP-10B	02/20/2019	06/12/2019
	1,1-DCA	**220**	**61**
	cDCE	480	100
	PCE	**750**	**250**
	TCE	**500**	**170**

SAMPLING DATE

CONCENTRATION IN µg/m³

- **BOLDED** WHERE EXCEED EPA DEFAULT SCREENING LEVEL
- INTERIM J&E SCREENING LEVELS WERE NOT EXCEEDED

Compound	Screening Levels: 2018 J&E 17.5 ft bgs (Industrial)	EPA Default (Industrial)	EPA Default (Residential)
1,1-DCA	40,000	256	60
cDCE	170,000	1,168	NA
PCE	17,000	67	16
TCE	19,000	100	16

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

COCs IN SOIL VAPOR - 20 FEET BGS

SCALE: AS SHOWN
AUGUST 2019

FIGURE 16

MOBINI, DARIUSH Printed: 8/2/2019 10:20 AM Layout: FIGURE 15-BOX
G:\38945_COOPERDRUM\GLOBAL\CAD\DRAWINGS\2019_08\130072-006_0015_COC_20.DWG

VP-7C	02/20/2019	06/12/2019
1,1-DCA	25	12
cDCE	75	19
PCE	**750**	**160**
TCE	**3400**	**250**

VP-14C	02/20/2019	06/12/2019
1,1-DCA	3.5	4.9
cDCE	10	6.7
PCE	460	210
TCE	65	41

FORMER HARD WASH AREA (HWA)

FORMER DRUM PROCESSING AREA (DPA)

FORMER TWEEDY SCHOOL

CORVAL STREET (ALLEY)

ATLANTIC AVENUE

RAYO AVENUE

SOUTHERN AVENUE

FOUR CABINS

ELG METALS BLDG

9430 RAYO AVENUE

SOUT INDUSTRIA

BLDG 1

BLDG 2

BLDG 3

BLDG 4

BLDG 5

BLDG 6

BLDG 7

OVERHANG

PATIO

ELECT. TRANS.

PP

DPE-2 DPE-3 DPE-4 DPE-5 DPE-6 DPE-7 DPE-8 DPE-9 DPE-10 DPE-11 DPE-12 DPE-13 DPE-14

SVE-3 SVE-4 SVE-5 SVE-6 SVE-7 SVE-8 SVE-9 SVE-10 SVE-11 SVE-12

VP-1 VP-2 VP-3 VP-4 VP-5C VP-6C VP-7C VP-8C VP-9C VP-10C VP-11C VP-12C VP-13C VP-14C VP-15C VP-16 VP-17 VP-18

PZ-5 PZ-7A/B

MW-2 MW-2A MW-4 MW-21 MW-22 MW-59A

LEGEND

- PROPERTY BOUNDARY
- FENCE
- ELECTRIC LINE
- POWER POLE
- EXISTING DUAL PHASE EXTRACTION WELL LOCATION
- EXISTING SOIL VAPOR EXTRACTION WELL LOCATION
- EXISTING VAPOR MONITORING POINT LOCATION (NOT ACCESSIBLE)
- EXISTING VAPOR MONITORING POINT LOCATION (ACCESSIBLE)
- PIEZOMETER LOCATION
- EXISTING MONITORING WELL LOCATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WELLS SVE-1 AND SVE-2 WERE RENAMED TO DPE-1 AND DPE-7 WHEN THEY WERE RECONFIGURED TO OPERATE AS DUAL PHASE EXTRACTION WELLS.
3. WELL LOCATIONS BASED ON INFORMATION PROVIDED BY URS OR CALVADA SURVEYING, INC.
4. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
5. COC = CHEMICALS OF CONCERN
6. BGS = BELOW GROUND SURFACE
7. < = LESS THAN LABORATORY DETECTION LIMIT
8. 1,1-DCA = 1,1-DICHLOROETHANE
9. cDCE = cis-1,2-DICHLOROETHENE
10. PCE = TETRACHLOROETHENE
11. TCE = TRICHLOROETHENE
12. µg/m³ = MICROGRAMS PER CUBIC METER

LOCATION IDENTIFICATION / CHEMICAL NAME	VP-7C	02/20/2019	06/12/2019
	1,1-DCA	25	12
	cDCE	75	19
	PCE	**750**	**160**
	TCE	**3400**	**250**

SAMPLING DATE

CONCENTRATION IN µg/m³

- **BOLDED** WHERE EXCEED EPA DEFAULT SCREENING LEVEL
- INTERIM J&E SCREENING LEVELS WERE NOT EXCEEDED

Compound	Screening Levels: EPA Default (Industrial)	EPA Default (Residential)	2013 VLEACH
1,1-DCA	256	60	24,000
cDCE	1,168	NA	21,000
PCE	67	16	76,000
TCE	100	16	43,000

N

0 100 200

SCALE IN FEET

HALEY ALDRICH

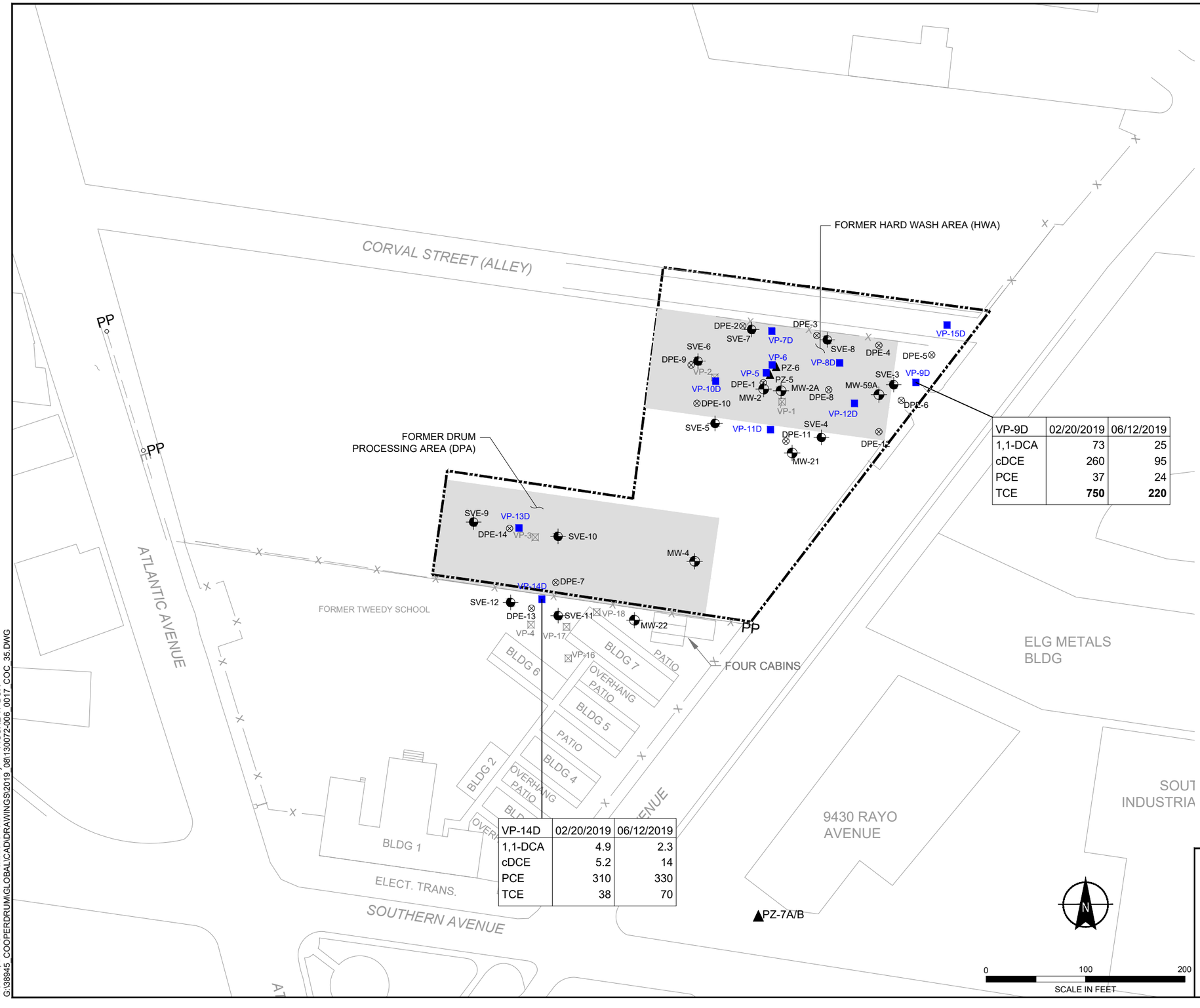
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

COCs IN SOIL VAPOR - 30 FEET BGS

SCALE: AS SHOWN
AUGUST 2019

FIGURE 17

MOBINI, DARIUSH Printed: 8/2/2019 10:20 AM Layout: FIGURE 16-BOX
G:\38945_COOPERDRUM\GLOBAL\CAD\DRAWINGS\2019_08\130072-006_0016_COC_30.DWG



VP-9D	02/20/2019	06/12/2019
1,1-DCA	73	25
cDCE	260	95
PCE	37	24
TCE	**750**	**220**

VP-14D	02/20/2019	06/12/2019
1,1-DCA	4.9	2.3
cDCE	5.2	14
PCE	310	330
TCE	38	70

LEGEND

- PROPERTY BOUNDARY
- FENCE
- ELECTRIC LINE
- POWER POLE
- EXISTING DUAL PHASE EXTRACTION WELL LOCATION
- EXISTING SOIL VAPOR EXTRACTION WELL LOCATION
- EXISTING VAPOR MONITORING POINT LOCATION (NOT ACCESSIBLE)
- EXISTING VAPOR MONITORING POINT LOCATION (ACCESSIBLE)
- PIEZOMETER LOCATION
- EXISTING MONITORING WELL LOCATION

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. WELLS SVE-1 AND SVE-2 WERE RENAMED TO DPE-1 AND DPE-7 WHEN THEY WERE RECONFIGURED TO OPERATE AS DUAL PHASE EXTRACTION WELLS.
3. WELL LOCATIONS BASED ON INFORMATION PROVIDED BY URS OR CALVADA SURVEYING, INC.
4. PROPERTY BOUNDARY BASED ON A PARCEL MAP PROVIDED BY "OFFICE OF THE ASSESSOR, COUNTY OF LOS ANGELES", 2016, PA# 6222-5.
5. COC = CHEMICALS OF CONCERN
6. BGS = BELOW GROUND SURFACE
7. < = LESS THAN LABORATORY DETECTION LIMIT
8. 1,1-DCA = 1,1-DICHLOROETHANE
9. cDCE = cis-1,2-DICHLOROETHENE
10. PCE = TETRACHLOROETHENE
11. TCE = TRICHLOROETHENE
12. µg/m³ = MICROGRAMS PER CUBIC METER

LOCATION IDENTIFICATION / CHEMICAL NAME	VP-9D	02/20/2019	06/12/2019
	1,1-DCA	73	25
	cDCE	260	95
	PCE	37	24
	TCE	**750**	**220**

SAMPLING DATE

CONCENTRATION IN µg/m³

- **BOLDED** WHERE EXCEED EPA DEFAULT SCREENING LEVEL
- INTERIM J&E SCREENING LEVELS WERE NOT EXCEEDED

Compound	Screening Levels: EPA Default (Industrial)	EPA Default (Residential)	2013 VLEACH
1,1-DCA	256	60	24,000
cDCE	1,168	NA	21,000
PCE	67	16	76,000
TCE	100	16	43,000

HALEY ALDRICH

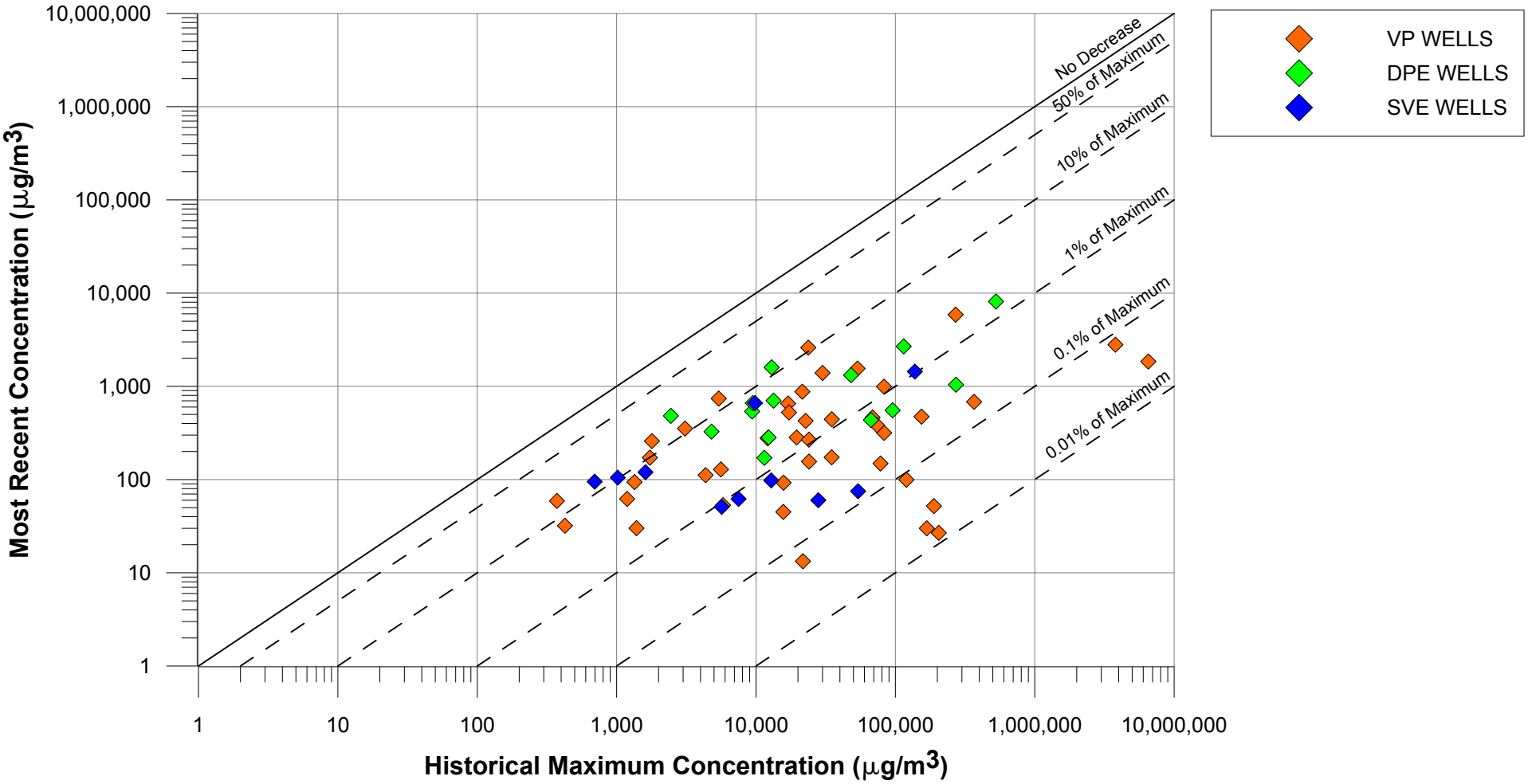
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

COCs IN SOIL VAPOR - 35 FEET BGS

SCALE: AS SHOWN
AUGUST 2019

FIGURE 18

MOBINI, DARIUSH Printed: 8/2/2019 10:21 AM Layout: FIGURE 17-BOX
G:\38945_COOPERDRUM\GLOBAL\CAD\DRAWINGS\2019_08\130072-006_0017_COC_35.DWG



Abbreviations

COCs = chemicals of concern
DPE = dual phase extraction
ug/m^3 = micrograms per cubic meter
SVE = soil vapor extraction
VP = vapor monitoring point

Notes

1. DPE and SVE wells were not operated during the reporting period due to low mass removal rates. SVE sampling data is from previous reporitng period. Select VPs were sampled this reporting period, therefore, not all VP data is from this reporting period.

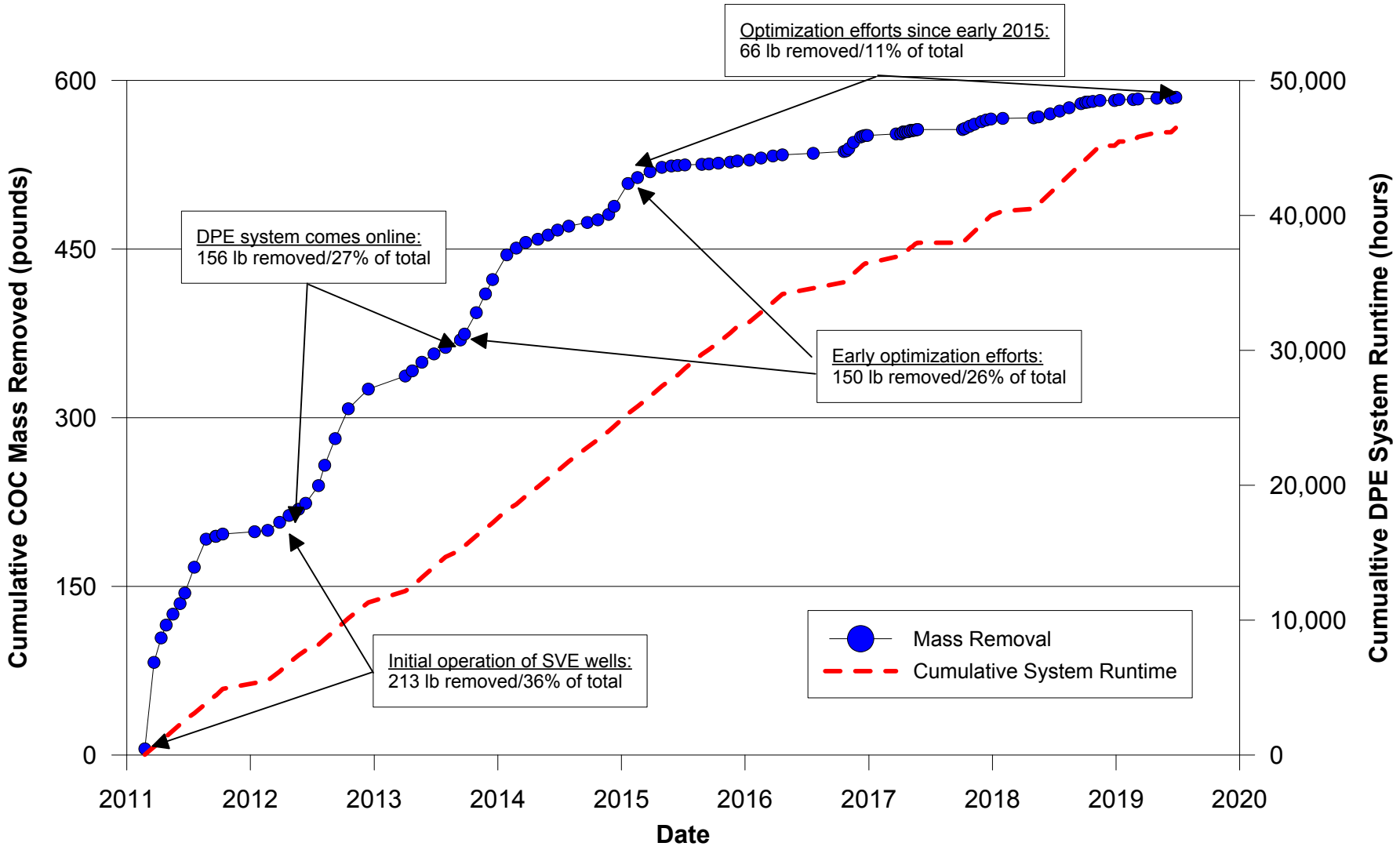
HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

MOST RECENT TOTAL COCS VS.
MAXIMUM HISTORICAL TOTAL COCS IN SOIL VAPOR

AUGUST 2019

FIGURE 19



Abbreviations
COCs = chemicals of concern
DPE = dual phase extraction
SVE = soil vapor extraction

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CUMULATIVE COC MASS REMOVAL IN VAPOR PHASE

AUGUST 2019

FIGURE 20

APPENDIX A

Response to EPA Comments

TABLE A-I
RESPONSE TO EPA COMMENTS ON COMBINED GROUNDWATER MONITORING AND PERFORMANCE EVALUATION REPORT, FIRST SEMI-ANNUAL 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

ITEM #	EPA SPECIFIC COMMENTS on Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018, dated August 31, 2018	RESPONSE TO COMMENTS
1	Section 5.4.3.4, Exposition Aquifer Monitoring Wells, page 20. The report noted that laboratory analyses detected COCs (cis-1,2-DCE, vinyl chloride, and 1,2-DCA) above cleanup levels, and increasing in wells MW55 and MW16. The report states that the source for the COC detections in the Exposition Aquifer has not been determined. At the time of the ROD (2002), concentrations of COCs in the Exposition aquifer were non-detect in the downgradient area of the Cooper Drum plume. However, based on ongoing monitoring of the Exposition aquifer and the hydraulic conditions between the overlying Gaspur and Exposition aquifer (i.e., downward vertical gradient) EPA is concerned that the source of these COCs in the Exposition Aquifer may be from the Cooper Drum site. The concentration trends in other wells (MW18 and MW32) monitoring the Exposition Aquifer have also shown increasing COC trends (see Appendix I in the subject report) and are of further concern. Table 9 from the Report shows groundwater analytical results from five monitoring wells (MW25B, MW28, MW30, MW37, MW40) completed in the Lower Gaspur Aquifer in the Phase 2 area, one monitoring well (MW62B) slightly upgradient in the Lower Gaspur Aquifer in the Phase 1 area, and a monitoring well (MW55) completed in the Exposition Aquifer in the downgradient portion of the Phase 2 Area. Given that MW55 is downgradient and cross-gradient of these wells (MW25B, MW28, MW30, MW37, MW40), constructed approximately 15 feet below the depth of the lower Gaspur Aquifer, and there is a downward hydraulic gradient between the aquifer zones, the COCs in MW55 may very well be from the Cooper Drum Site. An increasing trend of COCs since installation of MW55 further supports this conclusion. Additionally, the suite of compounds detected in the monitoring wells (MW25B, MW28, MW30, MW37, MW40) completed in the lower Gaspur Aquifer are very similar to the compounds detected in MW55. EPA has observed a very similar migration pattern to the east of the Cooper Drum plume beginning at the Jervis Webb site, where COCs have migrated laterally (slightly south east) and vertically into the Exposition aquifer beneath the ELG Metals property. Please address EPA's concern that the COCs from the Cooper Drum source area have vertically migrated into the Exposition Aquifer in the area near MW55 and provide any evidence that leads you to believe the contamination in the Exposition Aquifer is definitively not associated with the Cooper Drum source.	We appreciate EPA's thoughtful comments on the Exposition Aquifer trends and agree that additional discussion of these trends is warranted. Section 5.4.3.4 of the Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2019 (2019 PER) includes an evaluation of the geologic conditions (including three cross-sections), well construction, and COC trends for the five Exposition aquifer monitoring wells that are part of the monitoring program for the Cooper Drum Company Superfund Site. Based on our analysis, the well construction as reported on the boring logs for MW-16 and MW-18 indicate that these wells may be acting as conduits between the lower Gaspur and Exposition aquifers. Therefore, it cannot be determined whether COCs detected in samples from these wells are representative of groundwater quality in the Exposition aquifer. For the reasons discussed in Section 5.4.3.4, we do not view the trends at MW-16 and MW-18 as being indicative of COCs from the Cooper Drum Company Superfund Site migrating downward into the Exposition aquifer. The increasing COC concentration trends at MW-55 are more difficult to explain. As discussed in Section 5.4.3.4, the aquitard separating the Exposition from the Gaspur aquifer is twice as thick near MW-55 as at MW-26, where no COCs were detected. However, the COC concentrations at MW-55 were similar to the concentrations at nearby lower Gaspur aquifer monitoring wells MW-30, MW-37 and MW-40, and higher than concentrations at MW-25B and MW-28. Downward migration of COCs through approximately 13 feet of low permeability materials should cause substantial attenuation in concentration, such that the concentration in the Exposition aquifer would be much lower than in the overlying Gaspur. The absence of this attenuation suggests other explanations for COCs in MW-55 are plausible. One such explanation could be downward migration from the lower Gaspur beginning near MW-35 on Southern Avenue, which has similar COCs but at much higher concentrations than those observed at MW-55. Another explanation could be upgradient COCs in the Exposition aquifer that have been detected beneath the ELG Metals property at similar concentrations to MW-55, assuming a southwest flow direction in the Exposition aquifer. In addition, we cannot rule out the possibility that MW-55 may be compromised somehow, perhaps because of undetected problems during installation (e.g., borehole sloughing). Regarding the migration of COCs from the Jervis Webb site into the Exposition aquifer beneath the ELG Metals property, this scenario is not comparable to conditions at Cooper Drum when COC concentrations are factored in the analysis. Total COC concentrations were greater than 1,500 micrograms per liter (µg/L) in a Lower Gaspur aquifer sample beneath the ELG Metals property (SAIA-HP18; 100 feet bgs) downgradient of Jervis Webb; this is an order of magnitude higher than COC concentrations reported in groundwater samples from the lower Gaspur aquifer between the Cooper Drum property and MW-55. The total COC concentrations in the Exposition aquifer samples beneath ELG Metals ranged from 0.66 µg/L (SAIA-HP18; 124 feet bgs) to 73 µg/L (JWMW-11C; 11/29/16), which is an indication that COC concentrations in the Exposition aquifer have attenuated by a factor of 20 or more when compared to the lower Gaspur aquifer samples beneath ELG Metals. On the other hand, as described above, the COC concentrations at MW-55 are similar to concentrations in the Lower Gaspur aquifer (no attenuation). For this reason, we conclude that the plume diving scenario associated with the Jervis Webb site is not occurring at the Cooper Drum Site. CDCPG would like to schedule a meeting with EPA to further discuss the COC trends at MW-55 and to discuss options for any additional analyses that might help to resolve this issue.
2	Section 6.2, COC Concentration Trends and Mass Removal, second bullet, page 24. Please use a logarithmic scale on Figure 21 to provide an easier evaluation to see if the mass removal rate is truly asymptotic.	Figure 21 is no longer included in the PER. To aid in evaluating future mass removal and the presence of asymptotic conditions, a decline curve model was fit to the cumulative mass removal curve as part of the Rebound Tech Memo (Figure 6 in Rebound Tech Memo). The fit of the decline curve model to the data was excellent (R squared value of 0.992) and predicted that 95 percent of the total mass had been removed. The decline curve model predicts that an extended time frame (10 years) would be required to go from 95 percent mass removal to 99 percent mass removal based on current asymptotic conditions.

TABLE A-I
RESPONSE TO EPA COMMENTS ON COMBINED GROUNDWATER MONITORING AND PERFORMANCE EVALUATION REPORT, FIRST SEMI-ANNUAL 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

ITEM #	EPA SPECIFIC COMMENTS on Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018, dated August 31, 2018	RESPONSE TO COMMENTS
3	Section 6.2 Recommendation for OU2, last sentence, page 24. EPA recommends using the EPA default soil gas screening levels to evaluate rebound testing. In addition, as part of rebound testing the CDCPG should estimate/calculate the time period any rebound may occur in an effort to determine what the monitoring period may be. This would ensure that the CDCPG does not miss the actual rebound period. EPA and CDCPG will address these issues further in a separate technical meeting.	CDCPG and EPA met in March 2019 to discuss the issues of rebound and soil gas screening levels. It was agreed that CDCPG would submit a technical memorandum to propose a new plan for rebound testing. The "Soil Vapor Extraction Rebound Testing Technical Memorandum" was submitted on 28 June 2019. We look forward to EPA's comments on this document.
4	Appendix A, Table A-1, Response to EPA Comments, EPA General Comment. EPA is concerned that mass removal has become diffusion-limited and the SVE system will remove available COC mass from more advective zones as the COCs diffuse to them from less permeable zones. The SVE system would still remove mass but at a much lower rate since the residual COC mass is likely contained within the lower permeable zones and limited by concentration gradients to the higher permeable zones where the SVE system can remove them. Thus, the statement that, "decreases in soil gas concentrations at the vapor probes are not anticipated with further SVE operation" is not accurate. EPA and the CDCPG will address this concern further in a separate technical meeting.	This statement is based on observations that COC concentrations have remained relatively stable with continued operation of the SVE system. We agree that mass removal may have become diffusion limited, such that asymptotic conditions prevail. EPA and CDCPG further discussed these issues at a meeting in March 2019.
5	Section 4.4, Summary of Analytical Data Quality Review. As requested in previous comments, please state as a conclusion whether CDCPG rejected data or not during the data quality review.	A statement has been added to section 4.4 to summarize if any data were rejected during the data quality review.
6	Table 15, Validation Summary. Please check the column headings. The column headings for "Number of Results" and "% of Samples" appear incompatible for the tabulated values. Since the "Number of Results" is what is being reported, then all instances of "% of Samples" in the headings should be changed to "% of Results."	The column headings in Table 15 have been renamed to "% of Results".

TABLE A-II
RESPONSE TO EPA COMMENTS ON MONITORED NATURAL ATTENUATION TECHNICAL MEMORANDUM SEPTEMBER 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	EPA GENERAL COMMENTS on the Monitored Natural Attenuation Technical Memorandum, dated Sept 17, 2018	RESPONSE TO COMMENT
1	*Increasing COC concentrations at MW55* Overall, the report provided evidence in support of an MNA remedy for the Phase 2 RAA for the Gaspur Aquifer. However, concentrations of vinyl chloride have increased in MW55 in the Exposition Aquifer, which is within the geographic area of the MNA evaluation. Cis-1,2-DCE concentrations have also increased in other Exposition Aquifer wells that were not included within the MNA evaluation study area, as shown in the 2018 monitoring data. To demonstrate that MNA is a feasible and effective alternative to the active treatment techniques specified in the ROD, the MNA evaluation must address the vertical distribution of contamination in the Cooper Drum plume, including the question of whether contamination is migrating to lower aquifers. EPA understands that the Consent Decree did not address remediation of all groundwater aquifers. However, the groundwater remedy specified in the ROD includes containment of the downgradient Cooper Drum plume. For EPA to approve of MNA in the downgradient portion of the plume, the CDCPG would need to be able to show that the Cooper Drum groundwater plume is currently contained both vertically and laterally.[1] This approach is consistent with EPA guidelines for evaluating MNA at groundwater sites. EPA's guidance document, entitled Use of Monitored Natural Attenuation at Superfund, RCRA, Corrective Action and Underground Storage Tank Sites,[2] specifically states that "all monitoring programs should be designed to accomplish the following: Verify that the plume(s) is not expanding (either downgradient, laterally or vertically)." Decreasing or stable concentrations of COCs at wells within the MNA study area can be evidence of effective containment. Presently, concentration trends in Exposition Aquifer well MW55 are increasing, however, and are above the MCL. Two other wells (MW16 and MW18) in the Exposition Aquifer show increasing trends (but are below the MCL currently). Further analysis and explanation are needed to explain these trends and whether they affect the feasibility or effectiveness of MNA as a remedial alternative for groundwater in the Phase 2 RAA. EPA requests results and trend analyses of ongoing monitoring wells completed in both the Gaspur and Exposition Aquifers to gain a better understanding of the downgradient portion of the plume. Characterizing the vertical extent of COCs in the Gaspur Aquifer (including whether COCs are migrating to the Exposition Aquifer) and an evaluation of MNA parameters in the Exposition Aquifer will greatly assist EPA in determining if MNA is appropriate and effective at containing contamination vertically in the Gaspur Aquifer in the Phase 2 Remedial Action Area. Please propose a path forward for evaluating vertical migration and increasing COC concentration trends in the Exposition Aquifer. [1.] The ROD-selected remedy for groundwater provides the that "Containment will be provided at the downgradient extent of contamination……Monitored natural attenuation could be employed if it can be demonstrated that contaminant concentrations in the groundwater plume have stabilized at reduced concentrations." [2.] The Consent Decree Statement of Work states that MNA monitoring shall be consistent with the guidelines in the guidance document USEPA Use of Monitored Natural Attenuation at Superfund, RCRA, Corrective Action and Underground Storage Tank sites, EPA/600R-98/128, April 1999. , and A Guideline for Assessing Biodegradation and Source Identification of Organic Ground Water Contaminants using Compound Specific Isotope Analysis (CSIA), EPA 600/R-08/148, December 2008."	Comments noted. We understand that MNA will not be approved until a consensus is reached on the Exposition aquifer trends. We provided our perspective on Exposition aquifer COCs in the 2019 PER. After EPA has had the opportunity to review our perspectives on the Exposition aquifer provided in Section 5.4.3.4 of the 2019 PER, CDCPG would like to meet with EPA to propose a path forward for evaluating vertical migration and increasing COC concentration trends in the Exposition Aquifer.

TABLE A-II
RESPONSE TO EPA COMMENTS ON MONITORED NATURAL ATTENUATION TECHNICAL MEMORANDUM SEPTEMBER 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	EPA GENERAL COMMENTS on the Monitored Natural Attenuation Technical Memorandum, dated Sept 17, 2018	**RESPONSE TO COMMENT**
2	*Metrics for MNA Remedy* If EPA determines MNA is feasible and effective, the CDCPG would need to delineate the specifics of a proposed MNA remedy. Specifics include addressing the anticipated duration of the MNA remedy, analyses and evaluations needed during the remedy, identification of which wells would be included in the remedy, and criteria for wells being included, among other issues. Given that achievement of cleanup goals through MNA, especially for cis-1,2-DCE, could take a number of years, the report should explain how progress toward cleanup goals would be measured should EPA agree that MNA is a feasible and effective cleanup alternative. In addition, the report should explain contingency measures that would be followed should the EPA approve an MNA alternative, and the Phase 2 RAA fails to make progress toward cleanup goals in a timeframe proposed in the report. These contingency measures would need to be included in any ROD amendment adopting an MNA alternative. This contingency plan should specifically explain actions to be taken for the hypothetical scenario in which one or more of the wells in the Phase 2 Remedial Action Area exhibit statistically increasing trends. Contingency provisions could include a return to the ROD selected remedy (e.g., enhance reductive dechlorinating [ERD]) or other actions designed to address groundwater contamination in the Phase 2 RAA.	Comment noted. If MNA is determined to be feasible and effective and approved by EPA, a remedial action work plan will be prepared and include contingency actions and metrics.
	EPA SPECIFIC COMMENTS on the Monitored Natural Attenuation Technical Memorandum, dated Sept 17, 2018	**RESPONSE TO COMMENT**
1	Executive Summary, 2nd paragraph and Section 1.3.5. The executive summary states that remedial action in the Phase 2 Remedial Action Area may increase VI risk. However, with the shallow Gaspur Aquifer at ~55 ft bgs and the low concentrations (non-detect to <MCLs), it is not clear why VI would be of concern. Please explain this further.	VI is not currently a concern in the Phase 2 Remedial Action Area. However, if groundwater extraction were implemented, groundwater modeling has shown that concentrations could increase in the shallow Gaspur aquifer given the westward movement of shallow groundwater from the SAIA site. This is summarized in Section 3.4.2 of the "Addendum to the Final Remedial Action Work Plan for Phase 1 Operable Unit 1," prepared by AMEC and submitted on 8 June 2011.
2	Section 1.4.1.2 2nd bullet. Wells MW53 and MW54 are completed in the Lower Gaspur Aquifer and concentrations of cDCE and 1,4-dioxane in these two wells is elevated. These compounds are likely related to the Cooper Drum Plume. As such, these wells should be included in an MNA monitoring plan.	Comment noted. While it is unclear if the COCs at these locations are attributed to Cooper Drum, consideration of these wells as part of an MNA program may be acceptable if it can be determined that the COCs are Cooper Drum-related.
3	Section 1.4.2; penultimate bullet. This bullet suggests that low concentrations of 1,4-dioxane and/or 1,2-DCA concentrations in the Phase 2 Remedial Action Area are similar to upgradient areas. This conclusion should be more specific and supported with analytical data. 1,4-dioxane is clearly from the Cooper Drum source area as shown by the highest concentrations in Cooper Drum wells MW21 (up to 450 ug/L) and MW33A (up to 300 ug/L). These wells are on the Cooper Drum property and completed in the shallow Gaspur Aquifer.	1,4-Dioxane concentrations in the Phase 2 Remedial Action Area are generally less than 10 µg/L. 1,4-Dioxane concentrations are greater than 10 µg/L at locations on the Jervis Webb site in the Shallow Gaspur interval (JW-CPT-01 [33 µg/L], JW-CPT-02 [34 µg/L], JW-CPT-03 [12 µg/L], JW-CPT-05 [16 µg/L], JWMW-01 [64 to 71 µg/L], JWMW-04 [21 to 26 µg/L], JWMW-05 [14 to 19 µg/L], JWMW-07A [15 to 17 µg/L], and JWMW-09A [27 to 34 µg/L]) and in the Intermediate Gaspur interval (JWMW-11B [22 to 44 µg/L]). Directly north of the Cooper Drum Site, 1,4-dioxane concentrations at Intermediate Gaspur monitoring well MW-63 have ranged from 14 to 28 µg/L. Although the 1,4-dioxane concentrations at MW-21 and MW-33A have been consistently high, these concentrations are localized, since 1,4-dioxane concentrations in nearby monitoring wells north of Southern Avenue (MW-60A/B, MW15/15B, MW-62A/B, and PZ-7A/B) have been one to two orders of magnitude lower than concentrations reported at MW-21 and MW-33A.

TABLE A-II
RESPONSE TO EPA COMMENTS ON MONITORED NATURAL ATTENUATION TECHNICAL MEMORANDUM SEPTEMBER 2018
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	EPA SPECIFIC COMMENTS on the Monitored Natural Attenuation Technical Memorandum, dated Sept 17, 2018	**RESPONSE TO COMMENT**
4	Section 1.4.3; 1st paragraph, last sentence. Please note that the State Water Board considers all CA groundwater as beneficial; therefore, this argument (i.e., There is no beneficial use of the shallow groundwater and concentrations of arsenic and sulfate are well above the Cal EPA MCLs in the shallow aquifer), while logical, may not be acceptable from a State regulatory point of view.	Comment noted.
5	Section 1.4.3; 2nd paragraph, last sentence. While this argument (i.e., dilution of sulfate concentration in the shallow aquifer, from above Cal EPA MCLs to below MCLs, during vertical migration to deeper water supply wells) may be generally true, it must also be noted that solvents (especially DNAPL) migration mechanisms could be very different than sulfate and other inorganics.	Comment noted. There has been no evidence of DNAPL at the Cooper Drum Site.
6	Section 2.1.1; 1st sentence after TCE reductive dechlorination equation. Start this sentence with, "With the exception of PCE."	If EPA requests a revised Monitored Natural Attenuation Technical Memorandum for approval, this change will be made.
7	Section 2.3.1; 1st paragraph and table. Please add the specific analysis (M-K, linear regression, or T-S) used to evaluate the specific trend listed. Also, please explain how a "stable" trend was identified, and how that is different from "No trend" (i.e. not enough samples). Is "no obvious trend" considered "stable"?	If EPA requests a revised Monitored Natural Attenuation Technical Memorandum for approval, this change will be made.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 3, 2019

Mr. Peter Bennett, CHG
Haley & Aldrich
1956 Webster Street, Suite 450
Oakland, CA 94612

Re: EPA Comments on Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018
EPA Comments on Monitored Natural Attenuation Technical Memorandum, September 2018
Cooper Drum Cooperating Parties Group
Cooper Drum Company Superfund Site

Dear Mr. Bennett,

The Environmental Protection Agency (EPA), with support from Gilbane Company, contractor to the EPA, has reviewed the *Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018*, dated August 31, 2018, as well as the *Monitored Natural Attenuation Technical Memorandum,* dated September 17, 2018. Haley & Aldrich, Inc, prepared these documents on behalf of the Cooper Drum Cooperating Parties Group. EPA has the following comments.

EPA Comments on the Combined Groundwater Monitoring and Performance Evaluation Report, First Semi-Annual 2018

1) **Section 5.4.3.4, Exposition Aquifer Monitoring Wells, page 20**. The report noted that laboratory analyses detected COCs (cis-1,2-DCE, vinyl chloride, and 1,2-DCA) above cleanup levels, and increasing in wells MW55 and MW16. The report states that the source for the COC detections in the Exposition Aquifer has not been determined. At the time of the ROD (2002), concentrations of COCs in the Exposition aquifer were non-detect in the downgradient area of the Cooper Drum plume. However, based on ongoing monitoring of the Exposition aquifer and the hydraulic conditions between the overlying Gaspur and Exposition aquifer (i.e., downward vertical gradient) EPA is concerned that the source of these COCs in the Exposition Aquifer may be from the Cooper Drum site. The concentration trends in other wells (MW18 and MW32) monitoring the Exposition Aquifer have also shown increasing COC trends (see Appendix I in the subject report) and are of further concern.

Table 9 from the Report shows groundwater analytical results from five monitoring wells (MW25B, MW28, MW30, MW37, MW40) completed in the Lower Gaspur Aquifer in the Phase 2 area, one monitoring well (MW62B) slightly upgradient in the Lower Gaspur Aquifer in the Phase 1 area, and a monitoring well (MW55) completed in the Exposition Aquifer in the downgradient portion of the Phase 2 Area.

Given that MW55 is downgradient and cross-gradient of these wells (MW25B, MW28, MW30, MW37, MW40), constructed approximately 15 feet below the depth of the lower Gaspur Aquifer, and there is a downward hydraulic gradient between the aquifer zones, the COCs in MW55 may very well be from the Cooper Drum Site. An increasing trend of COCs since installation of MW55 further supports this conclusion. Additionally, the suite of compounds detected in the monitoring wells (MW25B, MW28, MW30, MW37, MW40) completed in the lower Gaspur Aquifer are very similar to the compounds detected in MW55. EPA has observed a very similar migration pattern to the east of the Cooper Drum plume beginning at the Jervis Webb site, where COCs have migrated laterally (slightly south east) and vertically into the Exposition aquifer beneath the ELG Metals property.

Please address EPA's concern that the COCs from the Cooper Drum source area have vertically migrated into the Exposition Aquifer in the area near MW55 and provide any evidence that leads you to believe the contamination in the Exposition Aquifer is definitively *not* associated with the Cooper Drum source.

2) **Section 6.2, COC Concentration Trends and Mass Removal, second bullet, page 24.** Please use a logarithmic scale on Figure 21 to provide an easier evaluation to see if the mass removal rate is truly asymptotic.

3) **Section 6.2 Recommendation for OU2, last sentence, page 24.** EPA recommends using the EPA default soil gas screening levels to evaluate rebound testing. In addition, as part of rebound testing the CDCPG should estimate/calculate the time period any rebound may occur in an effort to determine what the monitoring period may be. This would ensure that the CDCPG does not miss the actual rebound period. EPA and CDCPG will address these issues further in a separate technical meeting.

4) **Appendix A, Table A-1, Response to EPA Comments, EPA General Comment.** EPA is concerned that mass removal has become diffusion-limited and the SVE system will remove available COC mass from more advective zones as the COCs diffuse to them from less permeable zones. The SVE system would still remove mass but at a much lower rate since the residual COC mass is likely contained within the lower permeable zones and limited by concentration gradients to the higher permeable zones where the SVE system can remove them. Thus, the statement that, "decreases in soil gas concentrations at the vapor probes are not anticipated with further SVE operation" is not accurate. EPA and the CDCPG will address this concern further in a separate technical meeting.

5) **Section 4.4, Summary of Analytical Data Quality Review.** As requested in previous comments, please state as a conclusion whether CDCPG rejected data or not during the data quality review.

6) **Table 15, Validation Summary.** Please check the column headings. The column headings for "Number of Results" and "% of Samples" appear incompatible for the tabulated values. Since the "Number of Results" is what is being reported, then all instances of "% of Samples" in the headings should be changed to "% of Results".

EPA Comments on the Monitored Natural Attenuation Technical Memorandum, Sept 2018

EPA is concerned about several issues related to the implementation of Monitored Natural Attenuation (MNA) as a remedial alternative for the downgradient portion of the plume (Phase 2 Remedial Action Area [RAA]).

Increasing COC concentrations at MW55

Overall, the report provided evidence in support of an MNA remedy for the Phase 2 RAA for the Gaspur Aquifer. However, concentrations of vinyl chloride have increased in MW55 in the Exposition Aquifer, which is within the geographic area of the MNA evaluation. CisDCE concentrations have also increased in other Exposition Aquifer wells that were not included within the MNA evaluation study area, as shown in the 2018 monitoring data. To demonstrate that MNA is a feasible and effective alternative to the active treatment techniques specified in the ROD, the MNA evaluation must address the vertical distribution of contamination in the Cooper Drum plume, including the question of whether contamination is migrating to lower aquifers.

EPA understands that the Consent Decree did not address remediation of all groundwater aquifers. However, the groundwater remedy specified in the ROD includes containment of the downgradient Cooper Drum plume. For EPA to approve of MNA in the downgradient portion of the plume, the CDCPG would need to be able to show that the Cooper Drum groundwater plume is currently contained both vertically and laterally.[1] This approach is consistent with EPA guidelines for evaluating MNA at groundwater sites. EPA's guidance document, entitled *Use of Monitored Natural Attenuation at Superfund, RCRA, Corrective Action and Underground Storage Tank Sites,*[2] specifically states that "all monitoring programs should be designed to accomplish the following: . . . Verify that the plume(s) is not expanding (either downgradient, laterally or vertically)."

Decreasing or stable concentrations of COCs at wells within the MNA study area can be evidence of effective containment. Presently, concentration trends in Exposition Aquifer well MW55 are increasing, however, and are above the MCL. Two other wells (MW16 and MW18) in the Exposition Aquifer show increasing trends (but are below the MCL currently). Further analysis and explanation is needed to explain these trends and whether they affect the feasibility or effectiveness of MNA as a remedial alternative for groundwater in the Phase 2 RAA.

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[1] The ROD-selected remedy for groundwater provides the that "Containment will be provided at the downgradient extent of contamination……Monitored natural attenuation could be employed if it can be demonstrated that contaminant concentrations in the groundwater plume have stabilized at reduced concentrations."

[2] The Consent Decree Statement of Work states that MNA monitoring shall be consistent with the guidelines in the guidance document *USEPA Use of Monitored Natural Attenuation at Superfund, RCRA, Corrective Action and Underground Storage Tank sites*, EPA/600R-98/128, April 1999. , and *A Guideline for Assessing Biodegradation and Source Identification of Organic Ground Water Contaminants using Compound Specific Isotope Analysis (CSIA)*, EPA 600/R-08/148, December 2008."

EPA requests results and trend analyses of ongoing monitoring wells completed in both the Gaspur and Exposition Aquifers to gain a better understanding of the downgradient portion of the plume. Characterizing the vertical extent of COCs in the Gaspur Aquifer (including whether COCs are migrating to the Exposition Aquifer) and an evaluation of MNA parameters in the Exposition Aquifer will greatly assist EPA in determining if MNA is appropriate and effective at containing contamination vertically in the Gaspur Aquifer in the Phase 2 Remedial Action Area. Please propose a path forward for evaluating vertical migration and increasing COC concentration trends in the Exposition Aquifer.

Metrics for MNA Remedy

If EPA determines MNA is feasible and effective, the CDCPG would need to delineate the specifics of a proposed MNA remedy. Specifics include addressing the anticipated duration of the MNA remedy, analyses and evaluations needed during the remedy, identification of which wells would be included in the remedy, and criteria for wells being included, among other issues.

Given that achievement of cleanup goals through MNA, especially for cis-1,2-DCE, could take a number of years, the report should explain how progress toward cleanup goals would be measured should EPA agree that MNA is a feasible and effective cleanup alternative. In addition, the report should explain contingency measures that would be followed should the EPA approve an MNA alternative, and the Phase 2 RAA fail to make progress toward cleanup goals in a timeframe proposed in the report. These contingency measures would need to be included in any ROD amendment adopting an MNA alternative. This contingency plan should specifically explain actions to be taken for the hypothetical scenario in which one or more of the wells in the Phase 2 Remedial Action Area exhibit statistically increasing trends. Contingency provisions could include a return to the ROD selected remedy (e.g., enhance reductive dechlorinating [ERD]) or other actions designed to address groundwater contamination in the Phase 2 RAA.

Specific Comments

1) **Executive Summary, 2nd paragraph and Section 1.3.5**. The executive summary states that remedial action in the Phase 2 Remedial Action Area may increase VI risk. However, with the shallow Gaspur Aquifer at ~55 ft bgs and the low concentrations (nondetect to <MCLs), it is not clear why VI would be of concern. Please explain this further.

2) **Section 1.4.1.2 2nd bullet**. Wells MW53 and MW54 are completed in the Lower Gaspur Aquifer and concentrations of cDCE and 1,4-dioxane in these two wells is elevated. These compounds are likely related to the Cooper Drum Plume. As such, these wells should be included in an MNA monitoring plan.

3) **Section 1.4.2; penultimate bullet**. This bullet suggests that low concentrations of 1,4-dioxane and/or 1,2-DCA concentrations in the Phase 2 Remedial Action Area are

similar to upgradient areas. This conclusion should be more specific and supported with analytical data. 1,4-dioxane is clearly from the Cooper Drum source area as shown by the highest concentrations in Cooper Drum wells MW21 (up to 450 ug/L) and MW33A (up to 300 ug/L). These wells are on the Cooper Drum property and completed in the shallow Gaspur Aquifer.

4) **Section 1.4.3; 1st paragraph, last sentence**. Please note that the State Water Board considers all CA groundwater as beneficial; therefore, this argument (i.e., There is no beneficial use of the shallow groundwater and concentrations of arsenic and sulfate are well above the Cal EPA MCLs in the shallow aquifer), while logical, may not be acceptable from a State regulatory point of view.

5) **Section 1.4.3; 2nd paragraph, last sentence**. While this argument (i.e., dilution of sulfate concentration in the shallow aquifer, from above Cal EPA MCLs to below MCLs, during vertical migration to deeper water supply wells) may be generally true, it must also be noted that solvents (especially DNAPL) migration mechanisms could be very different than sulfate and other inorganics.

6) **Section 2.1.1; 1st sentence after TCE reductive dechlorination equation**. Start this sentence with, "With the exception of PCE."

7) **Section 2.3.1; 1st paragraph and table**. Please add the specific analysis (M-K, linear regression, or T-S) used to evaluate the specific trend listed. Also, please explain how a "stable" trend was identified, and how that is different from "No trend" (i.e. not enough samples). Is "no obvious trend" considered "stable"?

If you have any questions concerning these comments, please contact me at (415) 972-3219, or jurist.karen@epa.gov.

Sincerely,

Karen Jurist
Project Manager, Superfund Division

cc:
Dan Vineyard
Lindsey Moorhead
Lori Parnass
Tessa Berman
Don Gruber

APPENDIX B

Laboratory Analytical Reports

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

January 18, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-015-1

A874340 / 9A09015

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 01/09/19 14:53 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACI-010919-0001	9A09015-01	Vapor	5	01/09/19 11:45	01/09/19 14:53
SVE-VGACM-010919-0001	9A09015-02	Vapor	5	01/09/19 11:40	01/09/19 14:53
SVE-VGACE-010919-0001	9A09015-03	Vapor	5	01/09/19 11:35	01/09/19 14:53
TO-3 VOCs as Hexane					
SVE-VGACI-010919-0001	9A09015-01	Vapor	5	01/09/19 11:45	01/09/19 14:53
SVE-VGACM-010919-0001	9A09015-02	Vapor	5	01/09/19 11:40	01/09/19 14:53
SVE-VGACE-010919-0001	9A09015-03	Vapor	5	01/09/19 11:35	01/09/19 14:53

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACI-010919-0001

9A09015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.100	ug/L	0.050	<42	ppbv	21
Benzene	<0.019	ug/L	0.0096	<6.0	ppbv	3.0
Benzyl chloride	<0.10	ug/L	0.050	<19	ppbv	9.7
Bromodichloromethane	<0.10	ug/L	0.050	<15	ppbv	7.5
Bromoform	<0.099	ug/L	0.050	<9.6	ppbv	4.8
Bromomethane	<0.020	ug/L	0.010	<5.2	ppbv	2.6
2-Butanone (MEK)	<0.10	ug/L	0.050	<34	ppbv	17
Carbon Disulfide	<0.100	ug/L	0.050	<32	ppbv	16
Carbon Tetrachloride	<0.026	ug/L	0.013	<4.2	ppbv	2.1
Chlorobenzene	<0.020	ug/L	0.010	<4.4	ppbv	2.2
Chloroethane	<0.020	ug/L	0.010	<7.6	ppbv	3.8
Chloroform	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Chloromethane	<0.020	ug/L	0.0099	<9.6	ppbv	4.8
Dibromochloromethane	<0.039	ug/L	0.020	<4.6	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.040	ug/L	0.020	<5.2	ppbv	2.6
1,2-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,3-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,4-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.099	ug/L	0.049	<20	ppbv	10
1,1-Dichloroethane	**0.046**	ug/L	0.0081	**11**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.020	ug/L	0.010	<5.0	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACI-010919-0001

9A09015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.16**	ug/L	0.0079	**41**	ppbv	2.0
1,1-Dichloroethylene	**0.021**	ug/L	0.0079	**5.4**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.016**	ug/L	0.0079	**4.1**	ppbv	2.0
1,2-Dichloropropane	<0.020	ug/L	0.010	<4.4	ppbv	2.2
trans-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
cis-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
Dichlorotetrafluoroethane	<0.10	ug/L	0.050	<14	ppbv	7.2
1,4-Dioxane	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Ethylbenzene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
4-Ethyltoluene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Hexachlorobutadiene	<0.10	ug/L	0.050	<9.4	ppbv	4.7
2-Hexanone (MBK)	<0.098	ug/L	0.049	<24	ppbv	12
Isopropanol (IPA)	<0.20	ug/L	0.10	<82	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Methylene Chloride	<0.097	ug/L	0.049	<28	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.098	ug/L	0.049	<24	ppbv	12
Styrene	<0.020	ug/L	0.0098	<4.6	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.10	ug/L	0.050	<15	ppbv	7.3
Tetrachloroethylene (PCE)	**0.90**	ug/L	0.014	**130**	ppbv	2.0
Toluene	<0.098	ug/L	0.049	<26	ppbv	13
1,2,4-Trichlorobenzene	<0.040	ug/L	0.020	<5.4	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACI-010919-0001

9A09015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
1,1,1-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
Trichloroethylene (TCE)	**0.37**	ug/L	0.011	**69**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.10	ug/L	0.050	<18	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.100	ug/L	0.050	<13	ppbv	6.5
1,3,5-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Vinyl acetate	<0.020	ug/L	0.0099	<5.6	ppbv	2.8
Vinyl chloride	<0.020	ug/L	0.01	<7.8	ppbv	3.9
o-Xylene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
m,p-Xylenes	<0.020	ug/L	0.01	<4.6	ppbv	2.3
1,2,3-Trichloropropane	<0.024	ug/L	0.012	<4.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	103 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACM-010919-0001

9A09015-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.100	ug/L	0.050	<42	ppbv	21
Benzene	<0.019	ug/L	0.0096	<6.0	ppbv	3.0
Benzyl chloride	<0.10	ug/L	0.050	<19	ppbv	9.7
Bromodichloromethane	<0.10	ug/L	0.050	<15	ppbv	7.5
Bromoform	<0.099	ug/L	0.050	<9.6	ppbv	4.8
Bromomethane	<0.020	ug/L	0.010	<5.2	ppbv	2.6
2-Butanone (MEK)	<0.10	ug/L	0.050	<34	ppbv	17
Carbon Disulfide	<0.100	ug/L	0.050	<32	ppbv	16
Carbon Tetrachloride	<0.026	ug/L	0.013	<4.2	ppbv	2.1
Chlorobenzene	<0.020	ug/L	0.010	<4.4	ppbv	2.2
Chloroethane	<0.020	ug/L	0.010	<7.6	ppbv	3.8
Chloroform	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Chloromethane	<0.020	ug/L	0.0099	<9.6	ppbv	4.8
Dibromochloromethane	<0.039	ug/L	0.020	<4.6	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.040	ug/L	0.020	<5.2	ppbv	2.6
1,2-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,3-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,4-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.099	ug/L	0.049	<20	ppbv	10
1,1-Dichloroethane	**0.056**	ug/L	0.0081	**14**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.020	ug/L	0.010	<5.0	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACM-010919-0001

9A09015-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.16**	ug/L	0.0079	**41**	ppbv	2.0
1,1-Dichloroethylene	**0.024**	ug/L	0.0079	**6.1**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.018**	ug/L	0.0079	**4.6**	ppbv	2.0
1,2-Dichloropropane	<0.020	ug/L	0.010	<4.4	ppbv	2.2
trans-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
cis-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
Dichlorotetrafluoroethane	<0.10	ug/L	0.050	<14	ppbv	7.2
1,4-Dioxane	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Ethylbenzene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
4-Ethyltoluene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Hexachlorobutadiene	<0.10	ug/L	0.050	<9.4	ppbv	4.7
2-Hexanone (MBK)	<0.098	ug/L	0.049	<24	ppbv	12
Isopropanol (IPA)	<0.20	ug/L	0.10	<82	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Methylene Chloride	<0.097	ug/L	0.049	<28	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.098	ug/L	0.049	<24	ppbv	12
Styrene	<0.020	ug/L	0.0098	<4.6	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.10	ug/L	0.050	<15	ppbv	7.3
Tetrachloroethylene (PCE)	**0.23**	ug/L	0.014	**34**	ppbv	2.0
Toluene	<0.098	ug/L	0.049	<26	ppbv	13
1,2,4-Trichlorobenzene	<0.040	ug/L	0.020	<5.4	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	2	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACM-010919-0001

9A09015-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
1,1,1-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
Trichloroethylene (TCE)	**0.24**	ug/L	0.011	**46**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.10	ug/L	0.050	<18	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.100	ug/L	0.050	<13	ppbv	6.5
1,3,5-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Vinyl acetate	<0.020	ug/L	0.0099	<5.6	ppbv	2.8
Vinyl chloride	<0.020	ug/L	0.01	<7.8	ppbv	3.9
o-Xylene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
m,p-Xylenes	<0.020	ug/L	0.01	<4.6	ppbv	2.3
1,2,3-Trichloropropane	<0.024	ug/L	0.012	<4.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	100 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	0.25	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACE-010919-0001

9A09015-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.012**	ug/L	0.0081	**3.1**	ppbv	2.0
1,2-Dichloroethane (EDC)	**0.0038**	ug/L	0.010	**0.93**	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	0.25	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACE-010919-0001

9A09015-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.033**	ug/L	0.0079	**8.3**	ppbv	2.0
1,1-Dichloroethylene	**0.0057**	ug/L	0.0079	**1.4**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.0035**	ug/L	0.0079	**0.90**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	<0.0034	ug/L	0.014	<0.50	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Matrix:	Vapor	**Sampled:**	01/09/19
Dilution:	0.25	**Prepared:**	01/10/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	01/10/19

SVE-VGACE-010919-0001

9A09015-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	<0.0027	ug/L	0.011	<0.50	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	**0.0035**	ug/L	0.01	**1.4**	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	107 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate
Method: VOCs by EPA TO-3 GC/MS

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19
Units: ppbv

Date Sampled:	01/09/19	01/09/19	01/09/19	
Date Prepared:	01/10/19	01/10/19	01/10/19	
Date Analyzed:	01/10/19	01/10/19	01/10/19	
AA ID No:	9A09015-01	9A09015-02	9A09015-03	
Client ID No:	SVE-VGACI-010919-0001	SVE-VGACM-010919-0001	SVE-VGACE-010919-0001	
Matrix:	Vapor	Vapor	Vapor	
Dilution Factor:	1	1	1	MRL
TO-3 VOCs as Hexane (TO-3)				
TNMOC as Hexane	<1200	<1200	<1200	1200
Surrogates				**%REC Limits**
4-Bromofluorobenzene	106%	102%	109%	70-130

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
Blank (B9A1421-BLK1)				Prepared & Analyzed: 01/10/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
Blank (B9A1421-BLK1) Continued				Prepared & Analyzed: 01/10/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*19.6*		*ppbv*	*20*		*97.8*	*70-130*			
LCS (B9A1421-BS1)				Prepared & Analyzed: 01/10/19						
Acetone	**38.2**	21	ppbv	40		95.6	70-130		30	
Benzene	**40.5**	3.0	ppbv	40		101	70-130		30	
Benzyl chloride	**44.6**	9.7	ppbv	40		112	70-130		30	
Bromodichloromethane	**43.3**	7.5	ppbv	40		108	70-130		30	
Bromoform	**43.5**	4.8	ppbv	40		109	70-130		30	
Bromomethane	**40.6**	2.6	ppbv	40		101	70-130		30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
LCS (B9A1421-BS1) Continued				Prepared & Analyzed: 01/10/19						
2-Butanone (MEK)	**42.5**	17	ppbv	40		106	70-130		30	
Carbon Disulfide	**41.2**	16	ppbv	40		103	70-130		30	
Carbon Tetrachloride	**42.1**	2.1	ppbv	40		105	70-130		30	
Chlorobenzene	**40.4**	2.2	ppbv	40		101	70-130		30	
Chloroethane	**42.9**	3.8	ppbv	40		107	70-130		30	
Chloroform	**41.4**	2.0	ppbv	40		103	70-130		30	
Chloromethane	**46.7**	4.8	ppbv	40		117	70-130		30	
Dibromochloromethane	**43.1**	2.3	ppbv	40		108	70-130		30	
1,2-Dibromoethane (EDB)	**42.4**	2.6	ppbv	40		106	70-130		30	
1,2-Dichlorobenzene	**38.7**	3.3	ppbv	40		96.8	70-130		30	
1,3-Dichlorobenzene	**36.9**	3.3	ppbv	40		92.2	70-130		30	
1,4-Dichlorobenzene	**39.2**	3.3	ppbv	40		98.0	70-130		30	
Dichlorodifluoromethane (R12)	**38.0**	10	ppbv	40		95.0	70-130		30	
1,1-Dichloroethane	**40.2**	2.0	ppbv	40		101	70-130		30	
1,2-Dichloroethane (EDC)	**43.5**	2.5	ppbv	40		109	70-130		30	
cis-1,2-Dichloroethylene	**40.1**	2.0	ppbv	40		100	70-130		30	
1,1-Dichloroethylene	**41.9**	2.0	ppbv	40		105	70-130		30	
trans-1,2-Dichloroethylene	**41.6**	2.0	ppbv	40		104	70-130		30	
1,2-Dichloropropane	**42.1**	2.2	ppbv	40		105	70-130		30	
trans-1,3-Dichloropropylene	**43.5**	2.2	ppbv	40		109	70-130		30	
cis-1,3-Dichloropropylene	**42.6**	2.2	ppbv	40		106	70-130		30	
Dichlorotetrafluoroethane	**33.6**	7.2	ppbv	40		84.0	70-130		30	
Ethylbenzene	**37.9**	2.3	ppbv	40		94.7	70-130		30	
4-Ethyltoluene	**43.8**	2.0	ppbv	40		110	70-130		30	
Hexachlorobutadiene	**34.2**	4.7	ppbv	40		85.5	70-130		30	
2-Hexanone (MBK)	**43.9**	12	ppbv	40		110	70-130		30	
Isopropanol (IPA)	**46.1**	41	ppbv	40		115	70-130		30	
Methylene Chloride	**34.2**	14	ppbv	40		85.4	70-130		30	
4-Methyl-2-pentanone (MIBK)	**47.1**	12	ppbv	40		118	70-130		30	
Styrene	**39.8**	2.3	ppbv	40		99.4	70-130		30	
1,1,2,2-Tetrachloroethane	**37.3**	7.3	ppbv	40		93.3	70-130		30	
Tetrachloroethylene (PCE)	**38.9**	2.0	ppbv	40		97.3	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
LCS (B9A1421-BS1) Continued				Prepared & Analyzed: 01/10/19						
Toluene	**41.0**	13	ppbv	40		102	70-130		30	
1,2,4-Trichlorobenzene	**32.8**	2.7	ppbv	40		82.0	70-130		30	
1,1,2-Trichloroethane	**42.2**	3.7	ppbv	40		105	70-130		30	
1,1,1-Trichloroethane	**42.3**	3.7	ppbv	40		106	70-130		30	
Trichloroethylene (TCE)	**35.6**	2.0	ppbv	40		89.1	70-130		30	
Trichlorofluoromethane (R11)	**42.9**	8.9	ppbv	40		107	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**40.8**	6.5	ppbv	40		102	70-130		30	
1,3,5-Trimethylbenzene	**39.9**	2.0	ppbv	40		99.7	70-130		30	
1,2,4-Trimethylbenzene	**38.0**	2.0	ppbv	40		95.1	70-130		30	
Vinyl acetate	**40.0**	2.8	ppbv	40		100	70-130		30	
Vinyl chloride	**43.9**	3.9	ppbv	40		110	70-130		30	
o-Xylene	**37.3**	2.3	ppbv	40		93.3	70-130		30	
m,p-Xylenes	**83.1**	2.3	ppbv	80		104	70-130		30	
1,2,3-Trichloropropane	**44.9**	2.0	ppbv	40		112	70-130		30	
Surrogate: 4-Bromofluorobenzene	*20.0*		*ppbv*	*20*		*99.8*	*70-130*			
LCS Dup (B9A1421-BSD1)				Prepared & Analyzed: 01/11/19						
Acetone	**39.1**	21	ppbv	40		97.7	70-130	2.22	30	
Benzene	**40.1**	3.0	ppbv	40		100	70-130	0.893	30	
Benzyl chloride	**45.8**	9.7	ppbv	40		115	70-130	2.65	30	
Bromodichloromethane	**43.3**	7.5	ppbv	40		108	70-130	0.0462	30	
Bromoform	**44.1**	4.8	ppbv	40		110	70-130	1.28	30	
Bromomethane	**39.9**	2.6	ppbv	40		99.8	70-130	1.62	30	
2-Butanone (MEK)	**41.1**	17	ppbv	40		103	70-130	3.42	30	
Carbon Disulfide	**40.5**	16	ppbv	40		101	70-130	1.59	30	
Carbon Tetrachloride	**42.0**	2.1	ppbv	40		105	70-130	0.0951	30	
Chlorobenzene	**39.8**	2.2	ppbv	40		99.5	70-130	1.57	30	
Chloroethane	**39.9**	3.8	ppbv	40		99.8	70-130	7.13	30	
Chloroform	**41.4**	2.0	ppbv	40		103	70-130	0.00	30	
Chloromethane	**38.0**	4.8	ppbv	40		94.9	70-130	20.6	30	
Dibromochloromethane	**43.8**	2.3	ppbv	40		110	70-130	1.66	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
LCS Dup (B9A1421-BSD1) Continued				Prepared & Analyzed: 01/11/19						
1,2-Dibromoethane (EDB)	**42.8**	2.6	ppbv	40		107	70-130	0.798	30	
1,2-Dichlorobenzene	**40.3**	3.3	ppbv	40		101	70-130	3.92	30	
1,3-Dichlorobenzene	**39.7**	3.3	ppbv	40		99.2	70-130	7.32	30	
1,4-Dichlorobenzene	**40.3**	3.3	ppbv	40		101	70-130	2.84	30	
Dichlorodifluoromethane (R12)	**36.7**	10	ppbv	40		91.8	70-130	3.43	30	
1,1-Dichloroethane	**40.2**	2.0	ppbv	40		100	70-130	0.224	30	
1,2-Dichloroethane (EDC)	**42.6**	2.5	ppbv	40		107	70-130	2.14	30	
cis-1,2-Dichloroethylene	**39.5**	2.0	ppbv	40		98.7	70-130	1.46	30	
1,1-Dichloroethylene	**42.0**	2.0	ppbv	40		105	70-130	0.357	30	
trans-1,2-Dichloroethylene	**40.8**	2.0	ppbv	40		102	70-130	1.94	30	
1,2-Dichloropropane	**41.5**	2.2	ppbv	40		104	70-130	1.46	30	
trans-1,3-Dichloropropylene	**42.7**	2.2	ppbv	40		107	70-130	1.79	30	
cis-1,3-Dichloropropylene	**42.2**	2.2	ppbv	40		106	70-130	0.849	30	
Dichlorotetrafluoroethane	**32.7**	7.2	ppbv	40		81.6	70-130	2.81	30	
Ethylbenzene	**38.6**	2.3	ppbv	40		96.4	70-130	1.75	30	
4-Ethyltoluene	**41.8**	2.0	ppbv	40		104	70-130	4.86	30	
Hexachlorobutadiene	**37.2**	4.7	ppbv	40		92.9	70-130	8.32	30	
2-Hexanone (MBK)	**44.1**	12	ppbv	40		110	70-130	0.568	30	
Isopropanol (IPA)	**47.2**	41	ppbv	40		118	70-130	2.33	30	
Methylene Chloride	**33.3**	14	ppbv	40		83.2	70-130	2.64	30	
4-Methyl-2-pentanone (MIBK)	**47.6**	12	ppbv	40		119	70-130	1.08	30	
Styrene	**40.9**	2.3	ppbv	40		102	70-130	2.75	30	
1,1,2,2-Tetrachloroethane	**32.8**	7.3	ppbv	40		82.1	70-130	12.8	30	
Tetrachloroethylene (PCE)	**38.8**	2.0	ppbv	40		97.0	70-130	0.257	30	
Toluene	**40.8**	13	ppbv	40		102	70-130	0.293	30	
1,2,4-Trichlorobenzene	**36.2**	2.7	ppbv	40		90.6	70-130	9.97	30	
1,1,2-Trichloroethane	**42.2**	3.7	ppbv	40		105	70-130	0.0237	30	
1,1,1-Trichloroethane	**41.7**	3.7	ppbv	40		104	70-130	1.33	30	
Trichloroethylene (TCE)	**36.4**	2.0	ppbv	40		91.0	70-130	2.05	30	
Trichlorofluoromethane (R11)	**42.7**	8.9	ppbv	40		107	70-130	0.607	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**40.6**	6.5	ppbv	40		102	70-130	0.319	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874340
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9A1421 - *** DEFAULT PREP ****										
LCS Dup (B9A1421-BSD1) Continued				Prepared & Analyzed: 01/11/19						
1,3,5-Trimethylbenzene	**40.9**	2.0	ppbv	40		102	70-130	2.50	30	
1,2,4-Trimethylbenzene	**40.0**	2.0	ppbv	40		100	70-130	5.02	30	
Vinyl acetate	**40.2**	2.8	ppbv	40		100	70-130	0.274	30	
Vinyl chloride	**43.4**	3.9	ppbv	40		108	70-130	1.26	30	
o-Xylene	**37.6**	2.3	ppbv	40		93.9	70-130	0.668	30	
m,p-Xylenes	**83.8**	2.3	ppbv	80		105	70-130	0.755	30	
1,2,3-Trichloropropane	**44.9**	2.0	ppbv	40		112	70-130	0.0445	30	
Surrogate: 4-Bromofluorobenzene	*20.2*		*ppbv*	*20*		*101*	*70-130*			
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9A1552 - *** DEFAULT PREP ****										
Blank (B9A1552-BLK1)				Prepared & Analyzed: 01/10/19						
TNMOC as Hexane	<1200	1200	ppbv							
Surrogate: 4-Bromofluorobenzene	*4.91*		*ppbv*	*5.0*		*98.2*	*70-130*			
LCS (B9A1552-BS1)				Prepared & Analyzed: 01/11/19						
GRO as Hexane	**178**	1200	ppbv	200		89.1	70-130		30	
Surrogate: 4-Bromofluorobenzene	*5.05*		*ppbv*	*5.0*		*101*	*70-130*			
LCS Dup (B9A1552-BSD1)				Prepared & Analyzed: 01/11/19						
GRO as Hexane	**178**	1200	ppbv	200		88.9	70-130	0.208	30	
Surrogate: 4-Bromofluorobenzene	*5.14*		*ppbv*	*5.0*		*103*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874340
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19

Special Notes

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 17373
70054044
Page 1 of 1

Client: Haley-Aldrich; JHA Environmental Inc. Project Name / No.: Cooper Drum Sampler's Name: Alex Felix
Project Manager: Chris Tsiatsios / Matt Hillman Site Address: 9313 Rayo Ave Sampler's Signature: Alex Felix
Phone: 714-371-1820 / 714-392-5970 City: South Gate P.O. No.:
Fax: 949-453-1047 State & Zip: CA Quote No.:

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Please enter the TAT Turnaround Codes ** below

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15									Special Instructions
SVE-VGACI-010919-0001	9A09015-01	1-9-19	1145	VAPOR	1	X	X									
SVE-VGACM-010919-0001	-02	1-9-19	1140	VAPOR	1	X	X									
SVE-VGACE-010919-0001	-03	1-9-19	1135	VAPOR	1	X	X									

'19 JAN 9 2:53PM

For Laboratory Use

PRIORITY
Rush ___ Hrs SH ✓
Date 1/9/19 Time 1530 Sign

A.A. Project No.: A874340/9A09015

Relinquished by	Date	Time	Received by
Alex Felix	1-9-19	1301	
	1-9-19	1453	

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

January 18, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-015-1

A874341 / 9A09016

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 01/09/19 14:53 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-010919-0001	9A09016-01	Water	5	01/09/19 12:05	01/09/19 14:53
TOTAL-EFF-010919-0001	9A09016-02	Water	5	01/09/19 11:55	01/09/19 14:53
8270CM 1,4-Dioxane Only					
EW-INF-010919-0001	9A09016-01	Water	5	01/09/19 12:05	01/09/19 14:53
TOTAL-EFF-010919-0001	9A09016-02	Water	5	01/09/19 11:55	01/09/19 14:53

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9A09016-01	EW-INF-010919-0001	01/09/19	01/10/19	01/11/19	1	**8.5**	ug/L	1	2
9A09016-02	TOTAL-EFF-010919-0001	01/09/19	01/10/19	01/11/19	1	**8.4**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874341
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	01/09/19	01/09/19		
Date Prepared:	01/11/19	01/11/19		
Date Analyzed:	01/11/19	01/11/19		
AA ID No:	9A09016-01	9A09016-02		
Client ID No:	EW-INF-010919-0001	TOTAL-EFF-010919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<2.0	<2.0	2.0	10
Benzene	**1.8**	**1.5**	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874341
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	01/09/19	01/09/19		
Date Prepared:	01/11/19	01/11/19		
Date Analyzed:	01/11/19	01/11/19		
AA ID No:	9A09016-01	9A09016-02		
Client ID No:	EW-INF-010919-0001	TOTAL-EFF-010919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	**1.9**	**1.4**	0.20	0.50
1,2-Dichloroethane (EDC)	**2.5**	**1.7**	0.30	0.50
cis-1,2-Dichloroethylene	**40**	**31**	0.20	0.50
1,1-Dichloroethylene	**0.86**	**0.60**	0.30	0.50
trans-1,2-Dichloroethylene	**5.3**	**3.5**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19
Units: ug/L

Date Sampled:	01/09/19	01/09/19		
Date Prepared:	01/11/19	01/11/19		
Date Analyzed:	01/11/19	01/11/19		
AA ID No:	9A09016-01	9A09016-02		
Client ID No:	EW-INF-010919-0001	TOTAL-EFF-010919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**2.3**	**1.6**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.50	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0
Surrogates				**%REC Limits**
4-Bromofluorobenzene	116%	116%		70-140
Dibromofluoromethane	136%	119%		70-140
Toluene-d8	103%	106%		70-140

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9A1004 - EPA 3510C_MS										
Blank (B9A1004-BLK1)				Prepared: 01/10/19	Analyzed: 01/11/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9A1004-BS1)				Prepared: 01/10/19	Analyzed: 01/11/19					
1,4-Dioxane	**10.5**	1.0	ug/L	10		105	75-125			
LCS Dup (B9A1004-BSD1)				Prepared: 01/10/19	Analyzed: 01/11/19					
1,4-Dioxane	**12.4**	1.0	ug/L	10		124	75-125	16.1	30	
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Blank (B9A1106-BLK1)				Prepared & Analyzed: 01/11/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Blank (B9A1106-BLK1) Continued				Prepared & Analyzed: 01/11/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Blank (B9A1106-BLK1) Continued				Prepared & Analyzed: 01/11/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*49.4*		*ug/L*	*50*		*98.9*	*70-140*			
Surrogate: Dibromofluoromethane	*45.3*		*ug/L*	*50*		*90.6*	*70-140*			
Surrogate: Toluene-d8	*49.5*		*ug/L*	*50*		*99.0*	*70-140*			
LCS (B9A1106-BS1)				Prepared & Analyzed: 01/11/19						
Acetone	**17.0**	2.0	ug/L	20		85.2	50-150			
Benzene	**16.0**	0.20	ug/L	20		80.0	75-125			
Bromobenzene	**21.8**	0.30	ug/L	20		109	50-150			
Bromochloromethane	**17.3**	0.50	ug/L	20		86.6	50-150			
Bromodichloromethane	**18.1**	0.20	ug/L	20		90.5	75-125			
Bromoform	**18.8**	0.50	ug/L	20		94.2	75-125			
Bromomethane	**28.6**	0.50	ug/L	20		143	75-125			**
2-Butanone (MEK)	**19.5**	2.0	ug/L	20		97.5	50-150			
tert-Butylbenzene	**22.8**	0.20	ug/L	20		114	50-150			
n-Butylbenzene	**22.6**	0.20	ug/L	20		113	50-150			
sec-Butylbenzene	**23.0**	0.20	ug/L	20		115	50-150			
Carbon Disulfide	**15.2**	0.30	ug/L	20		76.0	50-150			
Carbon Tetrachloride	**20.0**	0.30	ug/L	20		100	75-125			
Chlorobenzene	**22.2**	0.30	ug/L	20		111	75-125			
Chloroethane	**19.1**	0.50	ug/L	20		95.6	75-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
LCS (B9A1106-BS1) Continued				Prepared & Analyzed: 01/11/19						
Chloroform	**18.4**	0.30	ug/L	20		92.0	75-125			
Chloromethane	**23.3**	0.40	ug/L	20		116	65-125			
4-Chlorotoluene	**21.7**	0.20	ug/L	20		108	65-125			
2-Chlorotoluene	**22.8**	0.30	ug/L	20		114	65-125			
1,2-Dibromo-3-chloropropane	**16.6**	0.40	ug/L	20		83.0	65-125			
Dibromochloromethane	**20.0**	0.30	ug/L	20		99.8	75-125			
1,2-Dibromoethane (EDB)	**18.1**	0.30	ug/L	20		90.3	65-125			
Dibromomethane	**15.9**	0.40	ug/L	20		79.7	65-125			
1,3-Dichlorobenzene	**21.7**	0.10	ug/L	20		108	65-125			
1,4-Dichlorobenzene	**21.8**	0.30	ug/L	20		109	75-125			
1,2-Dichlorobenzene	**22.0**	0.30	ug/L	20		110	65-125			
Dichlorodifluoromethane (R12)	**23.1**	0.50	ug/L	20		116	50-150			
1,1-Dichloroethane	**18.2**	0.20	ug/L	20		90.9	70-125			
1,2-Dichloroethane (EDC)	**19.4**	0.30	ug/L	20		97.0	75-125			
cis-1,2-Dichloroethylene	**16.7**	0.20	ug/L	20		83.7	75-125			
1,1-Dichloroethylene	**17.3**	0.30	ug/L	20		86.6	70-130			
trans-1,2-Dichloroethylene	**16.2**	0.40	ug/L	20		81.2	75-125			
1,3-Dichloropropane	**18.6**	0.10	ug/L	20		93.2	65-125			
1,2-Dichloropropane	**17.9**	0.50	ug/L	20		89.6	75-130			
2,2-Dichloropropane	**18.8**	0.40	ug/L	20		93.8	65-125			
trans-1,3-Dichloropropylene	**19.6**	0.20	ug/L	20		98.0	65-125			
1,1-Dichloropropylene	**19.1**	0.20	ug/L	20		95.5	65-125			
cis-1,3-Dichloropropylene	**17.8**	0.20	ug/L	20		88.8	75-125			
Ethylbenzene	**22.5**	0.20	ug/L	20		112	75-125			
Hexachlorobutadiene	**23.0**	0.40	ug/L	20		115	65-125			
2-Hexanone (MBK)	**15.5**	2.0	ug/L	20		77.4	65-125			
Isopropylbenzene	**22.4**	0.20	ug/L	20		112	65-125			
4-Isopropyltoluene	**23.3**	0.20	ug/L	20		117	65-125			
Methyl-tert-Butyl Ether (MTBE)	**32.8**	1.7	ug/L	40		81.9	75-125			
Methylene Chloride	**11.8**	5.0	ug/L	20		59.0	75-130			***
4-Methyl-2-pentanone (MIBK)	**18.9**	0.70	ug/L	20		94.4	65-125			
Naphthalene	**17.5**	0.20	ug/L	20		87.4	65-125			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
LCS (B9A1106-BS1) Continued				Prepared & Analyzed: 01/11/19						
n-Propylbenzene	**22.8**	0.20	ug/L	20		114	65-125			
Styrene	**22.4**	0.20	ug/L	20		112	65-125			
1,1,1,2-Tetrachloroethane	**21.8**	0.40	ug/L	20		109	65-125			
1,1,2,2-Tetrachloroethane	**15.7**	0.30	ug/L	20		78.3	70-135			
Tetrachloroethylene (PCE)	**21.8**	0.50	ug/L	20		109	75-125			
Toluene	**21.1**	0.30	ug/L	20		106	75-125			
1,2,3-Trichlorobenzene	**19.8**	0.20	ug/L	20		98.8	65-125			
1,1,2-Trichloroethane	**17.9**	0.30	ug/L	20		89.7	75-125			
1,1,1-Trichloroethane	**20.4**	0.30	ug/L	20		102	75-125			
Trichloroethylene (TCE)	**18.2**	0.20	ug/L	20		91.2	75-125			
Trichlorofluoromethane (R11)	**19.6**	0.20	ug/L	20		98.2	65-125			
1,2,3-Trichloropropane	**18.0**	0.30	ug/L	20		89.9	65-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.3**	0.30	ug/L	20		76.4	65-125			
1,2,4-Trimethylbenzene	**22.6**	0.30	ug/L	20		113	65-125			
1,3,5-Trimethylbenzene	**22.8**	0.20	ug/L	20		114	65-125			
Vinyl chloride	**22.5**	0.50	ug/L	20		113	75-125			
o-Xylene	**21.7**	0.30	ug/L	20		109	75-125			
m,p-Xylenes	**43.6**	0.40	ug/L	40		109	65-125			
Surrogate: 4-Bromofluorobenzene	*47.9*		*ug/L*	*50*		*95.9*	*70-140*			
Surrogate: Dibromofluoromethane	*43.8*		*ug/L*	*50*		*87.7*	*70-140*			
Surrogate: Toluene-d8	*49.6*		*ug/L*	*50*		*99.1*	*70-140*			
Matrix Spike (B9A1106-MS1)			**Source: 9A08011-01**	Prepared & Analyzed: 01/11/19						
Acetone	**19.9**	2.0	ug/L	20		99.5	50-150			
Benzene	**19.4**	0.20	ug/L	20		96.9	70-130			
Bromobenzene	**20.0**	0.30	ug/L	20		100	50-150			
Bromochloromethane	**20.3**	0.50	ug/L	20		102	50-150			
Bromodichloromethane	**23.0**	0.20	ug/L	20		115	50-150			
Bromoform	**21.3**	0.50	ug/L	20		106	70-130			
Bromomethane	**22.8**	0.50	ug/L	20		114	50-150			
2-Butanone (MEK)	**19.2**	2.0	ug/L	20		96.2	50-150			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Matrix Spike (B9A1106-MS1) Continued	**Source: 9A08011-01**	Prepared & Analyzed: 01/11/19								
tert-Butylbenzene	**22.4**	0.20	ug/L	20		112	50-150			
n-Butylbenzene	**23.1**	0.20	ug/L	20		115	50-150			
sec-Butylbenzene	**23.0**	0.20	ug/L	20		115	50-150			
Carbon Disulfide	**17.6**	0.30	ug/L	20		88.0	50-150			
Carbon Tetrachloride	**24.2**	0.30	ug/L	20		121	50-150			
Chlorobenzene	**22.8**	0.30	ug/L	20		114	70-130			
Chloroethane	**21.4**	0.50	ug/L	20		107	50-150			
Chloroform	**20.0**	0.30	ug/L	20		99.8	70-130			
Chloromethane	**36.4**	0.40	ug/L	20		182	50-150			**
4-Chlorotoluene	**21.5**	0.20	ug/L	20		108	50-150			
2-Chlorotoluene	**23.0**	0.30	ug/L	20		115	50-150			
1,2-Dibromo-3-chloropropane	**18.9**	0.40	ug/L	20		94.6	50-150			
Dibromochloromethane	**22.1**	0.30	ug/L	20		110	50-150			
1,2-Dibromoethane (EDB)	**21.1**	0.30	ug/L	20		106	50-150			
Dibromomethane	**20.3**	0.40	ug/L	20		101	50-150			
1,3-Dichlorobenzene	**21.2**	0.10	ug/L	20		106	50-150			
1,4-Dichlorobenzene	**21.5**	0.30	ug/L	20		108	50-150			
1,2-Dichlorobenzene	**21.8**	0.30	ug/L	20		109	50-150			
Dichlorodifluoromethane (R12)	**26.0**	0.50	ug/L	20		130	50-150			
1,1-Dichloroethane	**19.4**	0.20	ug/L	20		97.2	70-130			
1,2-Dichloroethane (EDC)	**23.9**	0.30	ug/L	20		119	50-150			
cis-1,2-Dichloroethylene	**18.2**	0.20	ug/L	20		90.8	70-130			
1,1-Dichloroethylene	**18.9**	0.30	ug/L	20		94.5	70-130			
trans-1,2-Dichloroethylene	**16.9**	0.40	ug/L	20		84.4	50-150			
1,3-Dichloropropane	**21.2**	0.10	ug/L	20		106	50-150			
1,2-Dichloropropane	**22.9**	0.50	ug/L	20		114	70-130			
2,2-Dichloropropane	**21.9**	0.40	ug/L	20		110	50-150			
trans-1,3-Dichloropropylene	**21.3**	0.20	ug/L	20		107	50-150			
1,1-Dichloropropylene	**22.1**	0.20	ug/L	20		111	50-150			
cis-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20		109	50-150			
Ethylbenzene	**23.2**	0.20	ug/L	20		116	70-130			
Hexachlorobutadiene	**20.5**	0.40	ug/L	20		103	50-150			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Matrix Spike (B9A1106-MS1) Continued	**Source: 9A08011-01**		Prepared & Analyzed: 01/11/19							
2-Hexanone (MBK)	**18.9**	2.0	ug/L	20		94.6	50-150			
Isopropylbenzene	**21.6**	0.20	ug/L	20		108	50-150			
4-Isopropyltoluene	**23.0**	0.20	ug/L	20		115	50-150			
Methyl-tert-Butyl Ether (MTBE)	**39.6**	1.7	ug/L	40		98.9	70-130			
Methylene Chloride	**16.8**	5.0	ug/L	20		84.2	50-150			
4-Methyl-2-pentanone (MIBK)	**24.4**	0.70	ug/L	20		122	50-150			
Naphthalene	**18.0**	0.20	ug/L	20		89.9	50-150			
n-Propylbenzene	**22.2**	0.20	ug/L	20		111	70-130			
Styrene	**23.8**	0.20	ug/L	20		119	50-150			
1,1,1,2-Tetrachloroethane	**21.5**	0.40	ug/L	20		107	50-150			
1,1,2,2-Tetrachloroethane	**20.8**	0.30	ug/L	20		104	50-150			
Tetrachloroethylene (PCE)	**19.9**	0.50	ug/L	20		99.5	70-130			
Toluene	**21.9**	0.30	ug/L	20		110	70-130			
1,2,3-Trichlorobenzene	**18.3**	0.20	ug/L	20		91.7	50-150			
1,1,2-Trichloroethane	**20.1**	0.30	ug/L	20		101	50-150			
1,1,1-Trichloroethane	**24.4**	0.30	ug/L	20		122	70-130			
Trichloroethylene (TCE)	**22.2**	0.20	ug/L	20		111	70-130			
Trichlorofluoromethane (R11)	**16.4**	0.20	ug/L	20		82.2	50-150			
1,2,3-Trichloropropane	**22.8**	0.30	ug/L	20		114	50-150			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**17.9**	0.30	ug/L	20		89.6	50-150			
1,2,4-Trimethylbenzene	**22.4**	0.30	ug/L	20		112	50-150			
1,3,5-Trimethylbenzene	**22.1**	0.20	ug/L	20		110	70-130			
Vinyl chloride	**30.0**	0.50	ug/L	20		150	70-130			**
o-Xylene	**23.3**	0.30	ug/L	20		116	50-150			
m,p-Xylenes	**45.8**	0.40	ug/L	40		114	50-150			
Surrogate: 4-Bromofluorobenzene	*49.4*		*ug/L*	*50*		*98.8*	*70-140*			
Surrogate: Dibromofluoromethane	*49.3*		*ug/L*	*50*		*98.6*	*70-140*			
Surrogate: Toluene-d8	*51.6*		*ug/L*	*50*		*103*	*70-140*			
Matrix Spike Dup (B9A1106-MSD1)	**Source: 9A08011-01**		Prepared & Analyzed: 01/11/19							
Acetone	**23.0**	2.0	ug/L	20		115	50-150	14.3	30	

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Matrix Spike Dup (B9A1106-MSD1) Continued				**Source: 9A08011-01**		Prepared & Analyzed: 01/11/19				
Benzene	**18.2**	0.20	ug/L	20		90.8	70-130	6.55	30	
Bromobenzene	**21.3**	0.30	ug/L	20		107	50-150	6.24	30	
Bromochloromethane	**19.3**	0.50	ug/L	20		96.7	50-150	4.89	30	
Bromodichloromethane	**20.6**	0.20	ug/L	20		103	50-150	10.7	30	
Bromoform	**21.0**	0.50	ug/L	20		105	70-130	1.61	30	
Bromomethane	**28.4**	0.50	ug/L	20		142	50-150	21.8	30	
2-Butanone (MEK)	**20.1**	2.0	ug/L	20		100	50-150	4.22	30	
tert-Butylbenzene	**22.5**	0.20	ug/L	20		112	50-150	0.401	30	
n-Butylbenzene	**23.0**	0.20	ug/L	20		115	50-150	0.434	30	
sec-Butylbenzene	**23.2**	0.20	ug/L	20		116	50-150	0.692	30	
Carbon Disulfide	**17.4**	0.30	ug/L	20		87.0	50-150	1.26	30	
Carbon Tetrachloride	**22.0**	0.30	ug/L	20		110	50-150	9.69	30	
Chlorobenzene	**22.3**	0.30	ug/L	20		111	70-130	2.26	30	
Chloroethane	**22.0**	0.50	ug/L	20		110	50-150	2.72	30	
Chloroform	**19.2**	0.30	ug/L	20		95.8	70-130	4.04	30	
Chloromethane	**42.1**	0.40	ug/L	20		211	50-150	14.4	30	**
4-Chlorotoluene	**22.3**	0.20	ug/L	20		112	50-150	3.70	30	
2-Chlorotoluene	**23.0**	0.30	ug/L	20		115	50-150	0.00	30	
1,2-Dibromo-3-chloropropane	**21.0**	0.40	ug/L	20		105	50-150	10.3	30	
Dibromochloromethane	**21.5**	0.30	ug/L	20		108	50-150	2.61	30	
1,2-Dibromoethane (EDB)	**20.3**	0.30	ug/L	20		102	50-150	3.91	30	
Dibromomethane	**18.6**	0.40	ug/L	20		92.8	50-150	8.91	30	
1,3-Dichlorobenzene	**21.9**	0.10	ug/L	20		109	50-150	3.06	30	
1,4-Dichlorobenzene	**22.0**	0.30	ug/L	20		110	50-150	2.48	30	
1,2-Dichlorobenzene	**22.4**	0.30	ug/L	20		112	50-150	2.40	30	
Dichlorodifluoromethane (R12)	**26.4**	0.50	ug/L	20		132	50-150	1.30	30	
1,1-Dichloroethane	**19.2**	0.20	ug/L	20		95.8	70-130	1.40	30	
1,2-Dichloroethane (EDC)	**21.6**	0.30	ug/L	20		108	50-150	10.2	30	
cis-1,2-Dichloroethylene	**17.9**	0.20	ug/L	20		89.6	70-130	1.27	30	
1,1-Dichloroethylene	**19.0**	0.30	ug/L	20		94.9	70-130	0.422	30	
trans-1,2-Dichloroethylene	**16.6**	0.40	ug/L	20		82.8	50-150	1.92	30	

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Matrix Spike Dup (B9A1106-MSD1) Continued				**Source: 9A08011-01**		Prepared & Analyzed: 01/11/19				
1,3-Dichloropropane	**21.3**	0.10	ug/L	20		107	50-150	0.470	30	
1,2-Dichloropropane	**21.2**	0.50	ug/L	20		106	70-130	7.85	30	
2,2-Dichloropropane	**21.1**	0.40	ug/L	20		106	50-150	3.58	30	
trans-1,3-Dichloropropylene	**21.3**	0.20	ug/L	20		106	50-150	0.329	30	
1,1-Dichloropropylene	**21.2**	0.20	ug/L	20		106	50-150	4.43	30	
cis-1,3-Dichloropropylene	**20.0**	0.20	ug/L	20		100	50-150	8.29	30	
Ethylbenzene	**22.6**	0.20	ug/L	20		113	70-130	2.66	30	
Hexachlorobutadiene	**21.5**	0.40	ug/L	20		107	50-150	4.57	30	
2-Hexanone (MBK)	**19.6**	2.0	ug/L	20		98.1	50-150	3.58	30	
Isopropylbenzene	**21.5**	0.20	ug/L	20		107	50-150	0.558	30	
4-Isopropyltoluene	**23.0**	0.20	ug/L	20		115	50-150	0.130	30	
Methyl-tert-Butyl Ether (MTBE)	**38.6**	1.7	ug/L	40		96.4	70-130	2.51	30	
Methylene Chloride	**15.4**	5.0	ug/L	20		77.0	50-150	8.87	30	
4-Methyl-2-pentanone (MIBK)	**25.7**	0.70	ug/L	20		128	50-150	5.11	30	
Naphthalene	**19.7**	0.20	ug/L	20		98.4	50-150	8.98	30	
n-Propylbenzene	**23.0**	0.20	ug/L	20		115	70-130	3.19	30	
Styrene	**23.0**	0.20	ug/L	20		115	50-150	3.46	30	
1,1,1,2-Tetrachloroethane	**21.5**	0.40	ug/L	20		108	50-150	0.233	30	
1,1,2,2-Tetrachloroethane	**20.3**	0.30	ug/L	20		101	50-150	2.34	30	
Tetrachloroethylene (PCE)	**19.6**	0.50	ug/L	20		98.2	70-130	1.26	30	
Toluene	**21.0**	0.30	ug/L	20		105	70-130	4.28	30	
1,2,3-Trichlorobenzene	**20.0**	0.20	ug/L	20		100	50-150	8.66	30	
1,1,2-Trichloroethane	**20.5**	0.30	ug/L	20		102	50-150	1.73	30	
1,1,1-Trichloroethane	**22.5**	0.30	ug/L	20		112	70-130	8.14	30	
Trichloroethylene (TCE)	**20.4**	0.20	ug/L	20		102	70-130	8.26	30	
Trichlorofluoromethane (R11)	**20.1**	0.20	ug/L	20		101	50-150	20.1	30	
1,2,3-Trichloropropane	**22.4**	0.30	ug/L	20		112	50-150	1.90	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.7**	0.30	ug/L	20		83.3	50-150	7.34	30	
1,2,4-Trimethylbenzene	**22.9**	0.30	ug/L	20		114	50-150	2.39	30	
1,3,5-Trimethylbenzene	**22.4**	0.20	ug/L	20		112	70-130	1.48	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-015-1
Project Name: Cooper Drum - South Gate

AA Project No: A874341
Date Received: 01/09/19
Date Reported: 01/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9A1106 - EPA 5030B										
Matrix Spike Dup (B9A1106-MSD1) Continued				**Source: 9A08011-01**		Prepared & Analyzed: 01/11/19				
Vinyl chloride	**33.9**	0.50	ug/L	20		170	70-130	12.3	30	**
o-Xylene	**22.2**	0.30	ug/L	20		111	50-150	4.48	30	
m,p-Xylenes	**43.5**	0.40	ug/L	40		109	50-150	5.20	30	
Surrogate: 4-Bromofluorobenzene	*49.8*		*ug/L*	*50*		*99.6*	*70-140*			
Surrogate: Dibromofluoromethane	*45.3*		*ug/L*	*50*		*90.7*	*70-140*			
Surrogate: Toluene-d8	*50.9*		*ug/L*	*50*		*102*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874341
Project No:	130072-015-1	**Date Received:**	01/09/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	01/18/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = ******* : Exceeds lower control limit.

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 17374
70054043
Page 1 of 1

Client: Haley + Aldrich, JHA Environmental Inc.	Project Name / No.: Cooper Drum	Sampler's Name: Alex Felix	
Project Manager: Chris Tsimbidis / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature: Alex Felix	
Phone: 714-371-1820 / 714-392-5970	City: Southgate	P.O. No.:	
Fax: 949-453-1047	State & Zip: CA	Quote No.:	

TAT Turnaround Codes **

(1) = Same Day Rush
(2) = 24 Hour Rush
(3) = 48 Hour Rush
(4) = 72 Hour Rush
(5) = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Please enter the TAT Turnaround Codes ** below

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane 8270C								Special Instructions
EW-INF-010919-0001	9A0901 6-01	1-9-19	1205	H2O	4	X	X								
TOTAL-EFF-010919-0001	-02	1-9-19	1155	H2O	4	X	X								

19 JAN 9 2:53PM

For Laboratory Use

REVIEWED
Date 1/9/19 Time 1530
TAT N Days Sign:

A.A. Project No.: A87434 / 9A0901 6

	Relinquished by	Date	Time	Received by
1		1-9-19	1301	
2		1-9-19	1453	
3				

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 07, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874342 / 9B20009

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 02/20/19 17:58 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
VP-05A-022019-0001	9B20009-01	Vapor	5	02/20/19 09:55	02/20/19 17:58
VP-07C-022019-0001	9B20009-02	Vapor	5	02/20/19 09:40	02/20/19 17:58
VP-09D-022019-0001	9B20009-03	Vapor	5	02/20/19 10:51	02/20/19 17:58
VP-10B-022019-0001	9B20009-04	Vapor	5	02/20/19 08:57	02/20/19 17:58
VP-13B-022019-0001	9B20009-05	Vapor	5	02/20/19 09:07	02/20/19 17:58
VP-14A-022019-0001	9B20009-06	Vapor	5	02/20/19 08:00	02/20/19 17:58
VP-14B-022019-0001	9B20009-07	Vapor	5	02/20/19 08:05	02/20/19 17:58
VP-14C-022019-0001	9B20009-08	Vapor	5	02/20/19 08:07	02/20/19 17:58
VP-14D-022019-0001	9B20009-09	Vapor	5	02/20/19 08:10	02/20/19 17:58

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-05A-022019-0001

9B20009-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	**0.0032**	ug/L	0.010	**0.70**	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.018**	ug/L	0.0098	**3.7**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.015**	ug/L	0.020	**2.5**	ppbv	3.3
1,3-Dichlorobenzene	**0.023**	ug/L	0.020	**3.8**	ppbv	3.3
1,4-Dichlorobenzene	**0.035**	ug/L	0.020	**5.8**	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.063** **b	ug/L	0.0081	**16** **b	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-05A-022019-0001

9B20009-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.015**	ug/L	0.0079	**3.9**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	**0.046**	ug/L	0.0079	**12**	ppbv	2.0
1,2-Dichloropropane	**0.015**	ug/L	0.010	**3.2**	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.0055**	ug/L	0.010	**1.5**	ppbv	2.8
Ethylbenzene	**0.0074**	ug/L	0.01	**1.7**	ppbv	2.3
4-Ethyltoluene	**0.0036**	ug/L	0.0098	**0.73**	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	**0.016**	ug/L	0.049	**3.9**	ppbv	12
Styrene	**0.0034**	ug/L	0.0098	**0.79**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**2.2** **b	ug/L	0.014	**330** **b	ppbv	2.0
Toluene	**0.014**	ug/L	0.049	**3.6**	ppbv	13
1,2,4-Trichlorobenzene	**0.013**	ug/L	0.020	**1.8**	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-05A-022019-0001

9B20009-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	**0.020**	ug/L	0.020	**3.7**	ppbv	3.7
Trichloroethylene (TCE)	**0.27** **b	ug/L	0.011	**51** **b	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	**0.0038**	ug/L	0.0098	**0.78**	ppbv	2.0
1,2,4-Trimethylbenzene	**0.011**	ug/L	0.0098	**2.1**	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.024**	ug/L	0.01	**5.6**	ppbv	2.3
m,p-Xylenes	**0.024**	ug/L	0.01	**5.5**	ppbv	2.3
1,2,3-Trichloropropane	**0.013**	ug/L	0.012	**2.2**	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	110 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-07C-022019-0001

9B20009-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	**0.060**	ug/L	0.010	**13**	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.0085**	ug/L	0.0098	**1.7**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.15** **a	ug/L	0.020	**26** **a	ppbv	3.3
1,3-Dichlorobenzene	**0.019**	ug/L	0.020	**3.1**	ppbv	3.3
1,4-Dichlorobenzene	**0.021**	ug/L	0.020	**3.4**	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.025**	ug/L	0.0081	**6.2**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-07C-022019-0001

9B20009-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.076**	ug/L	0.0079	**19**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.78** **b	ug/L	0.014	**110** **b	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-07C-022019-0001

9B20009-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**3.4** **b	ug/L	0.011	**630** **b	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.0034**	ug/L	0.01	**0.78**	ppbv	2.3
m,p-Xylenes	**0.0042**	ug/L	0.01	**0.97**	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	106 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-09D-022019-0001

9B20009-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	**0.0031**	ug/L	0.0096	**0.97**	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.006**	ug/L	0.0098	**1.2**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.071**	ug/L	0.0081	**18**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	2	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

VP-09D-022019-0001

9B20009-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.26** **a	ug/L	0.0079	**65** **a	ppbv	2.0
1,1-Dichloroethylene	**0.014**	ug/L	0.0079	**3.6**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.046**	ug/L	0.0079	**12**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.037**	ug/L	0.014	**5.5**	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-09D-022019-0001

9B20009-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.74** **a	ug/L	0.011	**140** **a	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	114 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-10B-022019-0001

9B20009-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.050**	ug/L	0.050	**21**	ppbv	21
Benzene	**0.044**	ug/L	0.0096	**14**	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	**0.028**	ug/L	0.050	**9.5**	ppbv	17
Carbon Disulfide	**0.038**	ug/L	0.050	**12**	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	**0.089**	ug/L	0.010	**19**	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.0037**	ug/L	0.0098	**0.77**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.047**	ug/L	0.020	**7.7**	ppbv	3.3
1,3-Dichlorobenzene	**0.013**	ug/L	0.020	**2.1**	ppbv	3.3
1,4-Dichlorobenzene	**0.060**	ug/L	0.020	**9.9**	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.22** **a	ug/L	0.0081	**54** **a	ppbv	2.0
1,2-Dichloroethane (EDC)	**0.0041**	ug/L	0.010	**1.0**	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	2	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

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9B20009-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.46** **a	ug/L	0.0079	**120** **a	ppbv	2.0
1,1-Dichloroethylene	**0.058**	ug/L	0.0079	**15**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.12** **a	ug/L	0.0079	**32** **a	ppbv	2.0
1,2-Dichloropropane	**0.030**	ug/L	0.010	**6.4**	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.018**	ug/L	0.010	**5.1**	ppbv	2.8
Ethylbenzene	**0.21** **a	ug/L	0.01	**49** **a	ppbv	2.3
4-Ethyltoluene	**0.0086**	ug/L	0.0098	**1.7**	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	**0.048**	ug/L	0.10	**20**	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	**0.12** **a	ug/L	0.049	**30** **a	ppbv	12
Styrene	**0.041**	ug/L	0.0098	**9.7**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.73** **a	ug/L	0.014	**110** **a	ppbv	2.0
Toluene	**0.99** **b	ug/L	0.049	**260** **b	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-10B-022019-0001

9B20009-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.54** **a	ug/L	0.011	**100** **a	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	**0.012**	ug/L	0.0098	**2.3**	ppbv	2.0
1,2,4-Trimethylbenzene	**0.013**	ug/L	0.0098	**2.7**	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	**0.042**	ug/L	0.01	**16**	ppbv	3.9
o-Xylene	**0.29** **a	ug/L	0.01	**66** **a	ppbv	2.3
m,p-Xylenes	**0.50** **a	ug/L	0.01	**120** **a	ppbv	2.3
1,2,3-Trichloropropane	**0.024**	ug/L	0.012	**4.0**	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	106 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	12.5	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/28/19

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9B20009-05 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
Acetone	<0.62	**	ug/L	0.050	<260	**	ppbv	21
Benzene	**0.044**		ug/L	0.0096	**14**		ppbv	3.0
Benzyl chloride	<0.013		ug/L	0.050	<2.4		ppbv	9.7
Bromodichloromethane	<0.013		ug/L	0.050	<1.9		ppbv	7.5
Bromoform	<0.012		ug/L	0.050	<1.2		ppbv	4.8
Bromomethane	<0.0025		ug/L	0.010	<0.65		ppbv	2.6
2-Butanone (MEK)	**0.020**		ug/L	0.050	**6.8**		ppbv	17
Carbon Disulfide	**0.035**		ug/L	0.050	**11**		ppbv	16
Carbon Tetrachloride	<0.0033		ug/L	0.013	<0.52		ppbv	2.1
Chlorobenzene	<0.0025		ug/L	0.010	<0.55		ppbv	2.2
Chloroethane	<0.0025		ug/L	0.010	<0.95		ppbv	3.8
Chloroform	**0.014**		ug/L	0.0098	**2.9**		ppbv	2.0
Chloromethane	**0.0032**		ug/L	0.0099	**1.5**		ppbv	4.8
Dibromochloromethane	<0.0049		ug/L	0.020	<0.58		ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005		ug/L	0.020	<0.65		ppbv	2.6
1,2-Dichlorobenzene	**0.13**		ug/L	0.020	**22**		ppbv	3.3
1,3-Dichlorobenzene	**0.015**		ug/L	0.020	**2.5**		ppbv	3.3
1,4-Dichlorobenzene	**0.028**		ug/L	0.020	**4.7**		ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012		ug/L	0.049	<2.5		ppbv	10
1,1-Dichloroethane	**0.007**		ug/L	0.0081	**1.7**		ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025		ug/L	0.010	<0.62		ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

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9B20009-05 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.84** **	ug/L	0.010	**230** **	ppbv	2.8
4-Ethyltoluene	**0.19** **a	ug/L	0.0098	**38** **a	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	**0.012**	ug/L	0.010	**3.4**	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	**0.36** **a	ug/L	0.049	**89** **a	ppbv	12
Styrene	**0.0053**	ug/L	0.0098	**1.2**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**1.0** **a	ug/L	0.014	**150** **a	ppbv	2.0
Toluene	**0.28** **a	ug/L	0.049	**73** **a	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

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9B20009-05 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.023**	ug/L	0.011	**4.4**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	**0.19** **a	ug/L	0.0098	**39** **a	ppbv	2.0
1,2,4-Trimethylbenzene	**0.29** **a	ug/L	0.0098	**58** **a	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.70** **a	ug/L	0.01	**160** **a	ppbv	2.3
m,p-Xylenes	**1.2** **a	ug/L	0.01	**280** **a	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	102 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

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9B20009-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0037**	ug/L	0.0081	**0.91**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14A-022019-0001

9B20009-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.035**	ug/L	0.010	**9.7**	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.49** **a	ug/L	0.014	**73** **a	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14A-022019-0001

9B20009-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.021**	ug/L	0.011	**3.9**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	105 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14B-022019-0001

9B20009-07 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.019**	ug/L	0.050	**8.2**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	<0.002	ug/L	0.0081	<0.50	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14B-022019-0001

9B20009-07 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.015**	ug/L	0.010	**4.3**	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.051**	ug/L	0.014	**7.5**	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14B-022019-0001

9B20009-07 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	<0.0027	ug/L	0.011	<0.50	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	**0.0033**	ug/L	0.01	**0.76**	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	108 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14C-022019-0001

9B20009-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0035**	ug/L	0.0081	**0.86**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14C-022019-0001

9B20009-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.010**	ug/L	0.0079	**2.6**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	**0.0062**	ug/L	0.0079	**1.6**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.46** **a	ug/L	0.010	**130** **a	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.46** **a	ug/L	0.014	**68** **a	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14C-022019-0001

9B20009-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.064**	ug/L	0.011	**12**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	111 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	2	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

VP-14D-022019-0001

9B20009-09 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.14** **a	ug/L	0.050	**60** **a	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	**0.13** **a	ug/L	0.050	**43** **a	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.022**	ug/L	0.0098	**4.4**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0048**	ug/L	0.0081	**1.2**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14D-022019-0001

9B20009-09 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.0053**	ug/L	0.0079	**1.3**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	**0.0036**	ug/L	0.0079	**0.91**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.36** **a	ug/L	0.010	**99** **a	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	**0.045**	ug/L	0.10	**18**	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.30** **a	ug/L	0.014	**45** **a	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/21/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/21/19

VP-14D-022019-0001

9B20009-09 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.037**	ug/L	0.011	**7.0**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	106 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
Blank (B9C0119-BLK1)				Prepared & Analyzed: 02/21/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
Blank (B9C0119-BLK1) Continued				Prepared & Analyzed: 02/21/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*20.8*		*ppbv*	*20*		*104*	*70-130*			
LCS (B9C0119-BS1)				Prepared & Analyzed: 02/21/19						
Acetone	**39.7**	21	ppbv	40		99.2	70-130		30	
Benzene	**39.8**	3.0	ppbv	40		99.5	70-130		30	
Benzyl chloride	**46.2**	9.7	ppbv	40		115	70-130		30	
Bromodichloromethane	**42.9**	7.5	ppbv	40		107	70-130		30	
Bromoform	**46.1**	4.8	ppbv	40		115	70-130		30	
Bromomethane	**39.9**	2.6	ppbv	40		99.8	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS (B9C0119-BS1) Continued				Prepared & Analyzed: 02/21/19						
2-Butanone (MEK)	**44.9**	17	ppbv	40		112	70-130		30	
Carbon Disulfide	**43.4**	16	ppbv	40		109	70-130		30	
Carbon Tetrachloride	**39.4**	2.1	ppbv	40		98.5	70-130		30	
Chlorobenzene	**36.2**	2.2	ppbv	40		90.5	70-130		30	
Chloroethane	**43.4**	3.8	ppbv	40		109	70-130		30	
Chloroform	**41.4**	2.0	ppbv	40		104	70-130		30	
Chloromethane	**39.3**	4.8	ppbv	40		98.3	70-130		30	
Dibromochloromethane	**43.5**	2.3	ppbv	40		109	70-130		30	
1,2-Dibromoethane (EDB)	**37.0**	2.6	ppbv	40		92.6	70-130		30	
1,2-Dichlorobenzene	**31.0**	3.3	ppbv	40		77.6	70-130		30	
1,3-Dichlorobenzene	**31.2**	3.3	ppbv	40		77.9	70-130		30	
1,4-Dichlorobenzene	**32.9**	3.3	ppbv	40		82.2	70-130		30	
Dichlorodifluoromethane (R12)	**40.8**	10	ppbv	40		102	70-130		30	
1,1-Dichloroethane	**40.8**	2.0	ppbv	40		102	70-130		30	
1,2-Dichloroethane (EDC)	**41.8**	2.5	ppbv	40		105	70-130		30	
cis-1,2-Dichloroethylene	**39.9**	2.0	ppbv	40		99.6	70-130		30	
1,1-Dichloroethylene	**40.7**	2.0	ppbv	40		102	70-130		30	
trans-1,2-Dichloroethylene	**43.4**	2.0	ppbv	40		109	70-130		30	
1,2-Dichloropropane	**38.4**	2.2	ppbv	40		96.1	70-130		30	
trans-1,3-Dichloropropylene	**38.8**	2.2	ppbv	40		96.9	70-130		30	
cis-1,3-Dichloropropylene	**38.3**	2.2	ppbv	40		95.8	70-130		30	
Dichlorotetrafluoroethane	**37.3**	7.2	ppbv	40		93.2	70-130		30	
Ethylbenzene	**36.6**	2.3	ppbv	40		91.6	70-130		30	
4-Ethyltoluene	**45.9**	2.0	ppbv	40		115	70-130		30	
Hexachlorobutadiene	**25.1**	4.7	ppbv	40		62.7	70-130		30	***
2-Hexanone (MBK)	**50.8**	12	ppbv	40		127	70-130		30	
Isopropanol (IPA)	**47.5**	41	ppbv	40		119	70-130		30	
Methylene Chloride	**39.1**	14	ppbv	40		97.7	70-130		30	
4-Methyl-2-pentanone (MIBK)	**48.9**	12	ppbv	40		122	70-130		30	
Styrene	**35.6**	2.3	ppbv	40		88.9	70-130		30	
1,1,2,2-Tetrachloroethane	**30.7**	7.3	ppbv	40		76.7	70-130		30	
Tetrachloroethylene (PCE)	**35.0**	2.0	ppbv	40		87.4	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS (B9C0119-BS1) Continued				Prepared & Analyzed: 02/21/19						
Toluene	**36.8**	13	ppbv	40		92.0	70-130		30	
1,2,4-Trichlorobenzene	**24.5**	2.7	ppbv	40		61.3	70-130		30	***
1,1,2-Trichloroethane	**36.7**	3.7	ppbv	40		91.8	70-130		30	
1,1,1-Trichloroethane	**41.4**	3.7	ppbv	40		104	70-130		30	
Trichloroethylene (TCE)	**33.4**	2.0	ppbv	40		83.6	70-130		30	
Trichlorofluoromethane (R11)	**41.0**	8.9	ppbv	40		103	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**41.3**	6.5	ppbv	40		103	70-130		30	
1,3,5-Trimethylbenzene	**33.1**	2.0	ppbv	40		82.8	70-130		30	
1,2,4-Trimethylbenzene	**32.6**	2.0	ppbv	40		81.4	70-130		30	
Vinyl acetate	**42.4**	2.8	ppbv	40		106	70-130		30	
Vinyl chloride	**42.4**	3.9	ppbv	40		106	70-130		30	
o-Xylene	**33.6**	2.3	ppbv	40		83.9	70-130		30	
m,p-Xylenes	**67.8**	2.3	ppbv	80		84.8	70-130		30	
1,2,3-Trichloropropane	**39.9**	2.0	ppbv	40		99.6	70-130		30	
Surrogate: 4-Bromofluorobenzene	*20.5*		*ppbv*	*20*		*103*	*70-130*			
LCS Dup (B9C0119-BSD1)				Prepared & Analyzed: 02/22/19						
Acetone	**38.3**	21	ppbv	40		95.7	70-130	3.52	30	
Benzene	**38.6**	3.0	ppbv	40		96.5	70-130	3.04	30	
Benzyl chloride	**45.9**	9.7	ppbv	40		115	70-130	0.695	30	
Bromodichloromethane	**43.4**	7.5	ppbv	40		108	70-130	1.11	30	
Bromoform	**45.5**	4.8	ppbv	40		114	70-130	1.33	30	
Bromomethane	**38.2**	2.6	ppbv	40		95.4	70-130	4.53	30	
2-Butanone (MEK)	**43.5**	17	ppbv	40		109	70-130	3.12	30	
Carbon Disulfide	**42.4**	16	ppbv	40		106	70-130	2.40	30	
Carbon Tetrachloride	**40.3**	2.1	ppbv	40		101	70-130	2.18	30	
Chlorobenzene	**36.1**	2.2	ppbv	40		90.3	70-130	0.249	30	
Chloroethane	**40.7**	3.8	ppbv	40		102	70-130	6.35	30	
Chloroform	**39.9**	2.0	ppbv	40		99.7	70-130	3.84	30	
Chloromethane	**39.7**	4.8	ppbv	40		99.2	70-130	0.962	30	
Dibromochloromethane	**45.0**	2.3	ppbv	40		112	70-130	3.39	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS Dup (B9C0119-BSD1) Continued				Prepared & Analyzed: 02/22/19						
1,2-Dibromoethane (EDB)	**37.8**	2.6	ppbv	40		94.6	70-130	2.11	30	
1,2-Dichlorobenzene	**31.6**	3.3	ppbv	40		79.0	70-130	1.69	30	
1,3-Dichlorobenzene	**32.9**	3.3	ppbv	40		82.3	70-130	5.46	30	
1,4-Dichlorobenzene	**32.4**	3.3	ppbv	40		81.1	70-130	1.26	30	
Dichlorodifluoromethane (R12)	**39.0**	10	ppbv	40		97.4	70-130	4.71	30	
1,1-Dichloroethane	**39.1**	2.0	ppbv	40		97.8	70-130	4.06	30	
1,2-Dichloroethane (EDC)	**40.7**	2.5	ppbv	40		102	70-130	2.66	30	
cis-1,2-Dichloroethylene	**39.0**	2.0	ppbv	40		97.6	70-130	2.10	30	
1,1-Dichloroethylene	**40.5**	2.0	ppbv	40		101	70-130	0.640	30	
trans-1,2-Dichloroethylene	**43.6**	2.0	ppbv	40		109	70-130	0.368	30	
1,2-Dichloropropane	**38.6**	2.2	ppbv	40		96.4	70-130	0.286	30	
trans-1,3-Dichloropropylene	**38.8**	2.2	ppbv	40		97.1	70-130	0.258	30	
cis-1,3-Dichloropropylene	**37.5**	2.2	ppbv	40		93.8	70-130	2.03	30	
Dichlorotetrafluoroethane	**35.7**	7.2	ppbv	40		89.4	70-130	4.27	30	
Ethylbenzene	**36.5**	2.3	ppbv	40		91.3	70-130	0.301	30	
4-Ethyltoluene	**47.3**	2.0	ppbv	40		118	70-130	3.00	30	
Hexachlorobutadiene	**24.3**	4.7	ppbv	40		60.7	70-130	3.28	30	***
2-Hexanone (MBK)	**43.2**	12	ppbv	40		108	70-130	16.3	30	
Isopropanol (IPA)	**45.6**	41	ppbv	40		114	70-130	4.04	30	
Methylene Chloride	**33.6**	14	ppbv	40		84.0	70-130	15.0	30	
4-Methyl-2-pentanone (MIBK)	**48.5**	12	ppbv	40		121	70-130	0.842	30	
Styrene	**35.4**	2.3	ppbv	40		88.6	70-130	0.338	30	
1,1,2,2-Tetrachloroethane	**31.0**	7.3	ppbv	40		77.4	70-130	0.844	30	
Tetrachloroethylene (PCE)	**35.6**	2.0	ppbv	40		88.9	70-130	1.76	30	
Toluene	**37.4**	13	ppbv	40		93.5	70-130	1.59	30	
1,2,4-Trichlorobenzene	**24.2**	2.7	ppbv	40		60.4	70-130	1.36	30	***
1,1,2-Trichloroethane	**37.5**	3.7	ppbv	40		93.8	70-130	2.16	30	
1,1,1-Trichloroethane	**40.1**	3.7	ppbv	40		100	70-130	3.21	30	
Trichloroethylene (TCE)	**33.7**	2.0	ppbv	40		84.3	70-130	0.774	30	
Trichlorofluoromethane (R11)	**40.3**	8.9	ppbv	40		101	70-130	1.89	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**41.1**	6.5	ppbv	40		103	70-130	0.485	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874342
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS Dup (B9C0119-BSD1) Continued				Prepared & Analyzed: 02/22/19						
1,3,5-Trimethylbenzene	**33.3**	2.0	ppbv	40		83.4	70-130	0.722	30	
1,2,4-Trimethylbenzene	**32.6**	2.0	ppbv	40		81.4	70-130	0.0614	30	
Vinyl acetate	**41.8**	2.8	ppbv	40		105	70-130	1.47	30	
Vinyl chloride	**41.7**	3.9	ppbv	40		104	70-130	1.57	30	
o-Xylene	**33.9**	2.3	ppbv	40		84.6	70-130	0.920	30	
m,p-Xylenes	**77.1**	2.3	ppbv	80		96.4	70-130	12.8	30	
1,2,3-Trichloropropane	**39.4**	2.0	ppbv	40		98.5	70-130	1.14	30	
Surrogate: 4-Bromofluorobenzene	*20.8*		*ppbv*	*20*		*104*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874342
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19

Special Notes

[1] = ****** : Result obtained from DF=12.5

[2] = ******* : Exceeds lower control limit.

[3] = ****a** : Result obtained from DF=2

[4] = ****b** : Result obtained from DF=7.5

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 Fax: 818-998-7258

A.A. COC No.: 17607

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name: Robert Barclay**
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Robert Barclay
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15	Special Instructions
						Please enter the TAT Turnaround Codes ** below		
VP-05A-022019-0001	9B20009-01	2/20/2019	0955	Vapor	1		X	
VP-07C-022019-0001	-02	2/20/2019	0940	Vapor	1		X	
VP-09D-022019-0001	-03	2/20/2019	1051	Vapor	1		X	
VP-10B-022019-0001	-04	2/20/2019	0857	Vapor	1		X	
VP-13B-022019-0001	-05	2/20/2019	0907	Vapor	1		X	
VP-14A-022019-0001	-06	2/20/2019	0800	Vapor	1		X	
VP-14B-022019-0001	-07	2/20/2019	0805	Vapor	1		X	
VP-14C-022019-0001	-08	2/20/2019	0807	Vapor	1		X	
VP-14D-022019-0001	-09	2/20/2019	0810	Vapor	1		X	

For Laboratory Use

PRIORITY
Rush ___ Hrs SH
Date 2/21/19 Time 0700 Sign

A.A. Project No.: A874342 / 9B20009

	Date	Time	
Relinquished by: Robert Barclay	2/20/19	1300	Received by:
Relinquished by:	2/20/19	17:55	Received by:
Relinquished by:	Date	Time	Received by:

RECEIVED 5°C

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 07, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874343 / 9B20010

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 02/20/19 17:58 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACI-022019-0001	9B20010-01	Vapor	5	02/20/19 13:30	02/20/19 17:58

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874343
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/22/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

SVE-VGACI-022019-0001

9B20010-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.012	ug/L	0.050	<5.2	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.0025**	ug/L	0.0098	**0.50**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.022**	ug/L	0.0081	**5.5**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874343
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/22/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

SVE-VGACI-022019-0001

9B20010-01 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.049**		ug/L	0.0079	**12**		ppbv	2.0
1,1-Dichloroethylene	**0.0026**		ug/L	0.0079	**0.66**		ppbv	2.0
trans-1,2-Dichloroethylene	**0.0056**		ug/L	0.0079	**1.4**		ppbv	2.0
1,2-Dichloropropane	<0.0025		ug/L	0.010	<0.55		ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
Dichlorotetrafluoroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.2
1,4-Dioxane	**0.0046**		ug/L	0.010	**1.3**		ppbv	2.8
Ethylbenzene	<0.0025		ug/L	0.01	<0.58		ppbv	2.3
4-Ethyltoluene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
Hexachlorobutadiene	<0.013		ug/L	0.050	<1.2		ppbv	4.7
2-Hexanone (MBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Isopropanol (IPA)	<0.025		ug/L	0.10	<10		ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025		ug/L	0.010	<0.70		ppbv	2.8
Methylene Chloride	<0.012		ug/L	0.049	<3.5		ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Styrene	<0.0024		ug/L	0.0098	<0.58		ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.3
Tetrachloroethylene (PCE)	**0.66**	**	ug/L	0.014	**98**	**	ppbv	2.0
Toluene	<0.012		ug/L	0.049	<3.2		ppbv	13
1,2,4-Trichlorobenzene	<0.005		ug/L	0.020	<0.68		ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874343
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19
Matrix:	Vapor	**Sampled:**	02/20/19
Dilution:	0.25	**Prepared:**	02/22/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	02/22/19

SVE-VGACI-022019-0001

9B20010-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.11**	ug/L	0.011	**21**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.0026**	ug/L	0.01	**0.60**	ppbv	2.3
m,p-Xylenes	**0.0036**	ug/L	0.01	**0.83**	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	108 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
Blank (B9C0119-BLK1)				Prepared & Analyzed: 02/21/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
Blank (B9C0119-BLK1) Continued				Prepared & Analyzed: 02/21/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*20.8*		*ppbv*	*20*		*104*	*70-130*			
LCS (B9C0119-BS1)				Prepared & Analyzed: 02/21/19						
Acetone	**39.7**	21	ppbv	40		99.2	70-130		30	
Benzene	**39.8**	3.0	ppbv	40		99.5	70-130		30	
Benzyl chloride	**46.2**	9.7	ppbv	40		115	70-130		30	
Bromodichloromethane	**42.9**	7.5	ppbv	40		107	70-130		30	
Bromoform	**46.1**	4.8	ppbv	40		115	70-130		30	
Bromomethane	**39.9**	2.6	ppbv	40		99.8	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS (B9C0119-BS1) Continued				Prepared & Analyzed: 02/21/19						
2-Butanone (MEK)	**44.9**	17	ppbv	40		112	70-130		30	
Carbon Disulfide	**43.4**	16	ppbv	40		109	70-130		30	
Carbon Tetrachloride	**39.4**	2.1	ppbv	40		98.5	70-130		30	
Chlorobenzene	**36.2**	2.2	ppbv	40		90.5	70-130		30	
Chloroethane	**43.4**	3.8	ppbv	40		109	70-130		30	
Chloroform	**41.4**	2.0	ppbv	40		104	70-130		30	
Chloromethane	**39.3**	4.8	ppbv	40		98.3	70-130		30	
Dibromochloromethane	**43.5**	2.3	ppbv	40		109	70-130		30	
1,2-Dibromoethane (EDB)	**37.0**	2.6	ppbv	40		92.6	70-130		30	
1,2-Dichlorobenzene	**31.0**	3.3	ppbv	40		77.6	70-130		30	
1,3-Dichlorobenzene	**31.2**	3.3	ppbv	40		77.9	70-130		30	
1,4-Dichlorobenzene	**32.9**	3.3	ppbv	40		82.2	70-130		30	
Dichlorodifluoromethane (R12)	**40.8**	10	ppbv	40		102	70-130		30	
1,1-Dichloroethane	**40.8**	2.0	ppbv	40		102	70-130		30	
1,2-Dichloroethane (EDC)	**41.8**	2.5	ppbv	40		105	70-130		30	
cis-1,2-Dichloroethylene	**39.9**	2.0	ppbv	40		99.6	70-130		30	
1,1-Dichloroethylene	**40.7**	2.0	ppbv	40		102	70-130		30	
trans-1,2-Dichloroethylene	**43.4**	2.0	ppbv	40		109	70-130		30	
1,2-Dichloropropane	**38.4**	2.2	ppbv	40		96.1	70-130		30	
trans-1,3-Dichloropropylene	**38.8**	2.2	ppbv	40		96.9	70-130		30	
cis-1,3-Dichloropropylene	**38.3**	2.2	ppbv	40		95.8	70-130		30	
Dichlorotetrafluoroethane	**37.3**	7.2	ppbv	40		93.2	70-130		30	
Ethylbenzene	**36.6**	2.3	ppbv	40		91.6	70-130		30	
4-Ethyltoluene	**45.9**	2.0	ppbv	40		115	70-130		30	
Hexachlorobutadiene	**25.1**	4.7	ppbv	40		62.7	70-130		30	***
2-Hexanone (MBK)	**50.8**	12	ppbv	40		127	70-130		30	
Isopropanol (IPA)	**47.5**	41	ppbv	40		119	70-130		30	
Methylene Chloride	**39.1**	14	ppbv	40		97.7	70-130		30	
4-Methyl-2-pentanone (MIBK)	**48.9**	12	ppbv	40		122	70-130		30	
Styrene	**35.6**	2.3	ppbv	40		88.9	70-130		30	
1,1,2,2-Tetrachloroethane	**30.7**	7.3	ppbv	40		76.7	70-130		30	
Tetrachloroethylene (PCE)	**35.0**	2.0	ppbv	40		87.4	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS (B9C0119-BS1) Continued				Prepared & Analyzed: 02/21/19						
Toluene	**36.8**	13	ppbv	40		92.0	70-130		30	
1,2,4-Trichlorobenzene	**24.5**	2.7	ppbv	40		61.3	70-130		30	***
1,1,2-Trichloroethane	**36.7**	3.7	ppbv	40		91.8	70-130		30	
1,1,1-Trichloroethane	**41.4**	3.7	ppbv	40		104	70-130		30	
Trichloroethylene (TCE)	**33.4**	2.0	ppbv	40		83.6	70-130		30	
Trichlorofluoromethane (R11)	**41.0**	8.9	ppbv	40		103	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**41.3**	6.5	ppbv	40		103	70-130		30	
1,3,5-Trimethylbenzene	**33.1**	2.0	ppbv	40		82.8	70-130		30	
1,2,4-Trimethylbenzene	**32.6**	2.0	ppbv	40		81.4	70-130		30	
Vinyl acetate	**42.4**	2.8	ppbv	40		106	70-130		30	
Vinyl chloride	**42.4**	3.9	ppbv	40		106	70-130		30	
o-Xylene	**33.6**	2.3	ppbv	40		83.9	70-130		30	
m,p-Xylenes	**67.8**	2.3	ppbv	80		84.8	70-130		30	
1,2,3-Trichloropropane	**39.9**	2.0	ppbv	40		99.6	70-130		30	
Surrogate: 4-Bromofluorobenzene	*20.5*		*ppbv*	*20*		*103*	*70-130*			
LCS Dup (B9C0119-BSD1)				Prepared & Analyzed: 02/22/19						
Acetone	**38.3**	21	ppbv	40		95.7	70-130	3.52	30	
Benzene	**38.6**	3.0	ppbv	40		96.5	70-130	3.04	30	
Benzyl chloride	**45.9**	9.7	ppbv	40		115	70-130	0.695	30	
Bromodichloromethane	**43.4**	7.5	ppbv	40		108	70-130	1.11	30	
Bromoform	**45.5**	4.8	ppbv	40		114	70-130	1.33	30	
Bromomethane	**38.2**	2.6	ppbv	40		95.4	70-130	4.53	30	
2-Butanone (MEK)	**43.5**	17	ppbv	40		109	70-130	3.12	30	
Carbon Disulfide	**42.4**	16	ppbv	40		106	70-130	2.40	30	
Carbon Tetrachloride	**40.3**	2.1	ppbv	40		101	70-130	2.18	30	
Chlorobenzene	**36.1**	2.2	ppbv	40		90.3	70-130	0.249	30	
Chloroethane	**40.7**	3.8	ppbv	40		102	70-130	6.35	30	
Chloroform	**39.9**	2.0	ppbv	40		99.7	70-130	3.84	30	
Chloromethane	**39.7**	4.8	ppbv	40		99.2	70-130	0.962	30	
Dibromochloromethane	**45.0**	2.3	ppbv	40		112	70-130	3.39	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS Dup (B9C0119-BSD1) Continued				Prepared & Analyzed: 02/22/19						
1,2-Dibromoethane (EDB)	**37.8**	2.6	ppbv	40		94.6	70-130	2.11	30	
1,2-Dichlorobenzene	**31.6**	3.3	ppbv	40		79.0	70-130	1.69	30	
1,3-Dichlorobenzene	**32.9**	3.3	ppbv	40		82.3	70-130	5.46	30	
1,4-Dichlorobenzene	**32.4**	3.3	ppbv	40		81.1	70-130	1.26	30	
Dichlorodifluoromethane (R12)	**39.0**	10	ppbv	40		97.4	70-130	4.71	30	
1,1-Dichloroethane	**39.1**	2.0	ppbv	40		97.8	70-130	4.06	30	
1,2-Dichloroethane (EDC)	**40.7**	2.5	ppbv	40		102	70-130	2.66	30	
cis-1,2-Dichloroethylene	**39.0**	2.0	ppbv	40		97.6	70-130	2.10	30	
1,1-Dichloroethylene	**40.5**	2.0	ppbv	40		101	70-130	0.640	30	
trans-1,2-Dichloroethylene	**43.6**	2.0	ppbv	40		109	70-130	0.368	30	
1,2-Dichloropropane	**38.6**	2.2	ppbv	40		96.4	70-130	0.286	30	
trans-1,3-Dichloropropylene	**38.8**	2.2	ppbv	40		97.1	70-130	0.258	30	
cis-1,3-Dichloropropylene	**37.5**	2.2	ppbv	40		93.8	70-130	2.03	30	
Dichlorotetrafluoroethane	**35.7**	7.2	ppbv	40		89.4	70-130	4.27	30	
Ethylbenzene	**36.5**	2.3	ppbv	40		91.3	70-130	0.301	30	
4-Ethyltoluene	**47.3**	2.0	ppbv	40		118	70-130	3.00	30	
Hexachlorobutadiene	**24.3**	4.7	ppbv	40		60.7	70-130	3.28	30	***
2-Hexanone (MBK)	**43.2**	12	ppbv	40		108	70-130	16.3	30	
Isopropanol (IPA)	**45.6**	41	ppbv	40		114	70-130	4.04	30	
Methylene Chloride	**33.6**	14	ppbv	40		84.0	70-130	15.0	30	
4-Methyl-2-pentanone (MIBK)	**48.5**	12	ppbv	40		121	70-130	0.842	30	
Styrene	**35.4**	2.3	ppbv	40		88.6	70-130	0.338	30	
1,1,2,2-Tetrachloroethane	**31.0**	7.3	ppbv	40		77.4	70-130	0.844	30	
Tetrachloroethylene (PCE)	**35.6**	2.0	ppbv	40		88.9	70-130	1.76	30	
Toluene	**37.4**	13	ppbv	40		93.5	70-130	1.59	30	
1,2,4-Trichlorobenzene	**24.2**	2.7	ppbv	40		60.4	70-130	1.36	30	***
1,1,2-Trichloroethane	**37.5**	3.7	ppbv	40		93.8	70-130	2.16	30	
1,1,1-Trichloroethane	**40.1**	3.7	ppbv	40		100	70-130	3.21	30	
Trichloroethylene (TCE)	**33.7**	2.0	ppbv	40		84.3	70-130	0.774	30	
Trichlorofluoromethane (R11)	**40.3**	8.9	ppbv	40		101	70-130	1.89	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**41.1**	6.5	ppbv	40		103	70-130	0.485	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874343
Date Received: 02/20/19
Date Reported: 03/07/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0119 - *** DEFAULT PREP ****										
LCS Dup (B9C0119-BSD1) Continued				Prepared & Analyzed: 02/22/19						
1,3,5-Trimethylbenzene	**33.3**	2.0	ppbv	40		83.4	70-130	0.722	30	
1,2,4-Trimethylbenzene	**32.6**	2.0	ppbv	40		81.4	70-130	0.0614	30	
Vinyl acetate	**41.8**	2.8	ppbv	40		105	70-130	1.47	30	
Vinyl chloride	**41.7**	3.9	ppbv	40		104	70-130	1.57	30	
o-Xylene	**33.9**	2.3	ppbv	40		84.6	70-130	0.920	30	
m,p-Xylenes	**77.1**	2.3	ppbv	80		96.4	70-130	12.8	30	
1,2,3-Trichloropropane	**39.4**	2.0	ppbv	40		98.5	70-130	1.14	30	
Surrogate: 4-Bromofluorobenzene	*20.8*		*ppbv*	*20*		*104*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874343
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/07/19

Special Notes

[1] = ****** : Result obtained from DF=2

[2] = ******* : Exceeds lower control limit.

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No. 17603

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 Fax: 818-998-7258

Page of

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name: Robert Barclay**
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Robert Barclay
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush 4 = 72 Hour Rush

2 = 24 Hour Rush 5 = 5 Day Rush

3 = 48 Hour Rush X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15									Special Instructions
						Please enter the TAT Turnaround Codes ** below										
SVE-VGACI-022019-0001	9B 2001 0 -01	2/20/2019	1330	Vapor	1		X									
																'19FEB20 5:45pm

For Laboratory Use

PRIORITY

Rush ___ Hrs SH ✓

Date 2/21/19 Time 0700 Sign

A.A. Project No.: A3749343 / 9B20010

Relinquished by	Date	Time	Received by
Robert Barclay	2/20/19	1332	
Relinquished by	Date	Time	Received by
	2/20/19	17:55	
Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 08, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874344 / 9B20011

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 02/20/19 17:58 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-022019-0001	9B20011-01	Water	5	02/20/19 13:00	02/20/19 17:58
TOTAL-EFF-022019-0001	9B20011-02	Water	5	02/20/19 13:15	02/20/19 17:58
8270CM 1,4-Dioxane Only					
EW-INF-022019-0001	9B20011-01	Water	5	02/20/19 13:00	02/20/19 17:58
TOTAL-EFF-022019-0001	9B20011-02	Water	5	02/20/19 13:15	02/20/19 17:58

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9B20011-01	EW-INF-022019-0001	02/20/19	02/26/19	02/27/19	1	**7.3**	ug/L	1	2
9B20011-02	TOTAL-EFF-022019-0001	02/20/19	02/26/19	02/27/19	1	**7.4**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874344
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/08/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	02/20/19	02/20/19		
Date Prepared:	03/01/19	03/01/19		
Date Analyzed:	03/01/19	03/01/19		
AA ID No:	9B20011-01	9B20011-02		
Client ID No:	EW-INF-022019-0001	TOTAL-EFF-022019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<2.0	<2.0	2.0	10
Benzene	**1.2**	**0.82**	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19
Units: ug/L

Date Sampled:	02/20/19	02/20/19		
Date Prepared:	03/01/19	03/01/19		
Date Analyzed:	03/01/19	03/01/19		
AA ID No:	9B20011-01	9B20011-02		
Client ID No:	EW-INF-022019-0001	TOTAL-EFF-022019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	**1.4**	**1.1**	0.20	0.50
1,2-Dichloroethane (EDC)	**1.9**	**1.8**	0.30	0.50
cis-1,2-Dichloroethylene	**30**	**24**	0.20	0.50
1,1-Dichloroethylene	**0.69**	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	**4.3**	**2.6**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19
Units: ug/L

Date Sampled:	02/20/19	02/20/19		
Date Prepared:	03/01/19	03/01/19		
Date Analyzed:	03/01/19	03/01/19		
AA ID No:	9B20011-01	9B20011-02		
Client ID No:	EW-INF-022019-0001	TOTAL-EFF-022019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.3**	**0.87**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	**0.89**	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0
Surrogates				**%REC Limits**
4-Bromofluorobenzene	99%	100%		70-140
Dibromofluoromethane	102%	105%		70-140
Toluene-d8	99%	98%		70-140

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9B2615 - EPA 3510C_MS										
Blank (B9B2615-BLK1)				Prepared: 02/26/19	Analyzed: 02/27/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9B2615-BS1)				Prepared: 02/26/19	Analyzed: 02/27/19					
1,4-Dioxane	**12.6**	1.0	ug/L	10		126	75-125			**
LCS Dup (B9B2615-BSD1)				Prepared: 02/26/19	Analyzed: 02/27/19					
1,4-Dioxane	**12.5**	1.0	ug/L	10		125	75-125	1.27	30	
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Blank (B9C0106-BLK1)				Prepared & Analyzed: 03/01/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Blank (B9C0106-BLK1) Continued				Prepared & Analyzed: 03/01/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Blank (B9C0106-BLK1) Continued				Prepared & Analyzed: 03/01/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*49.2*		*ug/L*	*50*		*98.5*	*70-140*			
Surrogate: Dibromofluoromethane	*50.2*		*ug/L*	*50*		*100*	*70-140*			
Surrogate: Toluene-d8	*49.7*		*ug/L*	*50*		*99.4*	*70-140*			
LCS (B9C0106-BS1)				Prepared & Analyzed: 03/01/19						
Acetone	**10.5**	2.0	ug/L	20		52.5	50-150			
Benzene	**15.9**	0.20	ug/L	20		79.4	75-125			
Bromobenzene	**21.4**	0.30	ug/L	20		107	50-150			
Bromochloromethane	**20.4**	0.50	ug/L	20		102	50-150			
Bromodichloromethane	**18.0**	0.20	ug/L	20		89.8	75-125			
Bromoform	**18.8**	0.50	ug/L	20		94.2	75-125			
Bromomethane	**26.4**	0.50	ug/L	20		132	75-125			**
2-Butanone (MEK)	**16.5**	2.0	ug/L	20		82.3	50-150			
tert-Butylbenzene	**25.0**	0.20	ug/L	20		125	50-150			
n-Butylbenzene	**23.5**	0.20	ug/L	20		118	50-150			
sec-Butylbenzene	**24.8**	0.20	ug/L	20		124	50-150			
Carbon Disulfide	**14.9**	0.30	ug/L	20		74.4	50-150			
Carbon Tetrachloride	**20.6**	0.30	ug/L	20		103	75-125			
Chlorobenzene	**20.6**	0.30	ug/L	20		103	75-125			
Chloroethane	**20.0**	0.50	ug/L	20		100	75-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
LCS (B9C0106-BS1) Continued				Prepared & Analyzed: 03/01/19						
Chloroform	**19.0**	0.30	ug/L	20		95.0	75-125			
Chloromethane	**20.3**	0.40	ug/L	20		101	65-125			
4-Chlorotoluene	**21.4**	0.20	ug/L	20		107	65-125			
2-Chlorotoluene	**21.6**	0.30	ug/L	20		108	65-125			
1,2-Dibromo-3-chloropropane	**18.2**	0.40	ug/L	20		91.2	65-125			
Dibromochloromethane	**20.4**	0.30	ug/L	20		102	75-125			
1,2-Dibromoethane (EDB)	**19.0**	0.30	ug/L	20		95.2	65-125			
Dibromomethane	**16.5**	0.40	ug/L	20		82.5	65-125			
1,3-Dichlorobenzene	**21.0**	0.10	ug/L	20		105	65-125			
1,4-Dichlorobenzene	**20.8**	0.30	ug/L	20		104	75-125			
1,2-Dichlorobenzene	**21.4**	0.30	ug/L	20		107	65-125			
Dichlorodifluoromethane (R12)	**18.8**	0.50	ug/L	20		94.2	50-150			
1,1-Dichloroethane	**16.6**	0.20	ug/L	20		83.2	70-125			
1,2-Dichloroethane (EDC)	**19.0**	0.30	ug/L	20		95.0	75-125			
cis-1,2-Dichloroethylene	**16.5**	0.20	ug/L	20		82.6	75-125			
1,1-Dichloroethylene	**17.2**	0.30	ug/L	20		86.0	70-130			
trans-1,2-Dichloroethylene	**16.9**	0.40	ug/L	20		84.4	75-125			
1,3-Dichloropropane	**17.7**	0.10	ug/L	20		88.5	65-125			
1,2-Dichloropropane	**14.2**	0.50	ug/L	20		71.1	75-130			***
2,2-Dichloropropane	**24.8**	0.40	ug/L	20		124	65-125			
trans-1,3-Dichloropropylene	**19.3**	0.20	ug/L	20		96.6	65-125			
1,1-Dichloropropylene	**18.2**	0.20	ug/L	20		91.2	65-125			
cis-1,3-Dichloropropylene	**16.0**	0.20	ug/L	20		79.9	75-125			
Ethylbenzene	**20.7**	0.20	ug/L	20		104	75-125			
Hexachlorobutadiene	**23.5**	0.40	ug/L	20		117	65-125			
2-Hexanone (MBK)	**14.0**	2.0	ug/L	20		70.2	65-125			
Isopropylbenzene	**23.4**	0.20	ug/L	20		117	65-125			
4-Isopropyltoluene	**25.6**	0.20	ug/L	20		128	65-125			**
Methyl-tert-Butyl Ether (MTBE)	**31.6**	1.7	ug/L	40		79.1	75-125			
Methylene Chloride	**15.8**	5.0	ug/L	20		78.9	75-130			
4-Methyl-2-pentanone (MIBK)	**14.0**	0.70	ug/L	20		69.8	65-125			
Naphthalene	**18.9**	0.20	ug/L	20		94.6	65-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
LCS (B9C0106-BS1) Continued				Prepared & Analyzed: 03/01/19						
n-Propylbenzene	**22.1**	0.20	ug/L	20		110	65-125			
Styrene	**19.8**	0.20	ug/L	20		99.0	65-125			
1,1,1,2-Tetrachloroethane	**21.9**	0.40	ug/L	20		110	65-125			
1,1,2,2-Tetrachloroethane	**15.3**	0.30	ug/L	20		76.7	70-135			
Tetrachloroethylene (PCE)	**22.9**	0.50	ug/L	20		114	75-125			
Toluene	**19.0**	0.30	ug/L	20		95.2	75-125			
1,2,3-Trichlorobenzene	**22.5**	0.20	ug/L	20		112	65-125			
1,1,2-Trichloroethane	**17.3**	0.30	ug/L	20		86.5	75-125			
1,1,1-Trichloroethane	**22.1**	0.30	ug/L	20		111	75-125			
Trichloroethylene (TCE)	**18.5**	0.20	ug/L	20		92.5	75-125			
Trichlorofluoromethane (R11)	**21.5**	0.20	ug/L	20		108	65-125			
1,2,3-Trichloropropane	**16.1**	0.30	ug/L	20		80.6	65-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**17.6**	0.30	ug/L	20		87.8	65-125			
1,2,4-Trimethylbenzene	**23.0**	0.30	ug/L	20		115	65-125			
1,3,5-Trimethylbenzene	**24.1**	0.20	ug/L	20		120	65-125			
Vinyl chloride	**20.6**	0.50	ug/L	20		103	75-125			
o-Xylene	**20.0**	0.30	ug/L	20		100	75-125			
m,p-Xylenes	**41.3**	0.40	ug/L	40		103	65-125			
Surrogate: 4-Bromofluorobenzene	*50.5*		*ug/L*	*50*		*101*	*70-140*			
Surrogate: Dibromofluoromethane	*45.6*		*ug/L*	*50*		*91.1*	*70-140*			
Surrogate: Toluene-d8	*50.1*		*ug/L*	*50*		*100*	*70-140*			
Matrix Spike (B9C0106-MS1)				**Source: 9B26021-01**	Prepared & Analyzed: 03/01/19					
Acetone	**21.7**	2.0	ug/L	20		108	50-150			
Benzene	**21.0**	0.20	ug/L	20		105	70-130			
Bromobenzene	**23.8**	0.30	ug/L	20		119	50-150			
Bromochloromethane	**25.3**	0.50	ug/L	20		126	50-150			
Bromodichloromethane	**24.8**	0.20	ug/L	20		124	50-150			
Bromoform	**25.2**	0.50	ug/L	20		126	70-130			
Bromomethane	**24.4**	0.50	ug/L	20		122	50-150			
2-Butanone (MEK)	**23.1**	2.0	ug/L	20		116	50-150			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Matrix Spike (B9C0106-MS1) Continued Source: 9B26021-01 Prepared & Analyzed: 03/01/19										
tert-Butylbenzene	**25.9**	0.20	ug/L	20		129	50-150			
n-Butylbenzene	**24.2**	0.20	ug/L	20		121	50-150			
sec-Butylbenzene	**25.3**	0.20	ug/L	20		126	50-150			
Carbon Disulfide	**18.0**	0.30	ug/L	20		90.0	50-150			
Carbon Tetrachloride	**24.2**	0.30	ug/L	20		121	50-150			
Chlorobenzene	**23.2**	0.30	ug/L	20		116	70-130			
Chloroethane	**26.6**	0.50	ug/L	20		133	50-150			
Chloroform	**25.8**	0.30	ug/L	20		129	70-130			
Chloromethane	**24.6**	0.40	ug/L	20		123	50-150			
4-Chlorotoluene	**22.8**	0.20	ug/L	20		114	50-150			
2-Chlorotoluene	**22.8**	0.30	ug/L	20		114	50-150			
1,2-Dibromo-3-chloropropane	**24.5**	0.40	ug/L	20		122	50-150			
Dibromochloromethane	**24.6**	0.30	ug/L	20		123	50-150			
1,2-Dibromoethane (EDB)	**23.8**	0.30	ug/L	20		119	50-150			
Dibromomethane	**24.8**	0.40	ug/L	20		124	50-150			
1,3-Dichlorobenzene	**22.5**	0.10	ug/L	20		112	50-150			
1,4-Dichlorobenzene	**23.4**	0.30	ug/L	20		117	50-150			
1,2-Dichlorobenzene	**24.2**	0.30	ug/L	20		121	50-150			
Dichlorodifluoromethane (R12)	**25.8**	0.50	ug/L	20		129	50-150			
1,1-Dichloroethane	**20.7**	0.20	ug/L	20		103	70-130			
1,2-Dichloroethane (EDC)	**28.0**	0.30	ug/L	20		140	50-150			
cis-1,2-Dichloroethylene	**22.2**	0.20	ug/L	20		111	70-130			
1,1-Dichloroethylene	**21.0**	0.30	ug/L	20		105	70-130			
trans-1,2-Dichloroethylene	**21.9**	0.40	ug/L	20		110	50-150			
1,3-Dichloropropane	**21.7**	0.10	ug/L	20		109	50-150			
1,2-Dichloropropane	**19.2**	0.50	ug/L	20		96.2	70-130			
2,2-Dichloropropane	**27.9**	0.40	ug/L	20		140	50-150			
trans-1,3-Dichloropropylene	**21.4**	0.20	ug/L	20		107	50-150			
1,1-Dichloropropylene	**23.1**	0.20	ug/L	20		116	50-150			
cis-1,3-Dichloropropylene	**20.6**	0.20	ug/L	20		103	50-150			
Ethylbenzene	**22.6**	0.20	ug/L	20		113	70-130			
Hexachlorobutadiene	**24.7**	0.40	ug/L	20		124	50-150			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Matrix Spike (B9C0106-MS1) Continued Source: 9B26021-01 Prepared & Analyzed: 03/01/19										
2-Hexanone (MBK)	**19.7**	2.0	ug/L	20		98.4	50-150			
Isopropylbenzene	**24.1**	0.20	ug/L	20		120	50-150			
4-Isopropyltoluene	**26.2**	0.20	ug/L	20		131	50-150			
Methyl-tert-Butyl Ether (MTBE)	**49.9**	1.7	ug/L	40		125	70-130			
Methylene Chloride	**21.3**	5.0	ug/L	20		106	50-150			
4-Methyl-2-pentanone (MIBK)	**23.1**	0.70	ug/L	20		116	50-150			
Naphthalene	**23.5**	0.20	ug/L	20		118	50-150			
n-Propylbenzene	**22.4**	0.20	ug/L	20		112	70-130			
Styrene	**21.9**	0.20	ug/L	20		110	50-150			
1,1,1,2-Tetrachloroethane	**24.6**	0.40	ug/L	20		123	50-150			
1,1,2,2-Tetrachloroethane	**20.2**	0.30	ug/L	20		101	50-150			
Tetrachloroethylene (PCE)	**24.6**	0.50	ug/L	20		123	70-130			
Toluene	**21.0**	0.30	ug/L	20		105	70-130			
1,2,3-Trichlorobenzene	**26.8**	0.20	ug/L	20		134	50-150			
1,1,2-Trichloroethane	**20.9**	0.30	ug/L	20		104	50-150			
1,1,1-Trichloroethane	**28.1**	0.30	ug/L	20		141	70-130			QM-07
Trichloroethylene (TCE)	**24.3**	0.20	ug/L	20		122	70-130			
Trichlorofluoromethane (R11)	**27.9**	0.20	ug/L	20		139	50-150			
1,2,3-Trichloropropane	**21.2**	0.30	ug/L	20		106	50-150			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**22.6**	0.30	ug/L	20		113	50-150			
1,2,4-Trimethylbenzene	**24.6**	0.30	ug/L	20		123	50-150			
1,3,5-Trimethylbenzene	**25.3**	0.20	ug/L	20		126	70-130			
Vinyl chloride	**26.8**	0.50	ug/L	20		134	70-130			QM-07
o-Xylene	**22.1**	0.30	ug/L	20		111	50-150			
m,p-Xylenes	**45.8**	0.40	ug/L	40		114	50-150			
Surrogate: 4-Bromofluorobenzene	*50.5*		*ug/L*	*50*		*101*	*70-140*			
Surrogate: Dibromofluoromethane	*53.8*		*ug/L*	*50*		*108*	*70-140*			
Surrogate: Toluene-d8	*46.4*		*ug/L*	*50*		*92.8*	*70-140*			
Matrix Spike Dup (B9C0106-MSD1) Source: 9B26021-01 Prepared & Analyzed: 03/01/19										
Acetone	**15.3**	2.0	ug/L	20		76.6	50-150	34.2	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Matrix Spike Dup (B9C0106-MSD1) Continued				**Source: 9B26021-01**		Prepared & Analyzed: 03/01/19				
Benzene	**16.9**	0.20	ug/L	20		84.3	70-130	21.9	30	
Bromobenzene	**22.2**	0.30	ug/L	20		111	50-150	7.13	30	
Bromochloromethane	**20.5**	0.50	ug/L	20		102	50-150	21.0	30	
Bromodichloromethane	**20.7**	0.20	ug/L	20		103	50-150	17.9	30	
Bromoform	**23.5**	0.50	ug/L	20		118	70-130	6.85	30	
Bromomethane	**19.6**	0.50	ug/L	20		97.8	50-150	21.9	30	
2-Butanone (MEK)	**19.2**	2.0	ug/L	20		96.0	50-150	18.5	30	
tert-Butylbenzene	**24.4**	0.20	ug/L	20		122	50-150	5.93	30	
n-Butylbenzene	**22.6**	0.20	ug/L	20		113	50-150	6.75	30	
sec-Butylbenzene	**23.7**	0.20	ug/L	20		118	50-150	6.66	30	
Carbon Disulfide	**15.5**	0.30	ug/L	20		77.6	50-150	14.8	30	
Carbon Tetrachloride	**20.9**	0.30	ug/L	20		105	50-150	14.3	30	
Chlorobenzene	**20.9**	0.30	ug/L	20		105	70-130	10.2	30	
Chloroethane	**19.7**	0.50	ug/L	20		98.3	50-150	29.9	30	
Chloroform	**21.0**	0.30	ug/L	20		105	70-130	20.4	30	
Chloromethane	**18.5**	0.40	ug/L	20		92.5	50-150	28.4	30	
4-Chlorotoluene	**21.0**	0.20	ug/L	20		105	50-150	8.53	30	
2-Chlorotoluene	**21.0**	0.30	ug/L	20		105	50-150	8.12	30	
1,2-Dibromo-3-chloropropane	**23.1**	0.40	ug/L	20		116	50-150	5.72	30	
Dibromochloromethane	**22.6**	0.30	ug/L	20		113	50-150	8.46	30	
1,2-Dibromoethane (EDB)	**22.0**	0.30	ug/L	20		110	50-150	7.96	30	
Dibromomethane	**19.9**	0.40	ug/L	20		99.7	50-150	21.8	30	
1,3-Dichlorobenzene	**20.9**	0.10	ug/L	20		104	50-150	7.29	30	
1,4-Dichlorobenzene	**21.3**	0.30	ug/L	20		107	50-150	9.42	30	
1,2-Dichlorobenzene	**22.3**	0.30	ug/L	20		112	50-150	7.87	30	
Dichlorodifluoromethane (R12)	**19.2**	0.50	ug/L	20		95.8	50-150	29.7	30	
1,1-Dichloroethane	**16.6**	0.20	ug/L	20		82.8	70-130	22.2	30	
1,2-Dichloroethane (EDC)	**22.9**	0.30	ug/L	20		114	50-150	20.2	30	
cis-1,2-Dichloroethylene	**17.6**	0.20	ug/L	20		87.8	70-130	23.6	30	
1,1-Dichloroethylene	**17.2**	0.30	ug/L	20		86.2	70-130	19.7	30	
trans-1,2-Dichloroethylene	**17.9**	0.40	ug/L	20		89.6	50-150	20.2	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Matrix Spike Dup (B9C0106-MSD1) Continued				**Source: 9B26021-01**		Prepared & Analyzed: 03/01/19				
1,3-Dichloropropane	**19.7**	0.10	ug/L	20		98.6	50-150	9.61	30	
1,2-Dichloropropane	**15.6**	0.50	ug/L	20		78.0	70-130	20.9	30	
2,2-Dichloropropane	**23.5**	0.40	ug/L	20		117	50-150	17.3	30	
trans-1,3-Dichloropropylene	**19.6**	0.20	ug/L	20		98.1	50-150	8.68	30	
1,1-Dichloropropylene	**19.2**	0.20	ug/L	20		96.1	50-150	18.3	30	
cis-1,3-Dichloropropylene	**16.3**	0.20	ug/L	20		81.6	50-150	23.0	30	
Ethylbenzene	**20.8**	0.20	ug/L	20		104	70-130	8.07	30	
Hexachlorobutadiene	**23.8**	0.40	ug/L	20		119	50-150	4.08	30	
2-Hexanone (MBK)	**18.7**	2.0	ug/L	20		93.4	50-150	5.22	30	
Isopropylbenzene	**22.5**	0.20	ug/L	20		113	50-150	6.61	30	
4-Isopropyltoluene	**24.8**	0.20	ug/L	20		124	50-150	5.69	30	
Methyl-tert-Butyl Ether (MTBE)	**40.8**	1.7	ug/L	40		102	70-130	19.9	30	
Methylene Chloride	**16.3**	5.0	ug/L	20		81.4	50-150	26.7	30	
4-Methyl-2-pentanone (MIBK)	**19.4**	0.70	ug/L	20		96.8	50-150	17.6	30	
Naphthalene	**23.5**	0.20	ug/L	20		117	50-150	0.170	30	
n-Propylbenzene	**21.2**	0.20	ug/L	20		106	70-130	5.92	30	
Styrene	**20.4**	0.20	ug/L	20		102	50-150	7.52	30	
1,1,1,2-Tetrachloroethane	**22.6**	0.40	ug/L	20		113	50-150	8.35	30	
1,1,2,2-Tetrachloroethane	**19.3**	0.30	ug/L	20		96.4	50-150	4.61	30	
Tetrachloroethylene (PCE)	**23.2**	0.50	ug/L	20		116	70-130	6.10	30	
Toluene	**19.4**	0.30	ug/L	20		96.8	70-130	8.08	30	
1,2,3-Trichlorobenzene	**25.5**	0.20	ug/L	20		128	50-150	4.86	30	
1,1,2-Trichloroethane	**19.2**	0.30	ug/L	20		95.9	50-150	8.58	30	
1,1,1-Trichloroethane	**23.8**	0.30	ug/L	20		119	70-130	16.7	30	
Trichloroethylene (TCE)	**20.1**	0.20	ug/L	20		101	70-130	18.9	30	
Trichlorofluoromethane (R11)	**20.8**	0.20	ug/L	20		104	50-150	28.9	30	
1,2,3-Trichloropropane	**19.9**	0.30	ug/L	20		99.4	50-150	6.52	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**18.3**	0.30	ug/L	20		91.7	50-150	20.6	30	
1,2,4-Trimethylbenzene	**22.8**	0.30	ug/L	20		114	50-150	7.59	30	
1,3,5-Trimethylbenzene	**23.6**	0.20	ug/L	20		118	70-130	6.70	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874344
Date Received: 02/20/19
Date Reported: 03/08/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C0106 - EPA 5030B										
Matrix Spike Dup (B9C0106-MSD1) Continued		**Source: 9B26021-01**				Prepared & Analyzed: 03/01/19				
Vinyl chloride	**20.5**	0.50	ug/L	20		102	70-130	26.6	30	
o-Xylene	**20.7**	0.30	ug/L	20		103	50-150	6.73	30	
m,p-Xylenes	**42.0**	0.40	ug/L	40		105	50-150	8.68	30	
Surrogate: 4-Bromofluorobenzene	*50.4*		*ug/L*	*50*		*101*	*70-140*			
Surrogate: Dibromofluoromethane	*48.1*		*ug/L*	*50*		*96.1*	*70-140*			
Surrogate: Toluene-d8	*48.4*		*ug/L*	*50*		*96.9*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874344
Project No:	130072-024	**Date Received:**	02/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/08/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = ******* : Exceeds lower control limit.

[3] = **QM-07** : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No. 7609

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 Fax: 818-998-7258

Page of

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name:** ~~Alex Felix~~ Robert Bucky
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Robert Bucky
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush 4 = 72 Hour Rush

2 = 24 Hour Rush 5 = 5 Day Rush

3 = 48 Hour Rush X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane by 8270C									Special Instructions
						Please enter the TAT Turnaround Codes ** below										
EW-INF-022019-0001	9B20011 -01	2/20/2019	1300	Water	4	X	X									
TOTAL-EFF-022019-0001	-02	2/20/2019	1315	Water	4	X	X									
																'19FEB20

For Laboratory Use

REVIEWED

Date 2/21/19 Time 0700

TAT N Days Sign:

A.A. Project No.: A874344 / 9B20011

Relinquished by	Date	Time	Received by
Robert Bucky	2/20/19	1323	
Relinquished by	Date	Time	Received by
	2/20/19	17:58	
Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 15, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874345 / 9C06025

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 03/06/19 14:20 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACE-030619-0001	9C06025-01	Vapor	5	03/06/19 10:45	03/06/19 14:20
SVE-VGACM-030619-0001	9C06025-02	Vapor	5	03/06/19 11:00	03/06/19 14:20
SVE-VGACI-030619-0001	9C06025-03	Vapor	5	03/06/19 11:10	03/06/19 14:20
TO-3 VOCs as Hexane					
SVE-VGACE-030619-0001	9C06025-01	Vapor	5	03/06/19 10:45	03/06/19 14:20
SVE-VGACM-030619-0001	9C06025-02	Vapor	5	03/06/19 11:00	03/06/19 14:20
SVE-VGACI-030619-0001	9C06025-03	Vapor	5	03/06/19 11:10	03/06/19 14:20

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACE-030619-0001

9C06025-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.012**	ug/L	0.0081	**3.0**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACE-030619-0001

9C06025-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.038**	ug/L	0.0079	**9.6**	ppbv	2.0
1,1-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
trans-1,2-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
1,2-Dichloropropane	<0.010	ug/L	0.010	<2.2	ppbv	2.2
trans-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
cis-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
Dichlorotetrafluoroethane	<0.050	ug/L	0.050	<7.2	ppbv	7.2
1,4-Dioxane	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Ethylbenzene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
4-Ethyltoluene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Hexachlorobutadiene	<0.050	ug/L	0.050	<4.7	ppbv	4.7
2-Hexanone (MBK)	<0.049	ug/L	0.049	<12	ppbv	12
Isopropanol (IPA)	<0.10	ug/L	0.10	<41	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Methylene Chloride	<0.049	ug/L	0.049	<14	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049	ug/L	0.049	<12	ppbv	12
Styrene	<0.0098	ug/L	0.0098	<2.3	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050	ug/L	0.050	<7.3	ppbv	7.3
Tetrachloroethylene (PCE)	<0.014	ug/L	0.014	<2.0	ppbv	2.0
Toluene	<0.049	ug/L	0.049	<13	ppbv	13
1,2,4-Trichlorobenzene	<0.020	ug/L	0.020	<2.7	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACE-030619-0001

9C06025-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	<0.011	ug/L	0.011	<2.0	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	106 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACM-030619-0001

9C06025-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.020**	ug/L	0.0081	**4.8**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACM-030619-0001

9C06025-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.066**	ug/L	0.0079	**17**	ppbv	2.0
1,1-Dichloroethylene	**0.0079**	ug/L	0.0079	**2.0**	ppbv	2.0
trans-1,2-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
1,2-Dichloropropane	<0.010	ug/L	0.010	<2.2	ppbv	2.2
trans-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
cis-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
Dichlorotetrafluoroethane	<0.050	ug/L	0.050	<7.2	ppbv	7.2
1,4-Dioxane	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Ethylbenzene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
4-Ethyltoluene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Hexachlorobutadiene	<0.050	ug/L	0.050	<4.7	ppbv	4.7
2-Hexanone (MBK)	<0.049	ug/L	0.049	<12	ppbv	12
Isopropanol (IPA)	<0.10	ug/L	0.10	<41	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Methylene Chloride	<0.049	ug/L	0.049	<14	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049	ug/L	0.049	<12	ppbv	12
Styrene	<0.0098	ug/L	0.0098	<2.3	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050	ug/L	0.050	<7.3	ppbv	7.3
Tetrachloroethylene (PCE)	**0.16**	ug/L	0.014	**24**	ppbv	2.0
Toluene	<0.049	ug/L	0.049	<13	ppbv	13
1,2,4-Trichlorobenzene	<0.020	ug/L	0.020	<2.7	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACM-030619-0001

9C06025-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	**0.15**	ug/L	0.011	**27**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	99.0 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACI-030619-0001

9C06025-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.017**	ug/L	0.0081	**4.2**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACI-030619-0001

9C06025-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.063**	ug/L	0.0079	**16**	ppbv	2.0
1,1-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
trans-1,2-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
1,2-Dichloropropane	<0.010	ug/L	0.010	<2.2	ppbv	2.2
trans-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
cis-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
Dichlorotetrafluoroethane	<0.050	ug/L	0.050	<7.2	ppbv	7.2
1,4-Dioxane	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Ethylbenzene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
4-Ethyltoluene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Hexachlorobutadiene	<0.050	ug/L	0.050	<4.7	ppbv	4.7
2-Hexanone (MBK)	<0.049	ug/L	0.049	<12	ppbv	12
Isopropanol (IPA)	<0.10	ug/L	0.10	<41	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Methylene Chloride	<0.049	ug/L	0.049	<14	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049	ug/L	0.049	<12	ppbv	12
Styrene	<0.0098	ug/L	0.0098	<2.3	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050	ug/L	0.050	<7.3	ppbv	7.3
Tetrachloroethylene (PCE)	**0.41**	ug/L	0.014	**61**	ppbv	2.0
Toluene	<0.049	ug/L	0.049	<13	ppbv	13
1,2,4-Trichlorobenzene	<0.020	ug/L	0.020	<2.7	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Matrix:	Vapor	**Sampled:**	03/06/19
Dilution:	1	**Prepared:**	03/08/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	03/08/19

SVE-VGACI-030619-0001

9C06025-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	**0.16**	ug/L	0.011	**30**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	101 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19
Method:	VOCs by EPA TO-3 GC/MS	**Units:**	ppbv

Date Sampled:	03/06/19	03/06/19	03/06/19	
Date Prepared:	03/08/19	03/08/19	03/08/19	
Date Analyzed:	03/08/19	03/08/19	03/08/19	
AA ID No:	9C06025-01	9C06025-02	9C06025-03	
Client ID No:	SVE-VGACE-030619-0001	SVE-VGACM-030619-0001	SVE-VGACI-030619-0001	
Matrix:	Vapor	Vapor	Vapor	
Dilution Factor:	1	1	1	MRL
TO-3 VOCs as Hexane (TO-3)				
TNMOC as Hexane	<1200	<1200	<1200	1200
Surrogates				**%REC Limits**
4-Bromofluorobenzene	106%	100%	102%	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
Blank (B9C0811-BLK1)				Prepared & Analyzed: 03/08/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
Blank (B9C0811-BLK1) Continued				Prepared & Analyzed: 03/08/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*20.5*		*ppbv*	*20*		*102*	*70-130*			
LCS (B9C0811-BS1)				Prepared & Analyzed: 03/08/19						
Acetone	**36.6**	21	ppbv	40		91.4	70-130		30	
Benzene	**39.3**	3.0	ppbv	40		98.3	70-130		30	
Benzyl chloride	**44.2**	9.7	ppbv	40		111	70-130		30	
Bromodichloromethane	**41.3**	7.5	ppbv	40		103	70-130		30	
Bromoform	**45.6**	4.8	ppbv	40		114	70-130		30	
Bromomethane	**38.4**	2.6	ppbv	40		95.9	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
LCS (B9C0811-BS1) Continued				Prepared & Analyzed: 03/08/19						
2-Butanone (MEK)	**41.5**	17	ppbv	40		104	70-130		30	
Carbon Disulfide	**40.2**	16	ppbv	40		101	70-130		30	
Carbon Tetrachloride	**40.6**	2.1	ppbv	40		101	70-130		30	
Chlorobenzene	**40.5**	2.2	ppbv	40		101	70-130		30	
Chloroethane	**41.2**	3.8	ppbv	40		103	70-130		30	
Chloroform	**40.8**	2.0	ppbv	40		102	70-130		30	
Chloromethane	**39.5**	4.8	ppbv	40		98.7	70-130		30	
Dibromochloromethane	**43.0**	2.3	ppbv	40		108	70-130		30	
1,2-Dibromoethane (EDB)	**40.1**	2.6	ppbv	40		100	70-130		30	
1,2-Dichlorobenzene	**37.2**	3.3	ppbv	40		92.9	70-130		30	
1,3-Dichlorobenzene	**39.4**	3.3	ppbv	40		98.6	70-130		30	
1,4-Dichlorobenzene	**37.7**	3.3	ppbv	40		94.3	70-130		30	
Dichlorodifluoromethane (R12)	**32.6**	10	ppbv	40		81.5	70-130		30	
1,1-Dichloroethane	**38.2**	2.0	ppbv	40		95.6	70-130		30	
1,2-Dichloroethane (EDC)	**40.9**	2.5	ppbv	40		102	70-130		30	
cis-1,2-Dichloroethylene	**39.4**	2.0	ppbv	40		98.6	70-130		30	
1,1-Dichloroethylene	**37.5**	2.0	ppbv	40		93.8	70-130		30	
trans-1,2-Dichloroethylene	**40.4**	2.0	ppbv	40		101	70-130		30	
1,2-Dichloropropane	**40.2**	2.2	ppbv	40		100	70-130		30	
trans-1,3-Dichloropropylene	**41.5**	2.2	ppbv	40		104	70-130		30	
cis-1,3-Dichloropropylene	**40.5**	2.2	ppbv	40		101	70-130		30	
Dichlorotetrafluoroethane	**32.5**	7.2	ppbv	40		81.3	70-130		30	
Ethylbenzene	**39.1**	2.3	ppbv	40		97.8	70-130		30	
4-Ethyltoluene	**44.5**	2.0	ppbv	40		111	70-130		30	
Hexachlorobutadiene	**30.2**	4.7	ppbv	40		75.4	70-130		30	
2-Hexanone (MBK)	**51.2**	12	ppbv	40		128	70-130		30	
Isopropanol (IPA)	**45.9**	41	ppbv	40		115	70-130		30	
Methylene Chloride	**34.6**	14	ppbv	40		86.5	70-130		30	
4-Methyl-2-pentanone (MIBK)	**51.0**	12	ppbv	40		127	70-130		30	
Styrene	**39.7**	2.3	ppbv	40		99.2	70-130		30	
1,1,2,2-Tetrachloroethane	**28.8**	7.3	ppbv	40		72.0	70-130		30	
Tetrachloroethylene (PCE)	**37.6**	2.0	ppbv	40		93.9	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
LCS (B9C0811-BS1) Continued				Prepared & Analyzed: 03/08/19						
Toluene	**39.3**	13	ppbv	40		98.3	70-130		30	
1,2,4-Trichlorobenzene	**29.9**	2.7	ppbv	40		74.8	70-130		30	
1,1,2-Trichloroethane	**40.2**	3.7	ppbv	40		100	70-130		30	
1,1,1-Trichloroethane	**40.9**	3.7	ppbv	40		102	70-130		30	
Trichloroethylene (TCE)	**35.0**	2.0	ppbv	40		87.5	70-130		30	
Trichlorofluoromethane (R11)	**40.0**	8.9	ppbv	40		100	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**40.7**	6.5	ppbv	40		102	70-130		30	
1,3,5-Trimethylbenzene	**39.2**	2.0	ppbv	40		98.0	70-130		30	
1,2,4-Trimethylbenzene	**37.6**	2.0	ppbv	40		94.0	70-130		30	
Vinyl acetate	**39.5**	2.8	ppbv	40		98.8	70-130		30	
Vinyl chloride	**41.1**	3.9	ppbv	40		103	70-130		30	
o-Xylene	**37.5**	2.3	ppbv	40		93.8	70-130		30	
m,p-Xylenes	**77.0**	2.3	ppbv	80		96.2	70-130		30	
1,2,3-Trichloropropane	**36.0**	2.0	ppbv	40		89.9	70-130		30	
Surrogate: 4-Bromofluorobenzene	*23.5*		*ppbv*	*20*		*118*	*70-130*			
LCS Dup (B9C0811-BSD1)				Prepared & Analyzed: 03/08/19						
Acetone	**38.5**	21	ppbv	40		96.2	70-130	5.17	30	
Benzene	**39.8**	3.0	ppbv	40		99.4	70-130	1.16	30	
Benzyl chloride	**43.0**	9.7	ppbv	40		108	70-130	2.75	30	
Bromodichloromethane	**42.2**	7.5	ppbv	40		105	70-130	2.16	30	
Bromoform	**45.0**	4.8	ppbv	40		113	70-130	1.37	30	
Bromomethane	**39.1**	2.6	ppbv	40		97.7	70-130	1.86	30	
2-Butanone (MEK)	**42.2**	17	ppbv	40		105	70-130	1.63	30	
Carbon Disulfide	**40.3**	16	ppbv	40		101	70-130	0.298	30	
Carbon Tetrachloride	**43.7**	2.1	ppbv	40		109	70-130	7.52	30	
Chlorobenzene	**39.4**	2.2	ppbv	40		98.4	70-130	2.91	30	
Chloroethane	**40.3**	3.8	ppbv	40		101	70-130	2.28	30	
Chloroform	**42.2**	2.0	ppbv	40		105	70-130	3.35	30	
Chloromethane	**39.8**	4.8	ppbv	40		99.6	70-130	0.883	30	
Dibromochloromethane	**44.2**	2.3	ppbv	40		110	70-130	2.64	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
LCS Dup (B9C0811-BSD1) Continued				Prepared & Analyzed: 03/08/19						
1,2-Dibromoethane (EDB)	**41.3**	2.6	ppbv	40		103	70-130	2.83	30	
1,2-Dichlorobenzene	**36.3**	3.3	ppbv	40		90.8	70-130	2.29	30	
1,3-Dichlorobenzene	**33.9**	3.3	ppbv	40		84.7	70-130	15.2	30	
1,4-Dichlorobenzene	**36.9**	3.3	ppbv	40		92.4	70-130	2.09	30	
Dichlorodifluoromethane (R12)	**35.9**	10	ppbv	40		89.8	70-130	9.63	30	
1,1-Dichloroethane	**39.8**	2.0	ppbv	40		99.4	70-130	3.90	30	
1,2-Dichloroethane (EDC)	**44.2**	2.5	ppbv	40		111	70-130	7.89	30	
cis-1,2-Dichloroethylene	**41.0**	2.0	ppbv	40		102	70-130	3.90	30	
1,1-Dichloroethylene	**40.2**	2.0	ppbv	40		101	70-130	7.02	30	
trans-1,2-Dichloroethylene	**41.6**	2.0	ppbv	40		104	70-130	2.85	30	
1,2-Dichloropropane	**39.4**	2.2	ppbv	40		98.6	70-130	1.91	30	
trans-1,3-Dichloropropylene	**41.6**	2.2	ppbv	40		104	70-130	0.168	30	
cis-1,3-Dichloropropylene	**39.5**	2.2	ppbv	40		98.7	70-130	2.55	30	
Dichlorotetrafluoroethane	**36.6**	7.2	ppbv	40		91.6	70-130	11.9	30	
Ethylbenzene	**36.7**	2.3	ppbv	40		91.8	70-130	6.35	30	
4-Ethyltoluene	**43.0**	2.0	ppbv	40		108	70-130	3.38	30	
Hexachlorobutadiene	**30.9**	4.7	ppbv	40		77.3	70-130	2.49	30	
2-Hexanone (MBK)	**49.0**	12	ppbv	40		123	70-130	4.35	30	
Isopropanol (IPA)	**46.5**	41	ppbv	40		116	70-130	1.32	30	
Methylene Chloride	**34.7**	14	ppbv	40		86.8	70-130	0.375	30	
4-Methyl-2-pentanone (MIBK)	**51.9**	12	ppbv	40		130	70-130	1.81	30	
Styrene	**38.3**	2.3	ppbv	40		95.7	70-130	3.54	30	
1,1,2,2-Tetrachloroethane	**31.4**	7.3	ppbv	40		78.4	70-130	8.47	30	
Tetrachloroethylene (PCE)	**39.2**	2.0	ppbv	40		98.0	70-130	4.27	30	
Toluene	**39.4**	13	ppbv	40		98.6	70-130	0.254	30	
1,2,4-Trichlorobenzene	**30.2**	2.7	ppbv	40		75.5	70-130	0.965	30	
1,1,2-Trichloroethane	**40.8**	3.7	ppbv	40		102	70-130	1.61	30	
1,1,1-Trichloroethane	**43.7**	3.7	ppbv	40		109	70-130	6.55	30	
Trichloroethylene (TCE)	**36.6**	2.0	ppbv	40		91.6	70-130	4.61	30	
Trichlorofluoromethane (R11)	**42.6**	8.9	ppbv	40		107	70-130	6.39	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**43.8**	6.5	ppbv	40		110	70-130	7.50	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
LCS Dup (B9C0811-BSD1) Continued				Prepared & Analyzed: 03/08/19						
1,3,5-Trimethylbenzene	**35.6**	2.0	ppbv	40		89.0	70-130	9.62	30	
1,2,4-Trimethylbenzene	**36.7**	2.0	ppbv	40		91.7	70-130	2.53	30	
Vinyl acetate	**41.5**	2.8	ppbv	40		104	70-130	4.89	30	
Vinyl chloride	**41.9**	3.9	ppbv	40		105	70-130	2.05	30	
o-Xylene	**36.4**	2.3	ppbv	40		90.9	70-130	3.17	30	
m,p-Xylenes	**68.4**	2.3	ppbv	80		85.5	70-130	11.9	30	
1,2,3-Trichloropropane	**33.4**	2.0	ppbv	40		83.6	70-130	7.26	30	
Surrogate: 4-Bromofluorobenzene	*21.5*		*ppbv*	*20*		*108*	*70-130*			
Duplicate (B9C0811-DUP1)				**Source: 9B22005-02** Prepared & Analyzed: 03/08/19						
Acetone	**<840**	840	ppbv						30	
Benzene	**144**	120	ppbv		150			4.63	30	
Benzyl chloride	**<390**	390	ppbv						30	
Bromodichloromethane	**<300**	300	ppbv						30	
Bromoform	**<190**	190	ppbv						30	
Bromomethane	**<100**	100	ppbv						30	
2-Butanone (MEK)	**<680**	680	ppbv						30	
Carbon Disulfide	**<640**	640	ppbv						30	
Carbon Tetrachloride	**<84**	84	ppbv						30	
Chlorobenzene	**<88**	88	ppbv						30	
Chloroethane	**<150**	150	ppbv						30	
Chloroform	**<80**	80	ppbv						30	
Chloromethane	**<190**	190	ppbv						30	
Dibromochloromethane	**<92**	92	ppbv						30	
1,2-Dibromoethane (EDB)	**<100**	100	ppbv						30	
1,2-Dichlorobenzene	**<130**	130	ppbv						30	
1,3-Dichlorobenzene	**<130**	130	ppbv						30	
1,4-Dichlorobenzene	**<130**	130	ppbv						30	
Dichlorodifluoromethane (R12)	**<400**	400	ppbv						30	
1,1-Dichloroethane	**<80**	80	ppbv						30	
1,2-Dichloroethane (EDC)	**<100**	100	ppbv						30	
cis-1,2-Dichloroethylene	**<80**	80	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
Duplicate (B9C0811-DUP1) Continued	**Source: 9B22005-02**	Prepared & Analyzed: 03/08/19								
1,1-Dichloroethylene	**<80**	80	ppbv						30	
trans-1,2-Dichloroethylene	**<80**	80	ppbv						30	
1,2-Dichloropropane	**<88**	88	ppbv						30	
trans-1,3-Dichloropropylene	**<88**	88	ppbv						30	
cis-1,3-Dichloropropylene	**<88**	88	ppbv						30	
Dichlorotetrafluoroethane	**<290**	290	ppbv						30	
1,4-Dioxane	**<110**	110	ppbv						30	
Ethylbenzene	**305**	92	ppbv		298			2.25	30	
4-Ethyltoluene	**<80**	80	ppbv						30	
Hexachlorobutadiene	**<190**	190	ppbv						30	
2-Hexanone (MBK)	**<480**	480	ppbv						30	
Isopropanol (IPA)	**<1600**	1600	ppbv						30	
Methyl-tert-Butyl Ether (MTBE)	**<110**	110	ppbv						30	
Methylene Chloride	**<560**	560	ppbv						30	
4-Methyl-2-pentanone (MIBK)	**<480**	480	ppbv						30	
Styrene	**<92**	92	ppbv						30	
1,1,2,2-Tetrachloroethane	**<290**	290	ppbv						30	
Tetrachloroethylene (PCE)	**<80**	80	ppbv						30	
Toluene	**<520**	520	ppbv						30	
1,2,4-Trichlorobenzene	**<110**	110	ppbv						30	
1,1,2-Trichloroethane	**<150**	150	ppbv						30	
1,1,1-Trichloroethane	**<150**	150	ppbv						30	
Trichloroethylene (TCE)	**<80**	80	ppbv						30	
Trichlorofluoromethane (R11)	**<360**	360	ppbv						30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<260**	260	ppbv						30	
1,3,5-Trimethylbenzene	**<80**	80	ppbv						30	
1,2,4-Trimethylbenzene	**<80**	80	ppbv						30	
Vinyl acetate	**<110**	110	ppbv						30	
Vinyl chloride	**<160**	160	ppbv						30	
o-Xylene	**<92**	92	ppbv						30	
m,p-Xylenes	**<92**	92	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
Duplicate (B9C0811-DUP1) Continued			**Source: 9B22005-02**	Prepared & Analyzed: 03/08/19						
1,2,3-Trichloropropane	**<80**	80	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*21.0*		*ppbv*	*20*		*105*	*70-130*			
Duplicate (B9C0811-DUP2)			**Source: 9C06025-01**	Prepared & Analyzed: 03/08/19						
Acetone	**<21**	21	ppbv		<21				30	
Benzene	**<3.0**	3.0	ppbv		<3.0				30	
Benzyl chloride	**<9.7**	9.7	ppbv		<9.7				30	
Bromodichloromethane	**<7.5**	7.5	ppbv		<7.5				30	
Bromoform	**<4.8**	4.8	ppbv		<4.8				30	
Bromomethane	**<2.6**	2.6	ppbv		<2.6				30	
2-Butanone (MEK)	**<17**	17	ppbv		<17				30	
Carbon Disulfide	**<16**	16	ppbv		<16				30	
Carbon Tetrachloride	**<2.1**	2.1	ppbv		<2.1				30	
Chlorobenzene	**<2.2**	2.2	ppbv		<2.2				30	
Chloroethane	**<3.8**	3.8	ppbv		<3.8				30	
Chloroform	**<2.0**	2.0	ppbv		<2.0				30	
Chloromethane	**<4.8**	4.8	ppbv		<4.8				30	
Dibromochloromethane	**<2.3**	2.3	ppbv		<2.3				30	
1,2-Dibromoethane (EDB)	**<2.6**	2.6	ppbv		<2.6				30	
1,2-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
1,3-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
1,4-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
Dichlorodifluoromethane (R12)	**<10**	10	ppbv		<10				30	
1,1-Dichloroethane	**3.08**	2.0	ppbv		3.00			2.63	30	
1,2-Dichloroethane (EDC)	**<2.5**	2.5	ppbv		<2.5				30	
cis-1,2-Dichloroethylene	**9.49**	2.0	ppbv		9.55			0.630	30	
1,1-Dichloroethylene	**<2.0**	2.0	ppbv		1.20			1.65	30	
trans-1,2-Dichloroethylene	**<2.0**	2.0	ppbv		0.830			11.4	30	
1,2-Dichloropropane	**<2.2**	2.2	ppbv		<2.2				30	
trans-1,3-Dichloropropylene	**<2.2**	2.2	ppbv		<2.2				30	
cis-1,3-Dichloropropylene	**<2.2**	2.2	ppbv		<2.2				30	
Dichlorotetrafluoroethane	**<7.2**	7.2	ppbv		<7.2				30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9C0811 - *** DEFAULT PREP ****										
Duplicate (B9C0811-DUP2) Continued	**Source: 9C06025-01**		Prepared & Analyzed: 03/08/19							
1,4-Dioxane	**<2.8**	2.8	ppbv		<2.8				30	
Ethylbenzene	**<2.3**	2.3	ppbv		<2.3				30	
4-Ethyltoluene	**<2.0**	2.0	ppbv		<2.0				30	
Hexachlorobutadiene	**<4.7**	4.7	ppbv		<4.7				30	
2-Hexanone (MBK)	**<12**	12	ppbv		<12				30	
Isopropanol (IPA)	**<41**	41	ppbv		<41				30	
Methyl-tert-Butyl Ether (MTBE)	**<2.8**	2.8	ppbv		<2.8				30	
Methylene Chloride	**<14**	14	ppbv		<14				30	
4-Methyl-2-pentanone (MIBK)	**<12**	12	ppbv		<12				30	
Styrene	**<2.3**	2.3	ppbv		<2.3				30	
1,1,2,2-Tetrachloroethane	**<7.3**	7.3	ppbv		<7.3				30	
Tetrachloroethylene (PCE)	**<2.0**	2.0	ppbv		<2.0				30	
Toluene	**<13**	13	ppbv		1.77			11.2	30	
1,2,4-Trichlorobenzene	**<2.7**	2.7	ppbv		<2.7				30	
1,1,2-Trichloroethane	**<3.7**	3.7	ppbv		<3.7				30	
1,1,1-Trichloroethane	**<3.7**	3.7	ppbv		<3.7				30	
Trichloroethylene (TCE)	**<2.0**	2.0	ppbv		<2.0				30	
Trichlorofluoromethane (R11)	**<8.9**	8.9	ppbv		<8.9				30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<6.5**	6.5	ppbv		<6.5				30	
1,3,5-Trimethylbenzene	**<2.0**	2.0	ppbv		<2.0				30	
1,2,4-Trimethylbenzene	**<2.0**	2.0	ppbv		<2.0				30	
Vinyl acetate	**<2.8**	2.8	ppbv		<2.8				30	
Vinyl chloride	**<3.9**	3.9	ppbv		<3.9				30	
o-Xylene	**<2.3**	2.3	ppbv		<2.3				30	
m,p-Xylenes	**<2.3**	2.3	ppbv		<2.3				30	
1,2,3-Trichloropropane	**<2.0**	2.0	ppbv		<2.0				30	
Surrogate: 4-Bromofluorobenzene	*20.9*		*ppbv*	*20*		*104*	*70-130*			
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9C1127 - *** DEFAULT PREP ****										
Blank (B9C1127-BLK1)			Prepared & Analyzed: 03/08/19							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874345
Date Received: 03/06/19
Date Reported: 03/15/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9C1127 - *** DEFAULT PREP ****										
Blank (B9C1127-BLK1) Continued				Prepared & Analyzed: 03/08/19						
TNMOC as Hexane	<1200	1200	ppbv							
Surrogate: 4-Bromofluorobenzene	*5.04*		*ppbv*	*5.0*		*101*	*70-130*			
LCS (B9C1127-BS1)				Prepared & Analyzed: 03/08/19						
GRO as Hexane	**256**	1200	ppbv	200		128	70-130		30	
Surrogate: 4-Bromofluorobenzene	*5.26*		*ppbv*	*5.0*		*105*	*70-130*			
LCS Dup (B9C1127-BSD1)				Prepared & Analyzed: 03/08/19						
GRO as Hexane	**240**	1200	ppbv	200		120	70-130	6.49	30	
Surrogate: 4-Bromofluorobenzene	*5.24*		*ppbv*	*5.0*		*105*	*70-130*			
Duplicate (B9C1127-DUP1)			**Source: 9C06025-01**	Prepared & Analyzed: 03/08/19						
TNMOC as Hexane	**<1200**	1200	ppbv		<1200				30	
GRO as Hexane	**<1200**	1200	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*5.20*		*ppbv*	*5.0*		*104*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874345
Project No:	130072-024	**Date Received:**	03/06/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	03/15/19

Special Notes

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 17688
70055192
Page 1 of 1

Client: Haley & Aldrich ; JHA Environmental Inc.	Project Name / No.: Cooper-Drum	Sampler's Name:	Alex Fong
Project Manager: Chris Tsiamblos / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature:	
Phone: 714-371-1820 / 714-392-5970	City: South Gate	P.O. No.:	
Fax: 949-453-1047	State & Zip: CA	Quote No.:	

TAT Turnaround Codes **

(1) = Same Day Rush
(2) = 24 Hour Rush
(3) = 48 Hour Rush
(4) = 72 Hour Rush
(5) = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Please enter the TAT Turnaround Codes ** below

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15								Special Instructions
SVE-VGACE-030619-0001		3-6-19	1045	VAPOR	1	X	X								9C06025-01
SVE-VGACN-030619-0001		3-6-19	1100	VAPOR	1	X	X								-02
SVE-VGACI-030619-0001		3-6-19	1110	VAPOR	1	X	X								-03
															10 MAR 5 2019

For Laboratory Use

PRIORITY
Rush Date 3/6/19 Hrs Time 1530 SH ✓ Sign

A.A. Project No.: A874345/9C06025

	Date	Time	
Relinquished by	03-06-19	1245	Received by
Relinquished by	3/6/19	14:20	Received by
Relinquished by	Date	Time	Received by

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 26, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874346 / 9C14002

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 03/14/19 10:24 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
QC1-031319	9C14002-01	Water	5	03/13/19 07:00	03/14/19 10:24
MW-63-031319	9C14002-02	Water	5	03/13/19 09:05	03/14/19 10:24
QC2-031319	9C14002-03	Water	5	03/13/19 09:10	03/14/19 10:24
MW-64A-031319	9C14002-04	Water	5	03/13/19 10:06	03/14/19 10:24
QC3-031319	9C14002-05	Water	5	03/13/19 10:18	03/14/19 10:24
MW-64B-031319	9C14002-06	Water	5	03/13/19 11:02	03/14/19 10:24
QC4-031319	9C14002-07	Water	5	03/13/19 11:10	03/14/19 10:24
8270CM 1,4-Dioxane Only					
MW-63-031319	9C14002-02	Water	5	03/13/19 09:05	03/14/19 10:24
QC2-031319	9C14002-03	Water	5	03/13/19 09:10	03/14/19 10:24
MW-64A-031319	9C14002-04	Water	5	03/13/19 10:06	03/14/19 10:24
QC3-031319	9C14002-05	Water	5	03/13/19 10:18	03/14/19 10:24
MW-64B-031319	9C14002-06	Water	5	03/13/19 11:02	03/14/19 10:24
QC4-031319	9C14002-07	Water	5	03/13/19 11:10	03/14/19 10:24

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9C14002-02	MW-63-031319	03/13/19	03/15/19	03/15/19	1	**25**	ug/L	1	2
9C14002-03	QC2-031319	03/13/19	03/15/19	03/15/19	1	**25**	ug/L	1	2
9C14002-04	MW-64A-031319	03/13/19	03/15/19	03/15/19	1	**7.0**	ug/L	1	2
9C14002-05	QC3-031319	03/13/19	03/15/19	03/15/19	1	<1.0	ug/L	1	2
9C14002-06	MW-64B-031319	03/13/19	03/15/19	03/15/19	1	<1.0	ug/L	1	2
9C14002-07	QC4-031319	03/13/19	03/15/19	03/15/19	1	<1.0	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19
Units: ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/19/19	03/19/19	03/19/19	03/19/19		
Date Analyzed:	03/19/19	03/19/19	03/19/19	03/19/19		
AA ID No:	9C14002-01	9C14002-02	9C14002-03	9C14002-04		
Client ID No:	QC1-031319	MW-63-031319	QC2-031319	MW-64A-031319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	100	MDL	MRL
8260B (EPA 8260B)						
Acetone	<2.0	<2.0	<2.0	**17000 [3]**	2.0	10
Benzene	<0.20	**4.4**	**4.2**	<20	0.20	0.50
Bromobenzene	<0.30	<0.30	<0.30	<30	0.30	0.50
Bromochloromethane	<0.50	<0.50	<0.50	<50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	<0.20	<20	0.20	0.50
Bromoform	<0.50	<0.50	<0.50	<50	0.50	0.50
Bromomethane	<0.50	<0.50	<0.50	<50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	<2.0	**420 J**	2.0	10
tert-Butylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	<0.30	<30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<30	0.30	0.50
Chlorobenzene	<0.30	<0.30	<0.30	<30	0.30	0.50
Chloroethane	<0.50	<0.50	<0.50	<50	0.50	0.50
Chloroform	<0.30	<0.30	<0.30	<30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	<0.30	<30	0.30	0.50
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	<200	2.0	2.0
Dibromochloromethane	<0.30	<0.30	<0.30	<30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	<0.30	<30	0.30	0.50
Dibromomethane	<0.40	<0.40	<0.40	<40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	<0.10	<10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.50	<0.50	<50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19
Units: ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/19/19	03/19/19	03/19/19	03/19/19		
Date Analyzed:	03/19/19	03/19/19	03/19/19	03/19/19		
AA ID No:	9C14002-01	9C14002-02	9C14002-03	9C14002-04		
Client ID No:	QC1-031319	MW-63-031319	QC2-031319	MW-64A-031319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	100	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	<0.30	<0.30	<30	0.30	0.50
cis-1,2-Dichloroethylene	<0.20	**3.3**	**3.2**	<20	0.20	0.50
1,1-Dichloroethylene	<0.30	**5.2**	**5.0**	<30	0.30	0.50
trans-1,2-Dichloroethylene	<0.40	<0.40	<0.40	<40	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	<0.10	<10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50	<50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	<0.40	<40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	<0.20	<20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	<0.20	<20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	<0.20	<20	0.20	0.50
Ethylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	<0.40	<40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	<2.0	<200	2.0	10
Isopropylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	<0.20	<20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	<1.7	<170	1.7	2.0
Methylene Chloride	<5.0	<5.0	<5.0	<500	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	<0.70	**6100**	0.70	10
Naphthalene	<0.20	<0.20	<0.20	<20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	<0.40	<40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	<0.30	<30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<50	0.50	0.50
Toluene	<0.30	<0.30	<0.30	**7200**	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	<0.20	<20	0.20	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19
Units: ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/19/19	03/19/19	03/19/19	03/19/19		
Date Analyzed:	03/19/19	03/19/19	03/19/19	03/19/19		
AA ID No:	9C14002-01	9C14002-02	9C14002-03	9C14002-04		
Client ID No:	QC1-031319	MW-63-031319	QC2-031319	MW-64A-031319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	100	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<30	0.30	0.50
Trichloroethylene (TCE)	<0.20	**0.44 J**	**0.43 J**	<20	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	<0.20	<20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	<0.30	<30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<20	0.20	0.50
Vinyl chloride	<0.50	<0.50	<0.50	<50	0.50	0.50
o-Xylene	<0.30	<0.30	<0.30	<30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	<0.40	<40	0.40	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	108%	109%	110%	108%		70-130
Dibromofluoromethane	104%	103%	101%	102%		70-130
Toluene-d8	101%	100%	100%	99%		70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19
Units: ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/22/19	03/22/19	03/19/19		
Date Analyzed:	03/23/19	03/23/19	03/19/19		
AA ID No:	9C14002-05	9C14002-06	9C14002-07		
Client ID No:	QC3-031319	MW-64B-031319	QC4-031319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B)					
Acetone	<2.0	**2.2 J**	<2.0	2.0	10
Benzene	<0.20	<0.20	<0.20	0.20	0.50
Bromobenzene	<0.30	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<2.0	<2.0	<2.0	2.0	2.0
Dibromochloromethane	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874346
Project No:	130072-025	**Date Received:**	03/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	03/26/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/22/19	03/22/19	03/19/19		
Date Analyzed:	03/23/19	03/23/19	03/19/19		
AA ID No:	9C14002-05	9C14002-06	9C14002-07		
Client ID No:	QC3-031319	MW-64B-031319	QC4-031319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,1-Dichloroethane	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	**1.3**	<0.30	0.30	0.50
cis-1,2-Dichloroethylene	<0.20	**3.6**	<0.20	0.20	0.50
1,1-Dichloroethylene	<0.30	<0.30	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.30	**22**	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	<0.20	0.20	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19
Units: ug/L

Date Sampled:	03/13/19	03/13/19	03/13/19		
Date Prepared:	03/22/19	03/22/19	03/19/19		
Date Analyzed:	03/23/19	03/23/19	03/19/19		
AA ID No:	9C14002-05	9C14002-06	9C14002-07		
Client ID No:	QC3-031319	MW-64B-031319	QC4-031319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,2,3-Trichlorobenzene	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.20	**0.31 J**	<0.20	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.50	<0.50	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	<0.40	0.40	1.0
Surrogates					**%REC Limits**
4-Bromofluorobenzene	113%	112%	109%		70-130
Dibromofluoromethane	94%	97%	100%		70-130
Toluene-d8	125%	125%	100%		70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9C1501 - EPA 3510C_MS										
Blank (B9C1501-BLK1)				Prepared & Analyzed: 03/15/19						
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9C1501-BS1)				Prepared & Analyzed: 03/15/19						
1,4-Dioxane	**11.5**	1.0	ug/L	10		115	70-130		30	
LCS Dup (B9C1501-BSD1)				Prepared & Analyzed: 03/15/19						
1,4-Dioxane	**12.3**	1.0	ug/L	10		123	70-130	6.65	30	
Matrix Spike (B9C1501-MS1)			**Source: 9C14002-04**	Prepared & Analyzed: 03/15/19						
1,4-Dioxane	**18.8**	1.0	ug/L	10	7.03	117	70-130		30	
Matrix Spike Dup (B9C1501-MSD1)			**Source: 9C14002-04**	Prepared & Analyzed: 03/15/19						
1,4-Dioxane	**18.9**	1.0	ug/L	10	7.03	118	70-130	0.585	30	
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Blank (B9C1918-BLK1)				Prepared & Analyzed: 03/19/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Blank (B9C1918-BLK1) Continued				Prepared & Analyzed: 03/19/19						
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<2.0	2.0	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Blank (B9C1918-BLK1) Continued				Prepared & Analyzed: 03/19/19						
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*54.8*		*ug/L*	*50*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*51.4*		*ug/L*	*50*		*103*	*70-130*			
Surrogate: Toluene-d8	*50.6*		*ug/L*	*50*		*101*	*70-130*			
LCS (B9C1918-BS1)				Prepared & Analyzed: 03/19/19						
Acetone	**10.9**	2.0	ug/L	20		54.6	50-150		30	
Benzene	**18.4**	0.20	ug/L	20		92.2	70-130		30	
Bromobenzene	**22.3**	0.30	ug/L	20		111	50-150		30	
Bromochloromethane	**20.1**	0.50	ug/L	20		100	50-150		30	
Bromodichloromethane	**23.6**	0.20	ug/L	20		118	70-130		30	
Bromoform	**22.0**	0.50	ug/L	20		110	70-130		30	
Bromomethane	**20.7**	0.50	ug/L	20		103	70-130		30	
2-Butanone (MEK)	**19.6**	2.0	ug/L	20		97.9	50-150		30	
tert-Butylbenzene	**26.6**	0.20	ug/L	20		133	50-150		30	
n-Butylbenzene	**25.9**	0.20	ug/L	20		129	50-150		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
LCS (B9C1918-BS1) Continued				Prepared & Analyzed: 03/19/19						
sec-Butylbenzene	**26.9**	0.20	ug/L	20		134	50-150		30	
Carbon Disulfide	**15.0**	0.30	ug/L	20		74.8	50-150		30	
Carbon Tetrachloride	**27.3**	0.30	ug/L	20		136	70-130		30	AA-C1
Chlorobenzene	**21.6**	0.30	ug/L	20		108	70-130		30	
Chloroethane	**24.9**	0.50	ug/L	20		125	70-130		30	
Chloroform	**23.0**	0.30	ug/L	20		115	70-130		30	
Chloromethane	**23.1**	0.40	ug/L	20		115	70-130		30	
4-Chlorotoluene	**23.9**	0.20	ug/L	20		120	65-125		30	
2-Chlorotoluene	**24.0**	0.30	ug/L	20		120	65-125		30	
1,2-Dibromo-3-chloropropane	**26.5**	2.0	ug/L	20		132	65-125		30	AA-C1
Dibromochloromethane	**23.8**	0.30	ug/L	20		119	70-130		30	
1,2-Dibromoethane (EDB)	**21.6**	0.30	ug/L	20		108	65-125		30	
Dibromomethane	**21.7**	0.40	ug/L	20		109	65-125		30	
1,3-Dichlorobenzene	**22.2**	0.10	ug/L	20		111	65-125		30	
1,4-Dichlorobenzene	**22.5**	0.30	ug/L	20		112	70-130		30	
1,2-Dichlorobenzene	**22.7**	0.30	ug/L	20		114	65-125		30	
Dichlorodifluoromethane (R12)	**17.5**	0.50	ug/L	20		87.4	50-150		30	
1,1-Dichloroethane	**17.2**	0.20	ug/L	20		86.1	70-130		30	
1,2-Dichloroethane (EDC)	**27.4**	0.30	ug/L	20		137	70-130		30	AA-C1
cis-1,2-Dichloroethylene	**18.3**	0.20	ug/L	20		91.6	70-130		30	
1,1-Dichloroethylene	**16.3**	0.30	ug/L	20		81.5	70-130		30	
trans-1,2-Dichloroethylene	**18.5**	0.40	ug/L	20		92.4	70-130		30	
1,3-Dichloropropane	**19.8**	0.10	ug/L	20		98.8	65-125		30	
1,2-Dichloropropane	**16.6**	0.50	ug/L	20		83.2	70-130		30	
2,2-Dichloropropane	**27.4**	0.40	ug/L	20		137	65-125		30	AA-C1
trans-1,3-Dichloropropylene	**21.2**	0.20	ug/L	20		106	65-125		30	
1,1-Dichloropropylene	**21.9**	0.20	ug/L	20		110	65-125		30	
cis-1,3-Dichloropropylene	**19.3**	0.20	ug/L	20		96.3	70-130		30	
Ethylbenzene	**22.1**	0.20	ug/L	20		111	70-130		30	
Hexachlorobutadiene	**23.1**	0.40	ug/L	20		116	65-125		30	
2-Hexanone (MBK)	**17.9**	2.0	ug/L	20		89.4	65-125		30	
Isopropylbenzene	**25.0**	0.20	ug/L	20		125	65-125		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
LCS (B9C1918-BS1) Continued				Prepared & Analyzed: 03/19/19						
4-Isopropyltoluene	**28.0**	0.20	ug/L	20		140	65-125		30	AA-C1
Methyl-tert-Butyl Ether (MTBE)	**45.2**	1.7	ug/L	40		113	70-130		30	
Methylene Chloride	**17.1**	5.0	ug/L	20		85.4	70-130		30	
4-Methyl-2-pentanone (MIBK)	**18.8**	0.70	ug/L	20		93.8	65-125		30	
Naphthalene	**22.8**	0.20	ug/L	20		114	65-125		30	
n-Propylbenzene	**24.1**	0.20	ug/L	20		120	65-125		30	
Styrene	**21.4**	0.20	ug/L	20		107	65-125		30	
1,1,1,2-Tetrachloroethane	**22.9**	0.40	ug/L	20		115	65-125		30	
1,1,2,2-Tetrachloroethane	**19.0**	0.30	ug/L	20		95.2	70-130		30	
Tetrachloroethylene (PCE)	**21.8**	0.50	ug/L	20		109	70-130		30	
Toluene	**20.1**	0.30	ug/L	20		100	70-130		30	
1,2,4-Trichlorobenzene	**23.1**	0.20	ug/L	20		115	65-125		30	
1,2,3-Trichlorobenzene	**23.3**	0.20	ug/L	20		117	65-125		30	
1,1,2-Trichloroethane	**19.0**	0.30	ug/L	20		95.2	70-130		30	
1,1,1-Trichloroethane	**28.2**	0.30	ug/L	20		141	70-130		30	AA-C1
Trichloroethylene (TCE)	**23.0**	0.20	ug/L	20		115	70-130		30	
Trichlorofluoromethane (R11)	**21.0**	0.20	ug/L	20		105	65-125		30	
1,2,3-Trichloropropane	**19.8**	0.30	ug/L	20		98.9	65-125		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.7**	0.30	ug/L	20		103	65-125		30	
1,2,4-Trimethylbenzene	**25.5**	0.30	ug/L	20		128	65-125		30	AA-C1
1,3,5-Trimethylbenzene	**26.5**	0.20	ug/L	20		133	65-125		30	AA-C1
Vinyl chloride	**25.6**	0.50	ug/L	20		128	70-130		30	
o-Xylene	**21.4**	0.30	ug/L	20		107	70-130		30	
m,p-Xylenes	**44.3**	0.40	ug/L	40		111	65-125		30	
Surrogate: 4-Bromofluorobenzene	*55.6*		*ug/L*	*50*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.8*	*70-130*			
Surrogate: Toluene-d8	*50.1*		*ug/L*	*50*		*100*	*70-130*			
LCS Dup (B9C1918-BSD1)				Prepared & Analyzed: 03/19/19						
Acetone	**15.8**	2.0	ug/L	20		79.0	50-150	36.5	30	
Benzene	**17.6**	0.20	ug/L	20		87.8	70-130	4.89	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
LCS Dup (B9C1918-BSD1) Continued				Prepared & Analyzed: 03/19/19						
Bromobenzene	**21.4**	0.30	ug/L	20		107	50-150	3.89	30	
Bromochloromethane	**20.0**	0.50	ug/L	20		100	50-150	0.0997	30	
Bromodichloromethane	**23.7**	0.20	ug/L	20		119	70-130	0.507	30	
Bromoform	**23.9**	0.50	ug/L	20		119	70-130	8.02	30	
Bromomethane	**22.0**	0.50	ug/L	20		110	70-130	6.36	30	
2-Butanone (MEK)	**20.5**	2.0	ug/L	20		103	50-150	4.74	30	
tert-Butylbenzene	**25.2**	0.20	ug/L	20		126	50-150	5.63	30	
n-Butylbenzene	**24.2**	0.20	ug/L	20		121	50-150	6.46	30	
sec-Butylbenzene	**25.2**	0.20	ug/L	20		126	50-150	6.65	30	
Carbon Disulfide	**13.9**	0.30	ug/L	20		69.6	50-150	7.14	30	
Carbon Tetrachloride	**25.4**	0.30	ug/L	20		127	70-130	7.13	30	
Chlorobenzene	**20.9**	0.30	ug/L	20		104	70-130	3.39	30	
Chloroethane	**24.5**	0.50	ug/L	20		123	70-130	1.62	30	
Chloroform	**20.4**	0.30	ug/L	20		102	70-130	12.4	30	
Chloromethane	**23.0**	0.40	ug/L	20		115	70-130	0.304	30	
4-Chlorotoluene	**22.7**	0.20	ug/L	20		113	65-125	5.19	30	
2-Chlorotoluene	**22.5**	0.30	ug/L	20		113	65-125	6.28	30	
1,2-Dibromo-3-chloropropane	**27.9**	2.0	ug/L	20		140	65-125	5.29	30	AA-C1
Dibromochloromethane	**24.1**	0.30	ug/L	20		120	70-130	1.17	30	
1,2-Dibromoethane (EDB)	**22.7**	0.30	ug/L	20		113	65-125	4.84	30	
Dibromomethane	**20.0**	0.40	ug/L	20		99.8	65-125	8.45	30	
1,3-Dichlorobenzene	**21.4**	0.10	ug/L	20		107	65-125	3.71	30	
1,4-Dichlorobenzene	**21.9**	0.30	ug/L	20		109	70-130	2.66	30	
1,2-Dichlorobenzene	**22.7**	0.30	ug/L	20		113	65-125	0.308	30	
Dichlorodifluoromethane (R12)	**15.8**	0.50	ug/L	20		79.0	50-150	10.1	30	
1,1-Dichloroethane	**18.6**	0.20	ug/L	20		93.0	70-130	7.71	30	
1,2-Dichloroethane (EDC)	**26.7**	0.30	ug/L	20		133	70-130	2.44	30	AA-C1
cis-1,2-Dichloroethylene	**17.6**	0.20	ug/L	20		88.1	70-130	3.90	30	
1,1-Dichloroethylene	**17.7**	0.30	ug/L	20		88.3	70-130	8.01	30	
trans-1,2-Dichloroethylene	**18.0**	0.40	ug/L	20		90.0	70-130	2.69	30	
1,3-Dichloropropane	**20.2**	0.10	ug/L	20		101	65-125	2.20	30	
1,2-Dichloropropane	**16.4**	0.50	ug/L	20		81.8	70-130	1.70	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
LCS Dup (B9C1918-BSD1) Continued				Prepared & Analyzed: 03/19/19						
2,2-Dichloropropane	**24.1**	0.40	ug/L	20		120	65-125	12.7	30	
trans-1,3-Dichloropropylene	**21.3**	0.20	ug/L	20		106	65-125	0.377	30	
1,1-Dichloropropylene	**20.9**	0.20	ug/L	20		104	65-125	4.91	30	
cis-1,3-Dichloropropylene	**19.2**	0.20	ug/L	20		96.2	70-130	0.0519	30	
Ethylbenzene	**21.2**	0.20	ug/L	20		106	70-130	4.53	30	
Hexachlorobutadiene	**22.8**	0.40	ug/L	20		114	65-125	1.35	30	
2-Hexanone (MBK)	**21.2**	2.0	ug/L	20		106	65-125	16.8	30	
Isopropylbenzene	**23.7**	0.20	ug/L	20		119	65-125	5.13	30	
4-Isopropyltoluene	**26.2**	0.20	ug/L	20		131	65-125	6.58	30	AA-C1
Methyl-tert-Butyl Ether (MTBE)	**48.3**	1.7	ug/L	40		121	70-130	6.65	30	
Methylene Chloride	**16.6**	5.0	ug/L	20		83.2	70-130	2.61	30	
4-Methyl-2-pentanone (MIBK)	**23.0**	0.70	ug/L	20		115	65-125	20.4	30	
Naphthalene	**24.4**	0.20	ug/L	20		122	65-125	6.65	30	
n-Propylbenzene	**22.5**	0.20	ug/L	20		113	65-125	6.61	30	
Styrene	**20.7**	0.20	ug/L	20		104	65-125	2.95	30	
1,1,1,2-Tetrachloroethane	**22.7**	0.40	ug/L	20		113	65-125	1.14	30	
1,1,2,2-Tetrachloroethane	**20.5**	0.30	ug/L	20		103	70-130	7.43	30	
Tetrachloroethylene (PCE)	**20.8**	0.50	ug/L	20		104	70-130	4.70	30	
Toluene	**19.2**	0.30	ug/L	20		95.8	70-130	4.84	30	
1,2,4-Trichlorobenzene	**22.9**	0.20	ug/L	20		115	65-125	0.609	30	
1,2,3-Trichlorobenzene	**24.7**	0.20	ug/L	20		123	65-125	5.62	30	
1,1,2-Trichloroethane	**19.4**	0.30	ug/L	20		97.0	70-130	1.82	30	
1,1,1-Trichloroethane	**26.2**	0.30	ug/L	20		131	70-130	7.23	30	AA-C1
Trichloroethylene (TCE)	**22.0**	0.20	ug/L	20		110	70-130	4.44	30	
Trichlorofluoromethane (R11)	**25.3**	0.20	ug/L	20		126	65-125	18.4	30	AA-C1
1,2,3-Trichloropropane	**21.7**	0.30	ug/L	20		108	65-125	9.21	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.7**	0.30	ug/L	20		98.5	65-125	4.85	30	
1,2,4-Trimethylbenzene	**23.9**	0.30	ug/L	20		120	65-125	6.51	30	
1,3,5-Trimethylbenzene	**25.2**	0.20	ug/L	20		126	65-125	5.27	30	AA-C1
Vinyl chloride	**23.3**	0.50	ug/L	20		117	70-130	9.17	30	
o-Xylene	**20.6**	0.30	ug/L	20		103	70-130	3.90	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
LCS Dup (B9C1918-BSD1) Continued				Prepared & Analyzed: 03/19/19						
m,p-Xylenes	**42.6**	0.40	ug/L	40		107	65-125	3.82	30	
Surrogate: 4-Bromofluorobenzene	*54.8*		*ug/L*	*50*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*48.0*		*ug/L*	*50*		*96.1*	*70-130*			
Surrogate: Toluene-d8	*50.7*		*ug/L*	*50*		*101*	*70-130*			
Matrix Spike (B9C1918-MS1)			**Source: 9C14002-04**	Prepared & Analyzed: 03/19/19						
Acetone	**245**	2.0	ug/L	20	17400	NR	50-150		30	**, QM-4X
Benzene	**16.9**	0.20	ug/L	20	<50	84.6	70-130		30	**
Bromobenzene	**21.3**	0.30	ug/L	20	<50	106	50-150		30	**
Bromochloromethane	**20.4**	0.50	ug/L	20	<50	102	50-150		30	**
Bromodichloromethane	**24.0**	0.20	ug/L	20	<50	120	50-150		30	**
Bromoform	**22.9**	0.50	ug/L	20	<50	114	70-130		30	**
Bromomethane	**16.1**	0.50	ug/L	20	<50	80.6	50-150		30	**
2-Butanone (MEK)	**25.8**	2.0	ug/L	20	421	NR	50-150		30	**, QM-4X
tert-Butylbenzene	**24.9**	0.20	ug/L	20	<50	125	50-150		30	**
n-Butylbenzene	**23.9**	0.20	ug/L	20	<50	120	50-150		30	**
sec-Butylbenzene	**24.7**	0.20	ug/L	20	<50	123	50-150		30	**
Carbon Disulfide	**13.2**	0.30	ug/L	20	<50	65.8	50-150		30	**
Carbon Tetrachloride	**25.8**	0.30	ug/L	20	<50	129	50-150		30	**
Chlorobenzene	**20.3**	0.30	ug/L	20	<50	102	70-130		30	**
Chloroethane	**29.2**	0.50	ug/L	20	<50	146	50-150		30	**
Chloroform	**23.1**	0.30	ug/L	20	<50	116	70-130		30	**
Chloromethane	**21.9**	0.40	ug/L	20	<50	110	50-150		30	**
4-Chlorotoluene	**22.4**	0.20	ug/L	20	<50	112	50-150		30	**
2-Chlorotoluene	**22.3**	0.30	ug/L	20	<50	112	50-150		30	**
1,2-Dibromo-3-chloropropane	**25.4**	2.0	ug/L	20	<200	127	50-150		30	**
Dibromochloromethane	**23.6**	0.30	ug/L	20	<50	118	50-150		30	**
1,2-Dibromoethane (EDB)	**21.3**	0.30	ug/L	20	<50	106	50-150		30	**
Dibromomethane	**20.5**	0.40	ug/L	20	<50	102	50-150		30	**
1,3-Dichlorobenzene	**21.2**	0.10	ug/L	20	<50	106	50-150		30	**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Matrix Spike (B9C1918-MS1) Continued Source: 9C14002-04 Prepared & Analyzed: 03/19/19										
1,4-Dichlorobenzene	**21.2**	0.30	ug/L	20	<50	106	50-150		30	**
1,2-Dichlorobenzene	**22.1**	0.30	ug/L	20	<50	111	50-150		30	**
Dichlorodifluoromethane (R12)	**16.4**	0.50	ug/L	20	<50	81.8	50-150		30	**
1,1-Dichloroethane	**18.7**	0.20	ug/L	20	<50	93.6	70-130		30	**
1,2-Dichloroethane (EDC)	**27.6**	0.30	ug/L	20	<50	138	50-150		30	**
cis-1,2-Dichloroethylene	**17.6**	0.20	ug/L	20	<50	88.0	70-130		30	**
1,1-Dichloroethylene	**16.6**	0.30	ug/L	20	<50	82.8	70-130		30	**
trans-1,2-Dichloroethylene	**16.8**	0.40	ug/L	20	<50	84.0	50-150		30	**
1,3-Dichloropropane	**19.2**	0.10	ug/L	20	<50	96.0	50-150		30	**
1,2-Dichloropropane	**15.3**	0.50	ug/L	20	<50	76.6	70-130		30	**
2,2-Dichloropropane	**24.6**	0.40	ug/L	20	<50	123	50-150		30	**
trans-1,3-Dichloropropylene	**21.5**	0.20	ug/L	20	<50	107	50-150		30	**
1,1-Dichloropropylene	**20.3**	0.20	ug/L	20	<50	102	50-150		30	**
cis-1,3-Dichloropropylene	**18.8**	0.20	ug/L	20	<50	94.0	50-150		30	**
Ethylbenzene	**20.8**	0.20	ug/L	20	<50	104	70-130		30	**
Hexachlorobutadiene	**22.4**	0.40	ug/L	20	<100	112	50-150		30	**
2-Hexanone (MBK)	**19.5**	2.0	ug/L	20	<1000	97.4	50-150		30	**
Isopropylbenzene	**23.0**	0.20	ug/L	20	<50	115	50-150		30	**
4-Isopropyltoluene	**25.8**	0.20	ug/L	20	<100	129	50-150		30	**
Methyl-tert-Butyl Ether (MTBE)	**46.6**	1.7	ug/L	40	<200	117	70-130		30	**
Methylene Chloride	**16.1**	5.0	ug/L	20	<500	80.3	50-150		30	**
4-Methyl-2-pentanone (MIBK)	**85.4**	0.70	ug/L	20	6110	NR	50-150		30	**, QM-4X
Naphthalene	**21.8**	0.20	ug/L	20	<200	109	50-150		30	**
n-Propylbenzene	**21.8**	0.20	ug/L	20	<50	109	70-130		30	**
Styrene	**20.2**	0.20	ug/L	20	<50	101	50-150		30	**
1,1,1,2-Tetrachloroethane	**22.8**	0.40	ug/L	20	<50	114	50-150		30	**
1,1,2,2-Tetrachloroethane	**19.7**	0.30	ug/L	20	<50	98.6	50-150		30	**
Tetrachloroethylene (PCE)	**21.0**	0.50	ug/L	20	<50	105	70-130		30	**
Toluene	**87.8**	0.30	ug/L	20	7190	NR	70-130		30	**, QM-4X
1,2,4-Trichlorobenzene	**22.7**	0.20	ug/L	20	<50	114	50-150		30	**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Matrix Spike (B9C1918-MS1) Continued Source: 9C14002-04 Prepared & Analyzed: 03/19/19										
1,2,3-Trichlorobenzene	**22.9**	0.20	ug/L	20	<50	115	50-150		30	**
1,1,2-Trichloroethane	**18.6**	0.30	ug/L	20	<50	93.0	50-150		30	**
1,1,1-Trichloroethane	**26.7**	0.30	ug/L	20	<50	133	70-130		30	**, AA-C1
Trichloroethylene (TCE)	**21.4**	0.20	ug/L	20	<50	107	70-130		30	**
Trichlorofluoromethane (R11)	**27.8**	0.20	ug/L	20	<50	139	50-150		30	**
1,2,3-Trichloropropane	**20.2**	0.30	ug/L	20	<50	101	50-150		30	**
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.0**	0.30	ug/L	20	<50	100	50-150		30	**
1,2,4-Trimethylbenzene	**23.7**	0.30	ug/L	20	<50	119	50-150		30	**
1,3,5-Trimethylbenzene	**24.7**	0.20	ug/L	20	<50	123	70-130		30	**
Vinyl chloride	**23.9**	0.50	ug/L	20	<50	119	70-130		30	**
o-Xylene	**20.6**	0.30	ug/L	20	<50	103	50-150		30	**
m,p-Xylenes	**41.4**	0.40	ug/L	40	<100	103	50-150		30	**
Surrogate: 4-Bromofluorobenzene	*54.7*		*ug/L*	*50*		*109*	*70-130*			**
Surrogate: Dibromofluoromethane	*47.7*		*ug/L*	*50*		*95.4*	*70-130*			**
Surrogate: Toluene-d8	*48.8*		*ug/L*	*50*		*97.5*	*70-130*			**
Matrix Spike Dup (B9C1918-MSD1) **Source: 9C14002-04** Prepared & Analyzed: 03/19/19										
Acetone	**226**	2.0	ug/L	20	17400	NR	50-150		30	**, QM-4X
Benzene	**17.7**	0.20	ug/L	20	<50	88.6	70-130		30	**
Bromobenzene	**21.6**	0.30	ug/L	20	<50	108	50-150		30	**
Bromochloromethane	**20.5**	0.50	ug/L	20	<50	103	50-150		30	**
Bromodichloromethane	**24.0**	0.20	ug/L	20	<50	120	50-150	0.208	30	**
Bromoform	**23.4**	0.50	ug/L	20	<50	117	70-130		30	**
Bromomethane	**19.6**	0.50	ug/L	20	<50	98.2	50-150		30	**
2-Butanone (MEK)	**27.4**	2.0	ug/L	20	421	NR	50-150		30	**, QM-4X
tert-Butylbenzene	**25.6**	0.20	ug/L	20	<50	128	50-150	2.81	30	**
n-Butylbenzene	**24.5**	0.20	ug/L	20	<50	122	50-150	2.31	30	**
sec-Butylbenzene	**25.4**	0.20	ug/L	20	<50	127	50-150	2.95	30	**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Matrix Spike Dup (B9C1918-MSD1) Continued				**Source: 9C14002-04**	Prepared & Analyzed: 03/19/19					
Carbon Disulfide	**13.9**	0.30	ug/L	20	<50	69.7	50-150		30	**
Carbon Tetrachloride	**26.1**	0.30	ug/L	20	<50	130	50-150		30	**
Chlorobenzene	**21.1**	0.30	ug/L	20	<50	106	70-130		30	**
Chloroethane	**25.1**	0.50	ug/L	20	<50	125	50-150		30	**
Chloroform	**23.5**	0.30	ug/L	20	<50	117	70-130		30	**
Chloromethane	**23.9**	0.40	ug/L	20	<50	120	50-150		30	**
4-Chlorotoluene	**23.1**	0.20	ug/L	20	<50	115	50-150	3.17	30	**
2-Chlorotoluene	**22.6**	0.30	ug/L	20	<50	113	50-150		30	**
1,2-Dibromo-3-chloropropane	**26.6**	2.0	ug/L	20	<200	133	50-150		30	**
Dibromochloromethane	**23.5**	0.30	ug/L	20	<50	118	50-150		30	**
1,2-Dibromoethane (EDB)	**21.8**	0.30	ug/L	20	<50	109	50-150		30	**
Dibromomethane	**19.9**	0.40	ug/L	20	<50	99.6	50-150		30	**
1,3-Dichlorobenzene	**21.3**	0.10	ug/L	20	<50	107	50-150	0.659	30	**
1,4-Dichlorobenzene	**21.7**	0.30	ug/L	20	<50	109	50-150		30	**
1,2-Dichlorobenzene	**22.8**	0.30	ug/L	20	<50	114	50-150		30	**
Dichlorodifluoromethane (R12)	**16.4**	0.50	ug/L	20	<50	81.8	50-150		30	**
1,1-Dichloroethane	**18.9**	0.20	ug/L	20	<50	94.5	70-130		30	**
1,2-Dichloroethane (EDC)	**28.0**	0.30	ug/L	20	<50	140	50-150		30	**
cis-1,2-Dichloroethylene	**19.0**	0.20	ug/L	20	<50	94.8	70-130		30	**
1,1-Dichloroethylene	**17.4**	0.30	ug/L	20	<50	87.2	70-130		30	**
trans-1,2-Dichloroethylene	**17.8**	0.40	ug/L	20	<50	89.2	50-150		30	**
1,3-Dichloropropane	**19.4**	0.10	ug/L	20	<50	97.0	50-150	1.14	30	**
1,2-Dichloropropane	**16.0**	0.50	ug/L	20	<50	79.8	70-130		30	**
2,2-Dichloropropane	**24.2**	0.40	ug/L	20	<50	121	50-150		30	**
trans-1,3-Dichloropropylene	**21.3**	0.20	ug/L	20	<50	107	50-150	0.608	30	**
1,1-Dichloropropylene	**21.2**	0.20	ug/L	20	<50	106	50-150	3.95	30	**
cis-1,3-Dichloropropylene	**19.0**	0.20	ug/L	20	<50	94.8	50-150		30	**
Ethylbenzene	**21.1**	0.20	ug/L	20	<50	105	70-130	1.34	30	**
Hexachlorobutadiene	**22.8**	0.40	ug/L	20	<100	114	50-150		30	**
2-Hexanone (MBK)	**20.0**	2.0	ug/L	20	<1000	100	50-150		30	**
Isopropylbenzene	**23.7**	0.20	ug/L	20	<50	118	50-150	3.13	30	**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C1918 - EPA 5030B										
Matrix Spike Dup (B9C1918-MSD1) Continued				**Source: 9C14002-04**	Prepared & Analyzed: 03/19/19					
4-Isopropyltoluene	**26.4**	0.20	ug/L	20	<100	132	50-150	2.07	30	**
Methyl-tert-Butyl Ether (MTBE)	**48.0**	1.7	ug/L	40	<200	120	70-130		30	**
Methylene Chloride	**16.9**	5.0	ug/L	20	<500	84.4	50-150		30	**
4-Methyl-2-pentanone (MIBK)	**86.7**	0.70	ug/L	20	6110	NR	50-150	1.50	30	**, QM-4X
Naphthalene	**24.0**	0.20	ug/L	20	<200	120	50-150	9.67	30	**
n-Propylbenzene	**22.8**	0.20	ug/L	20	<50	114	70-130	4.75	30	**
Styrene	**20.6**	0.20	ug/L	20	<50	103	50-150	1.67	30	**
1,1,1,2-Tetrachloroethane	**23.0**	0.40	ug/L	20	<50	115	50-150		30	**
1,1,2,2-Tetrachloroethane	**20.3**	0.30	ug/L	20	<50	102	50-150		30	**
Tetrachloroethylene (PCE)	**20.9**	0.50	ug/L	20	<50	105	70-130		30	**
Toluene	**86.6**	0.30	ug/L	20	7190	NR	70-130	1.34	30	**, QM-4X
1,2,4-Trichlorobenzene	**23.6**	0.20	ug/L	20	<50	118	50-150	4.06	30	**
1,2,3-Trichlorobenzene	**24.4**	0.20	ug/L	20	<50	122	50-150	6.34	30	**
1,1,2-Trichloroethane	**19.4**	0.30	ug/L	20	<50	97.0	50-150		30	**
1,1,1-Trichloroethane	**27.2**	0.30	ug/L	20	<50	136	70-130		30	**, AA-C1
Trichloroethylene (TCE)	**21.7**	0.20	ug/L	20	<50	108	70-130	1.30	30	**
Trichlorofluoromethane (R11)	**27.0**	0.20	ug/L	20	<50	135	50-150	2.85	30	**
1,2,3-Trichloropropane	**21.5**	0.30	ug/L	20	<50	107	50-150		30	**
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.0**	0.30	ug/L	20	<50	99.9	50-150		30	**
1,2,4-Trimethylbenzene	**24.2**	0.30	ug/L	20	<50	121	50-150		30	**
1,3,5-Trimethylbenzene	**25.4**	0.20	ug/L	20	<50	127	70-130	2.96	30	**
Vinyl chloride	**23.9**	0.50	ug/L	20	<50	120	70-130		30	**
o-Xylene	**20.9**	0.30	ug/L	20	<50	105	50-150		30	**
m,p-Xylenes	**42.9**	0.40	ug/L	40	<100	107	50-150	3.56	30	**
Surrogate: 4-Bromofluorobenzene	*55.8*		*ug/L*	*50*		*112*	*70-130*			**
Surrogate: Dibromofluoromethane	*47.0*		*ug/L*	*50*		*94.1*	*70-130*			**
Surrogate: Toluene-d8	*49.2*		*ug/L*	*50*		*98.3*	*70-130*			**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
Blank (B9C2208-BLK1)				Prepared & Analyzed: 03/22/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<2.0	2.0	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
Blank (B9C2208-BLK1) Continued				Prepared & Analyzed: 03/22/19						
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	0.200	0.20	ug/L							J
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
Blank (B9C2208-BLK1) Continued				Prepared & Analyzed: 03/22/19						
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*55.4*		*ug/L*	*50*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*48.0*		*ug/L*	*50*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*60.7*		*ug/L*	*50*		*121*	*70-130*			
LCS (B9C2208-BS1)				Prepared & Analyzed: 03/22/19						
Acetone	**15.4**	2.0	ug/L	20		76.8	50-150		30	
Benzene	**18.7**	0.20	ug/L	20		93.3	70-130		30	
Bromobenzene	**21.8**	0.30	ug/L	20		109	50-150		30	
Bromochloromethane	**20.4**	0.50	ug/L	20		102	50-150		30	
Bromodichloromethane	**18.6**	0.20	ug/L	20		92.8	70-130		30	
Bromoform	**16.1**	0.50	ug/L	20		80.4	70-130		30	
Bromomethane	**18.2**	0.50	ug/L	20		91.1	70-130		30	
2-Butanone (MEK)	**19.2**	2.0	ug/L	20		95.9	50-150		30	
tert-Butylbenzene	**20.8**	0.20	ug/L	20		104	50-150		30	
n-Butylbenzene	**20.1**	0.20	ug/L	20		100	50-150		30	
sec-Butylbenzene	**20.1**	0.20	ug/L	20		100	50-150		30	
Carbon Disulfide	**13.7**	0.30	ug/L	20		68.6	50-150		30	
Carbon Tetrachloride	**17.6**	0.30	ug/L	20		87.8	70-130		30	
Chlorobenzene	**18.8**	0.30	ug/L	20		94.0	70-130		30	
Chloroethane	**14.8**	0.50	ug/L	20		74.0	70-130		30	
Chloroform	**18.5**	0.30	ug/L	20		92.5	70-130		30	
Chloromethane	**16.1**	0.40	ug/L	20		80.4	70-130		30	
4-Chlorotoluene	**21.3**	0.20	ug/L	20		107	65-125		30	
2-Chlorotoluene	**21.4**	0.30	ug/L	20		107	65-125		30	
1,2-Dibromo-3-chloropropane	**15.8**	2.0	ug/L	20		79.2	65-125		30	
Dibromochloromethane	**17.7**	0.30	ug/L	20		88.6	70-130		30	
1,2-Dibromoethane (EDB)	**18.9**	0.30	ug/L	20		94.7	65-125		30	
Dibromomethane	**18.1**	0.40	ug/L	20		90.6	65-125		30	
1,3-Dichlorobenzene	**21.0**	0.10	ug/L	20		105	65-125		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
LCS (B9C2208-BS1) Continued				Prepared & Analyzed: 03/22/19						
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		99.2	70-130		30	
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		104	65-125		30	
Dichlorodifluoromethane (R12)	**11.8**	0.50	ug/L	20		58.8	50-150		30	
1,1-Dichloroethane	**18.2**	0.20	ug/L	20		91.0	70-130		30	
1,2-Dichloroethane (EDC)	**15.9**	0.30	ug/L	20		79.4	70-130		30	
cis-1,2-Dichloroethylene	**21.0**	0.20	ug/L	20		105	70-130		30	
1,1-Dichloroethylene	**17.4**	0.30	ug/L	20		86.9	70-130		30	
trans-1,2-Dichloroethylene	**19.6**	0.40	ug/L	20		97.8	70-130		30	
1,3-Dichloropropane	**16.8**	0.10	ug/L	20		84.2	65-125		30	
1,2-Dichloropropane	**20.4**	0.50	ug/L	20		102	70-130		30	
2,2-Dichloropropane	**14.6**	0.40	ug/L	20		73.2	65-125		30	
trans-1,3-Dichloropropylene	**16.7**	0.20	ug/L	20		83.6	65-125		30	
1,1-Dichloropropylene	**18.6**	0.20	ug/L	20		93.0	65-125		30	
cis-1,3-Dichloropropylene	**18.9**	0.20	ug/L	20		94.5	70-130		30	
Ethylbenzene	**18.8**	0.20	ug/L	20		94.0	70-130		30	
Hexachlorobutadiene	**18.2**	0.40	ug/L	20		91.2	65-125		30	
2-Hexanone (MBK)	**11.4**	2.0	ug/L	20		56.8	65-125		30	***
Isopropylbenzene	**21.3**	0.20	ug/L	20		107	65-125		30	
4-Isopropyltoluene	**19.3**	0.20	ug/L	20		96.4	65-125		30	
Methyl-tert-Butyl Ether (MTBE)	**30.6**	1.7	ug/L	40		76.6	70-130		30	
Methylene Chloride	**16.0**	5.0	ug/L	20		80.0	70-130		30	
4-Methyl-2-pentanone (MIBK)	**14.7**	0.70	ug/L	20		73.6	65-125		30	
Naphthalene	**19.4**	0.20	ug/L	20		96.8	65-125		30	
n-Propylbenzene	**20.7**	0.20	ug/L	20		104	65-125		30	
Styrene	**16.5**	0.20	ug/L	20		82.6	65-125		30	
1,1,1,2-Tetrachloroethane	**18.8**	0.40	ug/L	20		93.8	65-125		30	
1,1,2,2-Tetrachloroethane	**16.0**	0.30	ug/L	20		80.0	70-130		30	
Tetrachloroethylene (PCE)	**19.0**	0.50	ug/L	20		95.1	70-130		30	
Toluene	**18.6**	0.30	ug/L	20		93.2	70-130		30	
1,2,4-Trichlorobenzene	**19.5**	0.20	ug/L	20		97.5	65-125		30	
1,2,3-Trichlorobenzene	**18.0**	0.20	ug/L	20		90.0	65-125		30	
1,1,2-Trichloroethane	**18.7**	0.30	ug/L	20		93.5	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
LCS (B9C2208-BS1) Continued				Prepared & Analyzed: 03/22/19						
1,1,1-Trichloroethane	**17.8**	0.30	ug/L	20		88.8	70-130		30	
Trichloroethylene (TCE)	**19.6**	0.20	ug/L	20		97.9	70-130		30	
Trichlorofluoromethane (R11)	**15.9**	0.20	ug/L	20		79.7	65-125		30	
1,2,3-Trichloropropane	**15.3**	0.30	ug/L	20		76.6	65-125		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**24.3**	0.30	ug/L	20		122	65-125		30	
1,2,4-Trimethylbenzene	**20.2**	0.30	ug/L	20		101	65-125		30	
1,3,5-Trimethylbenzene	**20.2**	0.20	ug/L	20		101	65-125		30	
Vinyl chloride	**12.7**	0.50	ug/L	20		63.6	70-130		30	***
o-Xylene	**19.9**	0.30	ug/L	20		99.3	70-130		30	
m,p-Xylenes	**38.8**	0.40	ug/L	40		97.1	65-125		30	
Surrogate: 4-Bromofluorobenzene	*52.9*		*ug/L*	*50*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*50.6*		*ug/L*	*50*		*101*	*70-130*			
Surrogate: Toluene-d8	*51.7*		*ug/L*	*50*		*103*	*70-130*			
LCS Dup (B9C2208-BSD1)				Prepared: 03/22/19 Analyzed: 03/23/19						
Acetone	**8.10**	2.0	ug/L	20		40.5	50-150	61.9	30	***, J
Benzene	**19.5**	0.20	ug/L	20		97.6	70-130	4.50	30	
Bromobenzene	**22.7**	0.30	ug/L	20		114	50-150	4.04	30	
Bromochloromethane	**20.3**	0.50	ug/L	20		101	50-150	0.689	30	
Bromodichloromethane	**18.6**	0.20	ug/L	20		93.1	70-130	0.269	30	
Bromoform	**15.0**	0.50	ug/L	20		75.2	70-130	6.81	30	
Bromomethane	**13.6**	0.50	ug/L	20		68.2	70-130	28.8	30	***
2-Butanone (MEK)	**14.6**	2.0	ug/L	20		72.9	50-150	27.3	30	
tert-Butylbenzene	**22.2**	0.20	ug/L	20		111	50-150	6.74	30	
n-Butylbenzene	**20.7**	0.20	ug/L	20		104	50-150	3.24	30	
sec-Butylbenzene	**21.3**	0.20	ug/L	20		107	50-150	6.09	30	
Carbon Disulfide	**14.4**	0.30	ug/L	20		72.1	50-150	4.98	30	
Carbon Tetrachloride	**18.1**	0.30	ug/L	20		90.4	70-130	2.86	30	
Chlorobenzene	**19.2**	0.30	ug/L	20		96.2	70-130	2.31	30	
Chloroethane	**16.9**	0.50	ug/L	20		84.4	70-130	13.1	30	
Chloroform	**18.8**	0.30	ug/L	20		94.2	70-130	1.82	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
LCS Dup (B9C2208-BSD1) Continued				Prepared: 03/22/19 Analyzed: 03/23/19						
Chloromethane	**6.36**	0.40	ug/L	20		31.8	70-130	86.6	30	***
4-Chlorotoluene	**22.3**	0.20	ug/L	20		111	65-125	4.31	30	
2-Chlorotoluene	**23.1**	0.30	ug/L	20		115	65-125	7.79	30	
1,2-Dibromo-3-chloropropane	**13.4**	2.0	ug/L	20		67.2	65-125	16.3	30	
Dibromochloromethane	**17.4**	0.30	ug/L	20		87.0	70-130	1.71	30	
1,2-Dibromoethane (EDB)	**18.0**	0.30	ug/L	20		90.0	65-125	5.03	30	
Dibromomethane	**18.1**	0.40	ug/L	20		90.4	65-125	0.110	30	
1,3-Dichlorobenzene	**21.8**	0.10	ug/L	20		109	65-125	4.07	30	
1,4-Dichlorobenzene	**20.9**	0.30	ug/L	20		104	70-130	5.20	30	
1,2-Dichlorobenzene	**22.0**	0.30	ug/L	20		110	65-125	5.04	30	
Dichlorodifluoromethane (R12)	**11.4**	0.50	ug/L	20		56.9	50-150	3.20	30	
1,1-Dichloroethane	**19.4**	0.20	ug/L	20		96.8	70-130	6.17	30	
1,2-Dichloroethane (EDC)	**16.8**	0.30	ug/L	20		84.2	70-130	5.81	30	
cis-1,2-Dichloroethylene	**21.8**	0.20	ug/L	20		109	70-130	4.01	30	
1,1-Dichloroethylene	**18.0**	0.30	ug/L	20		90.2	70-130	3.78	30	
trans-1,2-Dichloroethylene	**20.3**	0.40	ug/L	20		102	70-130	3.91	30	
1,3-Dichloropropane	**16.8**	0.10	ug/L	20		84.0	65-125	0.297	30	
1,2-Dichloropropane	**21.7**	0.50	ug/L	20		108	70-130	6.08	30	
2,2-Dichloropropane	**14.4**	0.40	ug/L	20		71.8	65-125	1.79	30	
trans-1,3-Dichloropropylene	**16.0**	0.20	ug/L	20		80.0	65-125	4.52	30	
1,1-Dichloropropylene	**19.1**	0.20	ug/L	20		95.4	65-125	2.55	30	
cis-1,3-Dichloropropylene	**19.0**	0.20	ug/L	20		94.8	70-130	0.317	30	
Ethylbenzene	**19.2**	0.20	ug/L	20		96.0	70-130	2.05	30	
Hexachlorobutadiene	**18.8**	0.40	ug/L	20		94.0	65-125	3.02	30	
2-Hexanone (MBK)	**9.53**	2.0	ug/L	20		47.6	65-125	17.4	30	***, J
Isopropylbenzene	**22.7**	0.20	ug/L	20		113	65-125	6.23	30	
4-Isopropyltoluene	**20.6**	0.20	ug/L	20		103	65-125	6.71	30	
Methyl-tert-Butyl Ether (MTBE)	**16.1**	1.7	ug/L	40		40.2	70-130	62.4	30	***
Methylene Chloride	**16.0**	5.0	ug/L	20		80.2	70-130	0.312	30	
4-Methyl-2-pentanone (MIBK)	**13.5**	0.70	ug/L	20		67.4	65-125	8.73	30	
Naphthalene	**19.1**	0.20	ug/L	20		95.4	65-125	1.46	30	
n-Propylbenzene	**22.3**	0.20	ug/L	20		111	65-125	7.35	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874346
Date Received: 03/14/19
Date Reported: 03/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9C2208 - EPA 5030B										
LCS Dup (B9C2208-BSD1) Continued				Prepared: 03/22/19 Analyzed: 03/23/19						
Styrene	**9.38**	0.20	ug/L	20		46.9	65-125	55.1	30	***
1,1,1,2-Tetrachloroethane	**18.6**	0.40	ug/L	20		93.2	65-125	0.695	30	
1,1,2,2-Tetrachloroethane	**14.8**	0.30	ug/L	20		73.8	70-130	8.12	30	
Tetrachloroethylene (PCE)	**19.3**	0.50	ug/L	20		96.5	70-130	1.46	30	
Toluene	**19.3**	0.30	ug/L	20		96.4	70-130	3.38	30	
1,2,4-Trichlorobenzene	**19.0**	0.20	ug/L	20		95.0	65-125	2.60	30	
1,2,3-Trichlorobenzene	**18.0**	0.20	ug/L	20		89.8	65-125	0.167	30	
1,1,2-Trichloroethane	**18.4**	0.30	ug/L	20		91.8	70-130	1.89	30	
1,1,1-Trichloroethane	**18.2**	0.30	ug/L	20		90.8	70-130	2.12	30	
Trichloroethylene (TCE)	**20.6**	0.20	ug/L	20		103	70-130	4.93	30	
Trichlorofluoromethane (R11)	**16.7**	0.20	ug/L	20		83.4	65-125	4.48	30	
1,2,3-Trichloropropane	**14.4**	0.30	ug/L	20		72.0	65-125	6.19	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**25.4**	0.30	ug/L	20		127	65-125	4.30	30	AA-C1
1,2,4-Trimethylbenzene	**21.1**	0.30	ug/L	20		106	65-125	4.55	30	
1,3,5-Trimethylbenzene	**21.6**	0.20	ug/L	20		108	65-125	6.45	30	
Vinyl chloride	**12.8**	0.50	ug/L	20		64.2	70-130	0.938	30	***
o-Xylene	**20.0**	0.30	ug/L	20		99.8	70-130	0.502	30	
m,p-Xylenes	**39.2**	0.40	ug/L	40		98.1	65-125	1.02	30	
Surrogate: 4-Bromofluorobenzene	*54.5*		*ug/L*	*50*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*51.6*		*ug/L*	*50*		*103*	*70-130*			
Surrogate: Toluene-d8	*51.5*		*ug/L*	*50*		*103*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874346
Project No:	130072-025	**Date Received:**	03/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	03/26/19

Special Notes

[1] = ****** : Result obtained from DF=100

[2] = ******* : Exceeds lower control limit.

[3] = ****a** : Result obtained from DF=500

[4] = **AA-C1** : Exceeds upper control limit.

J : Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

[5] = **QM-4X** : The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

Viorel Vasile
Operations Manager

17719

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

LAB: American Analytics

COC 1 of 1

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874346 / 9C14002

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (AQ=Water)	CONTAINERS #	Preservatic	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
QC1-031319	3.13.19	0700	AQ	2		VOAs	X									9C14002 -01
MW-63-031319		0905		4	HCL	various	X	X								-02
QC2-031319		0910		4			X	X								-03
MW-64A-031319		1006		X6			X	X								-04
QC3-031319		1018		4			X	X								-05
MW-64B-031319		1102		4			X	X								-06
QC4-031319		1110		4			X	X								-07

REVIEWED Date 3/14/19 Time 1115 by [signature] TAT N Data Right

SAMPLE INTEGRITY INTACT (Y) N TEMP 5°C

SAMPLING COMPLETED	DATE	TIME
Kevin Thompson	3.13.19	1130

SAMPLING PERFORMED BY: Kevin Thompson

RESULTS NEEDED NO LATER THAN: Standard

	TIME		RECEIVED BY	DATE	TIME
RELEASED BY: [signature]	1200		Nicole	3/13/19	1200
RELEASED BY: Nicole	8:45		[signature]	3/14/19	8:45
RELEASED BY: [signature]	10:24		[signature]	3/14/19	10:24

SHIPPED VIA

TIME SENT

COOLER #

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

April 04, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874347 / 9C20007

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 03/20/19 14:50 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-032019-0001	9C20007-01	Water	5	03/20/19 10:05	03/20/19 14:50
TOTAL-EFF-032019-0001	9C20007-02	Water	5	03/20/19 09:50	03/20/19 14:50
8270CM 1,4-Dioxane Only					
EW-INF-032019-0001	9C20007-01	Water	5	03/20/19 10:05	03/20/19 14:50
TOTAL-EFF-032019-0001	9C20007-02	Water	5	03/20/19 09:50	03/20/19 14:50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9C20007-01	EW-INF-032019-0001	03/20/19	03/25/19	03/27/19	1	**4.8**	ug/L	1	2
9C20007-02	TOTAL-EFF-032019-0001	03/20/19	03/25/19	03/27/19	1	**4.9**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874347
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	04/04/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	03/20/19	03/20/19		
Date Prepared:	04/02/19	04/02/19		
Date Analyzed:	04/02/19	04/02/19		
AA ID No:	9C20007-01	9C20007-02		
Client ID No:	EW-INF-032019-0001	TOTAL-EFF-032019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<2.0	<2.0	2.0	10
Benzene	<0.20	<0.20	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19
Units: ug/L

Date Sampled:	03/20/19	03/20/19		
Date Prepared:	04/02/19	04/02/19		
Date Analyzed:	04/02/19	04/02/19		
AA ID No:	9C20007-01	9C20007-02		
Client ID No:	EW-INF-032019-0001	TOTAL-EFF-032019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	**1.1**	**0.80**	0.20	0.50
1,2-Dichloroethane (EDC)	**1.6**	**1.5**	0.30	0.50
cis-1,2-Dichloroethylene	**25**	**21**	0.20	0.50
1,1-Dichloroethylene	<0.30	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	**4.9**	**3.8**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19
Units: ug/L

Date Sampled:	03/20/19	03/20/19		
Date Prepared:	04/02/19	04/02/19		
Date Analyzed:	04/02/19	04/02/19		
AA ID No:	9C20007-01	9C20007-02		
Client ID No:	EW-INF-032019-0001	TOTAL-EFF-032019-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.80**	**0.53**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	**1.3**	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0
Surrogates				**%REC Limits**
4-Bromofluorobenzene	104%	104%		70-140
Dibromofluoromethane	99%	116%		70-140
Toluene-d8	103%	101%		70-140

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9C2521 - EPA 3510C_MS										
Blank (B9C2521-BLK1)				Prepared: 03/25/19	Analyzed: 03/27/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9C2521-BS1)				Prepared: 03/25/19	Analyzed: 03/27/19					
1,4-Dioxane	**11.2**	1.0	ug/L	10		112	75-125			
LCS Dup (B9C2521-BSD1)				Prepared: 03/25/19	Analyzed: 03/27/19					
1,4-Dioxane	**12.5**	1.0	ug/L	10		125	75-125	10.5	30	
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Blank (B9D0213-BLK1)				Prepared & Analyzed: 04/02/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Blank (B9D0213-BLK1) Continued				Prepared & Analyzed: 04/02/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Blank (B9D0213-BLK1) Continued				Prepared & Analyzed: 04/02/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*52.3*		*ug/L*	*50*		*105*	*70-140*			
Surrogate: Dibromofluoromethane	*51.9*		*ug/L*	*50*		*104*	*70-140*			
Surrogate: Toluene-d8	*52.9*		*ug/L*	*50*		*106*	*70-140*			
LCS (B9D0213-BS1)				Prepared & Analyzed: 04/02/19						
Acetone	**9.40**	2.0	ug/L	20		47.0	50-150			***, J
Benzene	**20.4**	0.20	ug/L	20		102	75-125			
Bromobenzene	**21.2**	0.30	ug/L	20		106	50-150			
Bromochloromethane	**20.9**	0.50	ug/L	20		104	50-150			
Bromodichloromethane	**20.5**	0.20	ug/L	20		102	75-125			
Bromoform	**22.0**	0.50	ug/L	20		110	75-125			
Bromomethane	**21.0**	0.50	ug/L	20		105	75-125			
2-Butanone (MEK)	**22.8**	2.0	ug/L	20		114	50-150			
tert-Butylbenzene	**21.7**	0.20	ug/L	20		108	50-150			
n-Butylbenzene	**21.0**	0.20	ug/L	20		105	50-150			
sec-Butylbenzene	**21.0**	0.20	ug/L	20		105	50-150			
Carbon Disulfide	**25.1**	0.30	ug/L	20		126	50-150			
Carbon Tetrachloride	**21.1**	0.30	ug/L	20		106	75-125			
Chlorobenzene	**20.6**	0.30	ug/L	20		103	75-125			
Chloroethane	**23.6**	0.50	ug/L	20		118	75-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
LCS (B9D0213-BS1) Continued				Prepared & Analyzed: 04/02/19						
Chloroform	**18.8**	0.30	ug/L	20		93.8	75-125			
Chloromethane	**20.2**	0.40	ug/L	20		101	65-125			
4-Chlorotoluene	**21.0**	0.20	ug/L	20		105	65-125			
2-Chlorotoluene	**21.0**	0.30	ug/L	20		105	65-125			
1,2-Dibromo-3-chloropropane	**21.0**	0.40	ug/L	20		105	65-125			
Dibromochloromethane	**20.2**	0.30	ug/L	20		101	75-125			
1,2-Dibromoethane (EDB)	**21.2**	0.30	ug/L	20		106	65-125			
Dibromomethane	**19.3**	0.40	ug/L	20		96.5	65-125			
1,3-Dichlorobenzene	**20.6**	0.10	ug/L	20		103	65-125			
1,4-Dichlorobenzene	**21.0**	0.30	ug/L	20		105	75-125			
1,2-Dichlorobenzene	**21.5**	0.30	ug/L	20		107	65-125			
Dichlorodifluoromethane (R12)	**14.7**	0.50	ug/L	20		73.7	50-150			
1,1-Dichloroethane	**19.0**	0.20	ug/L	20		95.0	70-125			
1,2-Dichloroethane (EDC)	**18.9**	0.30	ug/L	20		94.4	75-125			
cis-1,2-Dichloroethylene	**19.9**	0.20	ug/L	20		99.4	75-125			
1,1-Dichloroethylene	**22.8**	0.30	ug/L	20		114	70-130			
trans-1,2-Dichloroethylene	**20.2**	0.40	ug/L	20		101	75-125			
1,3-Dichloropropane	**19.8**	0.10	ug/L	20		98.8	65-125			
1,2-Dichloropropane	**20.5**	0.50	ug/L	20		103	75-130			
2,2-Dichloropropane	**18.8**	0.40	ug/L	20		94.2	65-125			
trans-1,3-Dichloropropylene	**20.4**	0.20	ug/L	20		102	65-125			
1,1-Dichloropropylene	**21.0**	0.20	ug/L	20		105	65-125			
cis-1,3-Dichloropropylene	**20.5**	0.20	ug/L	20		103	75-125			
Ethylbenzene	**20.9**	0.20	ug/L	20		104	75-125			
Hexachlorobutadiene	**22.4**	0.40	ug/L	20		112	65-125			
2-Hexanone (MBK)	**20.5**	2.0	ug/L	20		102	65-125			
Isopropylbenzene	**21.6**	0.20	ug/L	20		108	65-125			
4-Isopropyltoluene	**21.2**	0.20	ug/L	20		106	65-125			
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.7	ug/L	40		112	75-125			
Methylene Chloride	**19.2**	5.0	ug/L	20		96.1	75-130			
4-Methyl-2-pentanone (MIBK)	**20.2**	0.70	ug/L	20		101	65-125			
Naphthalene	**21.5**	0.20	ug/L	20		107	65-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
LCS (B9D0213-BS1) Continued				Prepared & Analyzed: 04/02/19						
n-Propylbenzene	**21.6**	0.20	ug/L	20		108	65-125			
Styrene	**20.9**	0.20	ug/L	20		104	65-125			
1,1,1,2-Tetrachloroethane	**20.6**	0.40	ug/L	20		103	65-125			
1,1,2,2-Tetrachloroethane	**21.3**	0.30	ug/L	20		107	70-135			
Tetrachloroethylene (PCE)	**21.3**	0.50	ug/L	20		106	75-125			
Toluene	**20.3**	0.30	ug/L	20		102	75-125			
1,2,3-Trichlorobenzene	**21.7**	0.20	ug/L	20		108	65-125			
1,1,2-Trichloroethane	**20.3**	0.30	ug/L	20		101	75-125			
1,1,1-Trichloroethane	**21.0**	0.30	ug/L	20		105	75-125			
Trichloroethylene (TCE)	**22.0**	0.20	ug/L	20		110	75-125			
Trichlorofluoromethane (R11)	**16.7**	0.20	ug/L	20		83.6	65-125			
1,2,3-Trichloropropane	**21.2**	0.30	ug/L	20		106	65-125			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.0**	0.30	ug/L	20		100	65-125			
1,2,4-Trimethylbenzene	**21.5**	0.30	ug/L	20		108	65-125			
1,3,5-Trimethylbenzene	**21.6**	0.20	ug/L	20		108	65-125			
Vinyl chloride	**17.9**	0.50	ug/L	20		89.5	75-125			
o-Xylene	**21.3**	0.30	ug/L	20		106	75-125			
m,p-Xylenes	**43.0**	0.40	ug/L	40		108	65-125			
Surrogate: 4-Bromofluorobenzene	*53.6*		*ug/L*	*50*		*107*	*70-140*			
Surrogate: Dibromofluoromethane	*48.4*		*ug/L*	*50*		*96.9*	*70-140*			
Surrogate: Toluene-d8	*51.7*		*ug/L*	*50*		*103*	*70-140*			
LCS Dup (B9D0213-BSD1)				Prepared & Analyzed: 04/02/19						
Acetone	**10.6**	2.0	ug/L	20		52.8	50-150	11.6	30	
Benzene	**21.3**	0.20	ug/L	20		107	75-125	4.65	30	
Bromobenzene	**21.3**	0.30	ug/L	20		106	50-150	0.423	30	
Bromochloromethane	**21.5**	0.50	ug/L	20		107	50-150	2.74	30	
Bromodichloromethane	**21.0**	0.20	ug/L	20		105	75-125	2.65	30	
Bromoform	**21.5**	0.50	ug/L	20		107	75-125	2.44	30	
Bromomethane	**21.8**	0.50	ug/L	20		109	75-125	3.75	30	
2-Butanone (MEK)	**22.1**	2.0	ug/L	20		111	50-150	3.03	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
LCS Dup (B9D0213-BSD1) Continued				Prepared & Analyzed: 04/02/19						
tert-Butylbenzene	**22.0**	0.20	ug/L	20		110	50-150	1.51	30	
n-Butylbenzene	**21.6**	0.20	ug/L	20		108	50-150	2.96	30	
sec-Butylbenzene	**21.3**	0.20	ug/L	20		106	50-150	1.42	30	
Carbon Disulfide	**24.6**	0.30	ug/L	20		123	50-150	1.89	30	
Carbon Tetrachloride	**21.1**	0.30	ug/L	20		105	75-125	0.284	30	
Chlorobenzene	**20.9**	0.30	ug/L	20		105	75-125	1.30	30	
Chloroethane	**24.2**	0.50	ug/L	20		121	75-125	2.72	30	
Chloroform	**18.4**	0.30	ug/L	20		92.2	75-125	1.67	30	
Chloromethane	**18.2**	0.40	ug/L	20		90.8	65-125	10.6	30	
4-Chlorotoluene	**21.2**	0.20	ug/L	20		106	65-125	0.947	30	
2-Chlorotoluene	**21.4**	0.30	ug/L	20		107	65-125	1.94	30	
1,2-Dibromo-3-chloropropane	**21.1**	0.40	ug/L	20		106	65-125	0.665	30	
Dibromochloromethane	**20.8**	0.30	ug/L	20		104	75-125	2.58	30	
1,2-Dibromoethane (EDB)	**21.7**	0.30	ug/L	20		108	65-125	2.33	30	
Dibromomethane	**18.9**	0.40	ug/L	20		94.6	65-125	1.94	30	
1,3-Dichlorobenzene	**20.9**	0.10	ug/L	20		105	65-125	1.69	30	
1,4-Dichlorobenzene	**21.7**	0.30	ug/L	20		109	75-125	3.56	30	
1,2-Dichlorobenzene	**22.0**	0.30	ug/L	20		110	65-125	2.44	30	
Dichlorodifluoromethane (R12)	**14.3**	0.50	ug/L	20		71.4	50-150	3.24	30	
1,1-Dichloroethane	**19.9**	0.20	ug/L	20		99.4	70-125	4.58	30	
1,2-Dichloroethane (EDC)	**18.7**	0.30	ug/L	20		93.4	75-125	1.07	30	
cis-1,2-Dichloroethylene	**20.8**	0.20	ug/L	20		104	75-125	4.81	30	
1,1-Dichloroethylene	**22.9**	0.30	ug/L	20		115	70-130	0.701	30	
trans-1,2-Dichloroethylene	**20.8**	0.40	ug/L	20		104	75-125	2.69	30	
1,3-Dichloropropane	**20.3**	0.10	ug/L	20		102	65-125	2.94	30	
1,2-Dichloropropane	**21.4**	0.50	ug/L	20		107	75-130	4.29	30	
2,2-Dichloropropane	**17.9**	0.40	ug/L	20		89.6	65-125	4.95	30	
trans-1,3-Dichloropropylene	**20.3**	0.20	ug/L	20		101	65-125	0.836	30	
1,1-Dichloropropylene	**21.4**	0.20	ug/L	20		107	65-125	1.79	30	
cis-1,3-Dichloropropylene	**21.1**	0.20	ug/L	20		106	75-125	2.98	30	
Ethylbenzene	**21.2**	0.20	ug/L	20		106	75-125	1.57	30	
Hexachlorobutadiene	**22.8**	0.40	ug/L	20		114	65-125	1.95	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
LCS Dup (B9D0213-BSD1) Continued				Prepared & Analyzed: 04/02/19						
2-Hexanone (MBK)	**21.1**	2.0	ug/L	20		105	65-125	2.89	30	
Isopropylbenzene	**22.0**	0.20	ug/L	20		110	65-125	1.83	30	
4-Isopropyltoluene	**21.4**	0.20	ug/L	20		107	65-125	0.985	30	
Methyl-tert-Butyl Ether (MTBE)	**46.4**	1.7	ug/L	40		116	75-125	3.29	30	
Methylene Chloride	**20.5**	5.0	ug/L	20		102	75-130	6.30	30	
4-Methyl-2-pentanone (MIBK)	**21.6**	0.70	ug/L	20		108	65-125	6.56	30	
Naphthalene	**21.6**	0.20	ug/L	20		108	65-125	0.696	30	
n-Propylbenzene	**21.8**	0.20	ug/L	20		109	65-125	1.15	30	
Styrene	**21.4**	0.20	ug/L	20		107	65-125	2.32	30	
1,1,1,2-Tetrachloroethane	**21.1**	0.40	ug/L	20		105	65-125	2.26	30	
1,1,2,2-Tetrachloroethane	**22.0**	0.30	ug/L	20		110	70-135	2.91	30	
Tetrachloroethylene (PCE)	**21.0**	0.50	ug/L	20		105	75-125	1.28	30	
Toluene	**21.1**	0.30	ug/L	20		105	75-125	3.48	30	
1,2,3-Trichlorobenzene	**21.9**	0.20	ug/L	20		109	65-125	0.873	30	
1,1,2-Trichloroethane	**21.2**	0.30	ug/L	20		106	75-125	4.15	30	
1,1,1-Trichloroethane	**21.0**	0.30	ug/L	20		105	75-125	0.0476	30	
Trichloroethylene (TCE)	**22.2**	0.20	ug/L	20		111	75-125	0.769	30	
Trichlorofluoromethane (R11)	**22.0**	0.20	ug/L	20		110	65-125	27.2	30	
1,2,3-Trichloropropane	**21.5**	0.30	ug/L	20		108	65-125	1.54	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.5**	0.30	ug/L	20		103	65-125	2.27	30	
1,2,4-Trimethylbenzene	**22.0**	0.30	ug/L	20		110	65-125	2.16	30	
1,3,5-Trimethylbenzene	**22.0**	0.20	ug/L	20		110	65-125	1.79	30	
Vinyl chloride	**17.3**	0.50	ug/L	20		86.3	75-125	3.64	30	
o-Xylene	**21.7**	0.30	ug/L	20		108	75-125	1.86	30	
m,p-Xylenes	**43.6**	0.40	ug/L	40		109	65-125	1.34	30	
Surrogate: 4-Bromofluorobenzene	*53.5*		*ug/L*	*50*		*107*	*70-140*			
Surrogate: Dibromofluoromethane	*49.0*		*ug/L*	*50*		*97.9*	*70-140*			
Surrogate: Toluene-d8	*51.8*		*ug/L*	*50*		*104*	*70-140*			
Matrix Spike (B9D0213-MS1)			**Source: 9C22002-17**	Prepared & Analyzed: 04/02/19						
Acetone	**24.0**	2.0	ug/L	20	16.2	38.8	50-150			***

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Matrix Spike (B9D0213-MS1) Continued Source: 9C22002-17 Prepared & Analyzed: 04/02/19										
Benzene	**19.5**	0.20	ug/L	20		97.6	70-130			
Bromobenzene	**20.4**	0.30	ug/L	20		102	50-150			
Bromochloromethane	**21.2**	0.50	ug/L	20		106	50-150			
Bromodichloromethane	**20.0**	0.20	ug/L	20		100	50-150			
Bromoform	**23.9**	0.50	ug/L	20		120	70-130			
Bromomethane	**22.7**	0.50	ug/L	20		114	50-150			
2-Butanone (MEK)	**23.8**	2.0	ug/L	20		119	50-150			
tert-Butylbenzene	**20.7**	0.20	ug/L	20		104	50-150			
n-Butylbenzene	**20.0**	0.20	ug/L	20		100	50-150			
sec-Butylbenzene	**20.1**	0.20	ug/L	20		100	50-150			
Carbon Disulfide	**22.6**	0.30	ug/L	20		113	50-150			
Carbon Tetrachloride	**20.6**	0.30	ug/L	20		103	50-150			
Chlorobenzene	**20.6**	0.30	ug/L	20		103	70-130			
Chloroethane	**20.9**	0.50	ug/L	20		104	50-150			
Chloroform	**17.3**	0.30	ug/L	20		86.4	70-130			
Chloromethane	**19.5**	0.40	ug/L	20		97.5	50-150			
4-Chlorotoluene	**20.1**	0.20	ug/L	20		101	50-150			
2-Chlorotoluene	**19.8**	0.30	ug/L	20		99.2	50-150			
1,2-Dibromo-3-chloropropane	**21.0**	0.40	ug/L	20		105	50-150			
Dibromochloromethane	**21.2**	0.30	ug/L	20		106	50-150			
1,2-Dibromoethane (EDB)	**22.2**	0.30	ug/L	20		111	50-150			
Dibromomethane	**18.5**	0.40	ug/L	20		92.7	50-150			
1,3-Dichlorobenzene	**20.4**	0.10	ug/L	20		102	50-150			
1,4-Dichlorobenzene	**20.6**	0.30	ug/L	20		103	50-150			
1,2-Dichlorobenzene	**21.2**	0.30	ug/L	20		106	50-150			
Dichlorodifluoromethane (R12)	**14.3**	0.50	ug/L	20		71.3	50-150			
1,1-Dichloroethane	**18.2**	0.20	ug/L	20		90.8	70-130			
1,2-Dichloroethane (EDC)	**17.3**	0.30	ug/L	20		86.3	50-150			
cis-1,2-Dichloroethylene	**18.3**	0.20	ug/L	20		91.4	70-130			
1,1-Dichloroethylene	**20.6**	0.30	ug/L	20		103	70-130			
trans-1,2-Dichloroethylene	**18.4**	0.40	ug/L	20		92.2	50-150			
1,3-Dichloropropane	**21.0**	0.10	ug/L	20		105	50-150			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Matrix Spike (B9D0213-MS1) Continued Source: 9C22002-17 Prepared & Analyzed: 04/02/19										
1,2-Dichloropropane	**19.6**	0.50	ug/L	20		98.2	70-130			
2,2-Dichloropropane	**14.8**	0.40	ug/L	20		74.2	50-150			
trans-1,3-Dichloropropylene	**20.6**	0.20	ug/L	20		103	50-150			
1,1-Dichloropropylene	**20.2**	0.20	ug/L	20		101	50-150			
cis-1,3-Dichloropropylene	**19.5**	0.20	ug/L	20		97.4	50-150			
Ethylbenzene	**20.9**	0.20	ug/L	20		105	70-130			
Hexachlorobutadiene	**20.5**	0.40	ug/L	20		102	50-150			
2-Hexanone (MBK)	**22.5**	2.0	ug/L	20		113	50-150			
Isopropylbenzene	**20.6**	0.20	ug/L	20		103	50-150			
4-Isopropyltoluene	**19.9**	0.20	ug/L	20		99.4	50-150			
Methyl-tert-Butyl Ether (MTBE)	**46.8**	1.7	ug/L	40		117	70-130			
Methylene Chloride	**17.8**	5.0	ug/L	20		88.8	50-150			
4-Methyl-2-pentanone (MIBK)	**22.9**	0.70	ug/L	20		115	50-150			
Naphthalene	**20.4**	0.20	ug/L	20		102	50-150			
n-Propylbenzene	**20.5**	0.20	ug/L	20		102	70-130			
Styrene	**20.9**	0.20	ug/L	20		105	50-150			
1,1,1,2-Tetrachloroethane	**20.8**	0.40	ug/L	20		104	50-150			
1,1,2,2-Tetrachloroethane	**23.2**	0.30	ug/L	20		116	50-150			
Tetrachloroethylene (PCE)	**21.2**	0.50	ug/L	20		106	70-130			
Toluene	**20.1**	0.30	ug/L	20		100	70-130			
1,2,3-Trichlorobenzene	**19.8**	0.20	ug/L	20		98.9	50-150			
1,1,2-Trichloroethane	**20.8**	0.30	ug/L	20		104	50-150			
1,1,1-Trichloroethane	**20.2**	0.30	ug/L	20		101	70-130			
Trichloroethylene (TCE)	**20.9**	0.20	ug/L	20		104	70-130			
Trichlorofluoromethane (R11)	**21.7**	0.20	ug/L	20		108	50-150			
1,2,3-Trichloropropane	**22.4**	0.30	ug/L	20		112	50-150			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**18.6**	0.30	ug/L	20		92.8	50-150			
1,2,4-Trimethylbenzene	**20.3**	0.30	ug/L	20		102	50-150			
1,3,5-Trimethylbenzene	**20.4**	0.20	ug/L	20		102	70-130			
Vinyl chloride	**18.6**	0.50	ug/L	20		92.9	70-130			
o-Xylene	**21.4**	0.30	ug/L	20		107	50-150			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Matrix Spike (B9D0213-MS1) Continued Source: 9C22002-17 Prepared & Analyzed: 04/02/19										
m,p-Xylenes	**42.5**	0.40	ug/L	40		106	50-150			
Surrogate: 4-Bromofluorobenzene	*52.4*		*ug/L*	*50*		*105*	*70-140*			
Surrogate: Dibromofluoromethane	*47.3*		*ug/L*	*50*		*94.7*	*70-140*			
Surrogate: Toluene-d8	*52.4*		*ug/L*	*50*		*105*	*70-140*			
Matrix Spike Dup (B9D0213-MSD1) **Source: 9C22002-17** Prepared & Analyzed: 04/02/19										
Acetone	**42.0**	2.0	ug/L	20	16.2	129	50-150	54.6	30	AA-C1
Benzene	**20.6**	0.20	ug/L	20		103	70-130	5.24	30	
Bromobenzene	**20.9**	0.30	ug/L	20		104	50-150	2.52	30	
Bromochloromethane	**20.4**	0.50	ug/L	20		102	50-150	3.56	30	
Bromodichloromethane	**20.2**	0.20	ug/L	20		101	50-150	0.944	30	
Bromoform	**21.6**	0.50	ug/L	20		108	70-130	10.0	30	
Bromomethane	**16.1**	0.50	ug/L	20		80.6	50-150	34.0	30	AA-C1
2-Butanone (MEK)	**24.9**	2.0	ug/L	20		125	50-150	4.68	30	
tert-Butylbenzene	**21.0**	0.20	ug/L	20		105	50-150	1.58	30	
n-Butylbenzene	**20.8**	0.20	ug/L	20		104	50-150	3.82	30	
sec-Butylbenzene	**20.2**	0.20	ug/L	20		101	50-150	0.596	30	
Carbon Disulfide	**24.4**	0.30	ug/L	20		122	50-150	8.00	30	
Carbon Tetrachloride	**20.0**	0.30	ug/L	20		100	50-150	2.90	30	
Chlorobenzene	**20.2**	0.30	ug/L	20		101	70-130	1.67	30	
Chloroethane	**21.7**	0.50	ug/L	20		109	50-150	3.89	30	
Chloroform	**17.2**	0.30	ug/L	20		86.0	70-130	0.464	30	
Chloromethane	**20.9**	0.40	ug/L	20		104	50-150	6.84	30	
4-Chlorotoluene	**20.8**	0.20	ug/L	20		104	50-150	3.18	30	
2-Chlorotoluene	**20.6**	0.30	ug/L	20		103	50-150	3.95	30	
1,2-Dibromo-3-chloropropane	**21.7**	0.40	ug/L	20		108	50-150	3.28	30	
Dibromochloromethane	**20.1**	0.30	ug/L	20		101	50-150	5.47	30	
1,2-Dibromoethane (EDB)	**20.8**	0.30	ug/L	20		104	50-150	6.38	30	
Dibromomethane	**18.1**	0.40	ug/L	20		90.6	50-150	2.24	30	
1,3-Dichlorobenzene	**20.4**	0.10	ug/L	20		102	50-150	0.392	30	
1,4-Dichlorobenzene	**20.9**	0.30	ug/L	20		104	50-150	1.59	30	
1,2-Dichlorobenzene	**21.4**	0.30	ug/L	20		107	50-150	0.844	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Matrix Spike Dup (B9D0213-MSD1) Continued				**Source: 9C22002-17**		Prepared & Analyzed: 04/02/19				
Dichlorodifluoromethane (R12)	**12.9**	0.50	ug/L	20		64.6	50-150	9.78	30	
1,1-Dichloroethane	**18.6**	0.20	ug/L	20		93.2	70-130	2.61	30	
1,2-Dichloroethane (EDC)	**17.2**	0.30	ug/L	20		86.0	50-150	0.406	30	
cis-1,2-Dichloroethylene	**19.4**	0.20	ug/L	20		97.2	70-130	6.20	30	
1,1-Dichloroethylene	**22.7**	0.30	ug/L	20		114	70-130	9.64	30	
trans-1,2-Dichloroethylene	**19.7**	0.40	ug/L	20		98.4	50-150	6.40	30	
1,3-Dichloropropane	**20.7**	0.10	ug/L	20		103	50-150	1.58	30	
1,2-Dichloropropane	**20.8**	0.50	ug/L	20		104	70-130	5.74	30	
2,2-Dichloropropane	**14.6**	0.40	ug/L	20		72.8	50-150	2.04	30	
trans-1,3-Dichloropropylene	**19.7**	0.20	ug/L	20		98.6	50-150	4.46	30	
1,1-Dichloropropylene	**20.3**	0.20	ug/L	20		102	50-150	0.345	30	
cis-1,3-Dichloropropylene	**20.1**	0.20	ug/L	20		100	50-150	2.93	30	
Ethylbenzene	**20.3**	0.20	ug/L	20		102	70-130	2.96	30	
Hexachlorobutadiene	**21.9**	0.40	ug/L	20		110	50-150	6.69	30	
2-Hexanone (MBK)	**22.3**	2.0	ug/L	20		111	50-150	1.16	30	
Isopropylbenzene	**21.3**	0.20	ug/L	20		106	50-150	3.24	30	
4-Isopropyltoluene	**20.7**	0.20	ug/L	20		103	50-150	3.85	30	
Methyl-tert-Butyl Ether (MTBE)	**47.2**	1.7	ug/L	40		118	70-130	1.00	30	
Methylene Chloride	**18.6**	5.0	ug/L	20		92.8	50-150	4.52	30	
4-Methyl-2-pentanone (MIBK)	**21.7**	0.70	ug/L	20		108	50-150	5.74	30	
Naphthalene	**22.6**	0.20	ug/L	20		113	50-150	10.2	30	
n-Propylbenzene	**21.2**	0.20	ug/L	20		106	70-130	3.45	30	
Styrene	**20.1**	0.20	ug/L	20		101	50-150	4.04	30	
1,1,1,2-Tetrachloroethane	**19.8**	0.40	ug/L	20		99.2	50-150	5.01	30	
1,1,2,2-Tetrachloroethane	**22.0**	0.30	ug/L	20		110	50-150	4.91	30	
Tetrachloroethylene (PCE)	**20.2**	0.50	ug/L	20		101	70-130	5.12	30	
Toluene	**19.7**	0.30	ug/L	20		98.6	70-130	1.66	30	
1,2,3-Trichlorobenzene	**21.8**	0.20	ug/L	20		109	50-150	9.58	30	
1,1,2-Trichloroethane	**20.6**	0.30	ug/L	20		103	50-150	0.580	30	
1,1,1-Trichloroethane	**19.7**	0.30	ug/L	20		98.7	70-130	2.11	30	
Trichloroethylene (TCE)	**21.2**	0.20	ug/L	20		106	70-130	1.38	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874347
Date Received: 03/20/19
Date Reported: 04/04/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9D0213 - EPA 5030B										
Matrix Spike Dup (B9D0213-MSD1) Continued	**Source: 9C22002-17** Prepared & Analyzed: 04/02/19									
Trichlorofluoromethane (R11)	**20.7**	0.20	ug/L	20		103	50-150	4.77	30	
1,2,3-Trichloropropane	**21.3**	0.30	ug/L	20		107	50-150	5.17	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.2**	0.30	ug/L	20		96.0	50-150	3.28	30	
1,2,4-Trimethylbenzene	**21.0**	0.30	ug/L	20		105	50-150	3.34	30	
1,3,5-Trimethylbenzene	**21.0**	0.20	ug/L	20		105	70-130	3.05	30	
Vinyl chloride	**18.5**	0.50	ug/L	20		92.6	70-130	0.269	30	
o-Xylene	**20.4**	0.30	ug/L	20		102	50-150	4.92	30	
m,p-Xylenes	**41.7**	0.40	ug/L	40		104	50-150	1.85	30	
Surrogate: 4-Bromofluorobenzene	*54.1*		*ug/L*	*50*		*108*	*70-140*			
Surrogate: Dibromofluoromethane	*48.1*		*ug/L*	*50*		*96.2*	*70-140*			
Surrogate: Toluene-d8	*51.8*		*ug/L*	*50*		*104*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874347
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	04/04/19

Special Notes

[1] = ******* : Exceeds lower control limit.

[2] = **AA-C1** : Exceeds RPD limit.

J : Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No.: 7743

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 Fax: 818-998-7258

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name: Alex Felix**
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Alex Felix
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane by 8270C									Special Instructions
						Please enter the TAT Turnaround Codes ** below										
EW-INF-032019-0001	9C20007 -01	3/20/2019	1005	Water	4	X	X									
TOTAL-EFF-032019-0001	-02	3/20/2019	0950	Water	4	X	X									

19 MAR 20 2:50pm

SAMPLE INTEGRITY
INTACT (Y) N TEMP 5.0°C

For Laboratory Use	Relinquished by	Date	Time	Received by
REVIEWED Date 3/20/19 Time 1650 TAT N Days Sign:	Alex Felix	3-20-19	1220	
	Relinquished by	3/20/19	1450	Received by
A.A. Project No.: A874 397 /9C20007	Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

May 10, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874349 / 9D24021

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 04/24/19 18:00 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-042419-0001	9D24021-01	Water	5	04/24/19 00:00	04/24/19 18:00
TOTAL-EFF-042419-0001	9D24021-02	Water	5	04/24/19 00:00	04/24/19 18:00
8270CM 1,4-Dioxane Only					
EW-INF-042419-0001	9D24021-01	Water	5	04/24/19 00:00	04/24/19 18:00
TOTAL-EFF-042419-0001	9D24021-02	Water	5	04/24/19 00:00	04/24/19 18:00

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9D24021-01	EW-INF-042419-0001	04/24/19	04/26/19	04/29/19	1	**6.9**	ug/L	1	2
9D24021-02	TOTAL-EFF-042419-0001	04/24/19	04/26/19	04/29/19	1	**7.2**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19
Units: ug/L

Date Sampled:	04/24/19	04/24/19		
Date Prepared:	05/07/19	05/07/19		
Date Analyzed:	05/07/19	05/07/19		
AA ID No:	9D24021-01	9D24021-02		
Client ID No:	EW-INF-042419-0001	TOTAL-EFF-042419-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	**17 J**	**20 J**	2.0	50
Benzene	<0.20	<0.20	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	20
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19
Units: ug/L

Date Sampled:	04/24/19	04/24/19		
Date Prepared:	05/07/19	05/07/19		
Date Analyzed:	05/07/19	05/07/19		
AA ID No:	9D24021-01	9D24021-02		
Client ID No:	EW-INF-042419-0001	TOTAL-EFF-042419-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	**1.5**	**1.1**	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	**1.6**	0.30	0.50
cis-1,2-Dichloroethylene	**35**	**28**	0.20	0.50
1,1-Dichloroethylene	<0.30	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	**5.0**	**3.1**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	20
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	20
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19
Units: ug/L

Date Sampled:	04/24/19	04/24/19		
Date Prepared:	05/07/19	05/07/19		
Date Analyzed:	05/07/19	05/07/19		
AA ID No:	9D24021-01	9D24021-02		
Client ID No:	EW-INF-042419-0001	TOTAL-EFF-042419-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.2**	**0.81**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	**0.92**	<0.50	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0

Surrogates			**%REC Limits**
4-Bromofluorobenzene	107%	107%	80-129
Dibromofluoromethane	109%	111%	68-137
Toluene-d8	105%	105%	83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9D2601 - EPA 3510C_MS										
Blank (B9D2601-BLK1)				Prepared: 04/26/19	Analyzed: 04/29/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9D2601-BS1)				Prepared: 04/26/19	Analyzed: 04/29/19					
1,4-Dioxane	**13.4**	1.0	ug/L	10		134	75-125			**
LCS Dup (B9D2601-BSD1)				Prepared: 04/26/19	Analyzed: 04/29/19					
1,4-Dioxane	**12.0**	1.0	ug/L	10		120	75-125	10.6	30	
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Blank (B9E0714-BLK1)				Prepared & Analyzed: 05/07/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Blank (B9E0714-BLK1) Continued				Prepared & Analyzed: 05/07/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Blank (B9E0714-BLK1) Continued				Prepared & Analyzed: 05/07/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*54.6*		*ug/L*	*50*		*109*	*80-129*			
Surrogate: Dibromofluoromethane	*59.0*		*ug/L*	*50*		*118*	*68-137*			
Surrogate: Toluene-d8	*53.6*		*ug/L*	*50*		*107*	*83-134*			
LCS (B9E0714-BS1)				Prepared & Analyzed: 05/07/19						
Acetone	**12.9**	2.0	ug/L	20		64.4	27-123			J
Benzene	**21.0**	0.20	ug/L	20		105	60-134			
Bromobenzene	**20.0**	0.30	ug/L	20		100	93-119			
Bromochloromethane	**23.0**	0.50	ug/L	20		115	78-121			
Bromodichloromethane	**21.9**	0.20	ug/L	20		109	74-135			
Bromoform	**19.5**	0.50	ug/L	20		97.4	68-132			
Bromomethane	**17.0**	0.50	ug/L	20		85.2	58-142			
2-Butanone (MEK)	**21.9**	2.0	ug/L	20		109	62-138			
tert-Butylbenzene	**21.9**	0.20	ug/L	20		109	86-144			
n-Butylbenzene	**21.8**	0.20	ug/L	20		109	88-136			
sec-Butylbenzene	**21.6**	0.20	ug/L	20		108	84-142			
Carbon Disulfide	**26.4**	0.30	ug/L	20		132	17-177			
Carbon Tetrachloride	**23.3**	0.30	ug/L	20		117	66-155			
Chlorobenzene	**20.4**	0.30	ug/L	20		102	86-122			
Chloroethane	**22.5**	0.50	ug/L	20		113	45-166			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
LCS (B9E0714-BS1) Continued				Prepared & Analyzed: 05/07/19						
Chloroform	**21.8**	0.30	ug/L	20		109	71-131			
Chloromethane	**16.7**	0.40	ug/L	20		83.4	48-152			
4-Chlorotoluene	**21.4**	0.20	ug/L	20		107	94-121			
2-Chlorotoluene	**21.3**	0.30	ug/L	20		106	95-123			
1,2-Dibromo-3-chloropropane	**19.0**	0.40	ug/L	20		94.9	53-145			
Dibromochloromethane	**19.7**	0.30	ug/L	20		98.6	72-133			
1,2-Dibromoethane (EDB)	**20.0**	0.30	ug/L	20		100	79-120			
Dibromomethane	**21.5**	0.40	ug/L	20		107	68-124			
1,3-Dichlorobenzene	**20.6**	0.10	ug/L	20		103	94-115			
1,4-Dichlorobenzene	**21.0**	0.30	ug/L	20		105	95-116			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		103	95-120			
Dichlorodifluoromethane (R12)	**4.24**	0.50	ug/L	20		21.2	16-148			
1,1-Dichloroethane	**22.2**	0.20	ug/L	20		111	67-120			
1,2-Dichloroethane (EDC)	**21.6**	0.30	ug/L	20		108	57-156			
cis-1,2-Dichloroethylene	**22.1**	0.20	ug/L	20		110	70-124			
1,1-Dichloroethylene	**25.6**	0.30	ug/L	20		128	50-149			
trans-1,2-Dichloroethylene	**23.5**	0.40	ug/L	20		118	66-126			
1,3-Dichloropropane	**19.7**	0.10	ug/L	20		98.6	79-113			
1,2-Dichloropropane	**21.3**	0.50	ug/L	20		106	53-139			
2,2-Dichloropropane	**25.7**	0.40	ug/L	20		128	44-162			
trans-1,3-Dichloropropylene	**20.5**	0.20	ug/L	20		102	76-121			
1,1-Dichloropropylene	**22.1**	0.20	ug/L	20		111	84-124			
cis-1,3-Dichloropropylene	**21.6**	0.20	ug/L	20		108	67-127			
Ethylbenzene	**20.5**	0.20	ug/L	20		102	86-124			
Hexachlorobutadiene	**20.2**	0.40	ug/L	20		101	76-140			
2-Hexanone (MBK)	**18.4**	2.0	ug/L	20		92.2	52-123			J
Isopropylbenzene	**21.5**	0.20	ug/L	20		107	95-128			
4-Isopropyltoluene	**21.3**	0.20	ug/L	20		107	70-130			
Methyl-tert-Butyl Ether (MTBE)	**46.1**	1.7	ug/L	40		115	58-144			
Methylene Chloride	**21.6**	5.0	ug/L	20		108	50-135			
4-Methyl-2-pentanone (MIBK)	**17.2**	0.70	ug/L	20		86.0	49-139			J
Naphthalene	**21.4**	0.20	ug/L	20		107	74-128			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
LCS (B9E0714-BS1) Continued				Prepared & Analyzed: 05/07/19						
n-Propylbenzene	**21.6**	0.20	ug/L	20		108	96-124			
Styrene	**20.6**	0.20	ug/L	20		103	84-123			
1,1,1,2-Tetrachloroethane	**19.9**	0.40	ug/L	20		99.6	70-130			
1,1,2,2-Tetrachloroethane	**20.8**	0.30	ug/L	20		104	58-126			
Tetrachloroethylene (PCE)	**19.6**	0.50	ug/L	20		97.8	84-125			
Toluene	**19.6**	0.30	ug/L	20		97.9	83-118			
1,2,3-Trichlorobenzene	**21.1**	0.20	ug/L	20		105	77-134			
1,1,2-Trichloroethane	**18.6**	0.30	ug/L	20		93.2	75-115			
1,1,1-Trichloroethane	**22.3**	0.30	ug/L	20		112	66-158			
Trichloroethylene (TCE)	**22.4**	0.20	ug/L	20		112	82-128			
Trichlorofluoromethane (R11)	**18.5**	0.20	ug/L	20		92.7	65-137			
1,2,3-Trichloropropane	**20.4**	0.30	ug/L	20		102	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.3**	0.30	ug/L	20		96.6	62-130			
1,2,4-Trimethylbenzene	**22.0**	0.30	ug/L	20		110	70-130			
1,3,5-Trimethylbenzene	**22.0**	0.20	ug/L	20		110	89-138			
Vinyl chloride	**16.8**	0.50	ug/L	20		84.0	51-151			
o-Xylene	**21.6**	0.30	ug/L	20		108	89-120			
m,p-Xylenes	**43.5**	0.40	ug/L	40		109	90-121			
Surrogate: 4-Bromofluorobenzene	*54.1*		*ug/L*	*50*		*108*	*80-129*			
Surrogate: Dibromofluoromethane	*56.6*		*ug/L*	*50*		*113*	*68-137*			
Surrogate: Toluene-d8	*52.7*		*ug/L*	*50*		*105*	*83-134*			
LCS Dup (B9E0714-BSD1)				Prepared: 05/07/19 Analyzed: 05/08/19						
Acetone	**12.6**	2.0	ug/L	20		62.8	27-123	2.36	30	J
Benzene	**22.2**	0.20	ug/L	20		111	60-134	5.65	30	
Bromobenzene	**20.2**	0.30	ug/L	20		101	93-119	0.647	30	
Bromochloromethane	**22.4**	0.50	ug/L	20		112	78-121	2.69	30	
Bromodichloromethane	**21.5**	0.20	ug/L	20		107	74-135	1.94	30	
Bromoform	**18.4**	0.50	ug/L	20		92.0	68-132	5.60	30	
Bromomethane	**17.0**	0.50	ug/L	20		85.2	58-142	0.00	30	
2-Butanone (MEK)	**19.0**	2.0	ug/L	20		94.8	62-138	14.3	30	J

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
LCS Dup (B9E0714-BSD1) Continued				Prepared: 05/07/19 Analyzed: 05/08/19						
tert-Butylbenzene	**21.3**	0.20	ug/L	20		107	86-144	2.50	30	
n-Butylbenzene	**20.8**	0.20	ug/L	20		104	88-136	4.51	30	
sec-Butylbenzene	**20.8**	0.20	ug/L	20		104	84-142	3.72	30	
Carbon Disulfide	**25.8**	0.30	ug/L	20		129	17-177	2.11	30	
Carbon Tetrachloride	**22.1**	0.30	ug/L	20		111	66-155	5.24	30	
Chlorobenzene	**19.9**	0.30	ug/L	20		99.7	86-122	2.33	30	
Chloroethane	**21.5**	0.50	ug/L	20		108	45-166	4.58	30	
Chloroform	**21.4**	0.30	ug/L	20		107	71-131	1.85	30	
Chloromethane	**14.2**	0.40	ug/L	20		71.1	48-152	15.9	30	
4-Chlorotoluene	**21.2**	0.20	ug/L	20		106	94-121	1.13	30	
2-Chlorotoluene	**21.0**	0.30	ug/L	20		105	95-123	1.56	30	
1,2-Dibromo-3-chloropropane	**17.2**	0.40	ug/L	20		86.2	53-145	9.61	30	
Dibromochloromethane	**18.4**	0.30	ug/L	20		92.2	72-133	6.76	30	
1,2-Dibromoethane (EDB)	**19.1**	0.30	ug/L	20		95.3	79-120	4.86	30	
Dibromomethane	**21.7**	0.40	ug/L	20		108	68-124	0.928	30	
1,3-Dichlorobenzene	**20.3**	0.10	ug/L	20		102	94-115	1.42	30	
1,4-Dichlorobenzene	**20.3**	0.30	ug/L	20		101	95-116	3.49	30	
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	95-120	1.87	30	
Dichlorodifluoromethane (R12)	**4.34**	0.50	ug/L	20		21.7	16-148	2.33	30	
1,1-Dichloroethane	**21.2**	0.20	ug/L	20		106	67-120	4.89	30	
1,2-Dichloroethane (EDC)	**22.1**	0.30	ug/L	20		110	57-156	2.34	30	
cis-1,2-Dichloroethylene	**22.4**	0.20	ug/L	20		112	70-124	1.35	30	
1,1-Dichloroethylene	**25.4**	0.30	ug/L	20		127	50-149	0.786	30	
trans-1,2-Dichloroethylene	**22.8**	0.40	ug/L	20		114	66-126	3.20	30	
1,3-Dichloropropane	**18.8**	0.10	ug/L	20		94.2	79-113	4.61	30	
1,2-Dichloropropane	**21.3**	0.50	ug/L	20		106	53-139	0.0470	30	
2,2-Dichloropropane	**21.4**	0.40	ug/L	20		107	44-162	18.1	30	
trans-1,3-Dichloropropylene	**18.9**	0.20	ug/L	20		94.6	76-121	7.82	30	
1,1-Dichloropropylene	**21.6**	0.20	ug/L	20		108	84-124	2.24	30	
cis-1,3-Dichloropropylene	**20.8**	0.20	ug/L	20		104	67-127	3.88	30	
Ethylbenzene	**19.9**	0.20	ug/L	20		99.7	86-124	2.57	30	
Hexachlorobutadiene	**19.1**	0.40	ug/L	20		95.6	76-140	5.19	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
LCS Dup (B9E0714-BSD1) Continued				Prepared: 05/07/19 Analyzed: 05/08/19						
2-Hexanone (MBK)	**17.3**	2.0	ug/L	20		86.6	52-123	6.26	30	J
Isopropylbenzene	**21.4**	0.20	ug/L	20		107	95-128	0.373	30	
4-Isopropyltoluene	**20.9**	0.20	ug/L	20		104	70-130	2.18	30	
Methyl-tert-Butyl Ether (MTBE)	**47.3**	1.7	ug/L	40		118	58-144	2.57	30	
Methylene Chloride	**23.2**	5.0	ug/L	20		116	50-135	7.01	30	
4-Methyl-2-pentanone (MIBK)	**18.4**	0.70	ug/L	20		91.9	49-139	6.63	30	J
Naphthalene	**20.4**	0.20	ug/L	20		102	74-128	4.73	30	
n-Propylbenzene	**21.2**	0.20	ug/L	20		106	96-124	1.87	30	
Styrene	**19.0**	0.20	ug/L	20		94.9	84-123	8.43	30	
1,1,1,2-Tetrachloroethane	**19.6**	0.40	ug/L	20		97.9	70-130	1.72	30	
1,1,2,2-Tetrachloroethane	**18.1**	0.30	ug/L	20		90.4	58-126	13.8	30	
Tetrachloroethylene (PCE)	**19.2**	0.50	ug/L	20		96.0	84-125	1.96	30	
Toluene	**19.2**	0.30	ug/L	20		95.9	83-118	2.06	30	
1,2,3-Trichlorobenzene	**19.1**	0.20	ug/L	20		95.5	77-134	9.76	30	
1,1,2-Trichloroethane	**19.5**	0.30	ug/L	20		97.4	75-115	4.35	30	
1,1,1-Trichloroethane	**21.7**	0.30	ug/L	20		108	66-158	2.96	30	
Trichloroethylene (TCE)	**23.7**	0.20	ug/L	20		119	82-128	5.68	30	
Trichlorofluoromethane (R11)	**18.6**	0.20	ug/L	20		92.9	65-137	0.216	30	
1,2,3-Trichloropropane	**18.5**	0.30	ug/L	20		92.6	68-123	9.86	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**20.1**	0.30	ug/L	20		100	62-130	3.76	30	
1,2,4-Trimethylbenzene	**21.7**	0.30	ug/L	20		108	70-130	1.65	30	
1,3,5-Trimethylbenzene	**21.6**	0.20	ug/L	20		108	89-138	1.83	30	
Vinyl chloride	**16.5**	0.50	ug/L	20		82.4	51-151	1.80	30	
o-Xylene	**20.1**	0.30	ug/L	20		101	89-120	6.81	30	
m,p-Xylenes	**41.2**	0.40	ug/L	40		103	90-121	5.55	30	
Surrogate: 4-Bromofluorobenzene	*55.8*		*ug/L*	*50*		*112*	*80-129*			
Surrogate: Dibromofluoromethane	*56.4*		*ug/L*	*50*		*113*	*68-137*			
Surrogate: Toluene-d8	*52.7*		*ug/L*	*50*		*105*	*83-134*			
Matrix Spike (B9E0714-MS1)			**Source: 9D24021-02**	Prepared & Analyzed: 05/07/19						
Acetone	**34.2**	2.0	ug/L	20	19.8	71.8	11-169			J

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Matrix Spike (B9E0714-MS1) Continued Source: 9D24021-02 Prepared & Analyzed: 05/07/19										
Benzene	**20.7**	0.20	ug/L	20	<0.50	103	56-135			
Bromobenzene	**19.4**	0.30	ug/L	20	<0.50	97.1	92-123			
Bromochloromethane	**22.1**	0.50	ug/L	20	<0.50	110	74-125			
Bromodichloromethane	**21.5**	0.20	ug/L	20	<0.50	108	68-144			
Bromoform	**19.0**	0.50	ug/L	20	<0.50	94.8	68-151			
Bromomethane	**14.8**	0.50	ug/L	20	<0.50	73.9	54-142			
2-Butanone (MEK)	**31.8**	2.0	ug/L	20	<20	159	62-145			QM-07
tert-Butylbenzene	**20.7**	0.20	ug/L	20	<0.50	103	87-142			
n-Butylbenzene	**20.7**	0.20	ug/L	20	<0.50	104	83-142			
sec-Butylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	84-145			
Carbon Disulfide	**23.3**	0.30	ug/L	20	<0.50	117	28-151			
Carbon Tetrachloride	**22.9**	0.30	ug/L	20	<0.50	114	58-164			
Chlorobenzene	**19.7**	0.30	ug/L	20	<0.50	98.6	87-125			
Chloroethane	**19.8**	0.50	ug/L	20	<0.50	99.2	42-164			
Chloroform	**21.1**	0.30	ug/L	20	<0.50	106	65-138			
Chloromethane	**13.4**	0.40	ug/L	20	<0.50	67.2	50-152			
4-Chlorotoluene	**20.2**	0.20	ug/L	20	<0.50	101	88-129			
2-Chlorotoluene	**20.1**	0.30	ug/L	20	<0.50	100	89-132			
1,2-Dibromo-3-chloropropane	**17.4**	0.40	ug/L	20	<1.0	87.0	53-161			
Dibromochloromethane	**19.0**	0.30	ug/L	20	<0.50	95.0	70-130			
1,2-Dibromoethane (EDB)	**18.7**	0.30	ug/L	20	<0.50	93.4	76-130			
Dibromomethane	**20.8**	0.40	ug/L	20	<0.50	104	62-135			
1,3-Dichlorobenzene	**19.8**	0.10	ug/L	20	<0.50	99.0	93-120			
1,4-Dichlorobenzene	**20.1**	0.30	ug/L	20	<0.50	101	94-121			
1,2-Dichlorobenzene	**19.8**	0.30	ug/L	20	<0.50	99.1	94-125			
Dichlorodifluoromethane (R12)	**4.23**	0.50	ug/L	20	<0.50	21.2	17-153			
1,1-Dichloroethane	**20.7**	0.20	ug/L	20	1.09	98.0	55-131			
1,2-Dichloroethane (EDC)	**23.7**	0.30	ug/L	20	1.59	110	52-168			
cis-1,2-Dichloroethylene	**45.4**	0.20	ug/L	20	27.5	89.6	70-130			
1,1-Dichloroethylene	**23.5**	0.30	ug/L	20	<0.50	117	51-140			
trans-1,2-Dichloroethylene	**23.2**	0.40	ug/L	20	3.07	101	59-127			
1,3-Dichloropropane	**17.6**	0.10	ug/L	20	<0.50	88.2	80-121			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Matrix Spike (B9E0714-MS1) Continued Source: 9D24021-02 Prepared & Analyzed: 05/07/19										
1,2-Dichloropropane	**19.4**	0.50	ug/L	20	<0.50	97.0	52-142			
2,2-Dichloropropane	**20.6**	0.40	ug/L	20	<0.50	103	36-168			
trans-1,3-Dichloropropylene	**18.7**	0.20	ug/L	20	<0.50	93.4	78-130			
1,1-Dichloropropylene	**21.3**	0.20	ug/L	20	<0.50	106	76-132			
cis-1,3-Dichloropropylene	**19.7**	0.20	ug/L	20	<0.50	98.4	66-130			
Ethylbenzene	**20.0**	0.20	ug/L	20	<0.50	99.8	86-128			
Hexachlorobutadiene	**19.2**	0.40	ug/L	20	<1.0	95.8	70-130			
2-Hexanone (MBK)	**16.2**	2.0	ug/L	20	<20	81.2	52-141			J
Isopropylbenzene	**20.2**	0.20	ug/L	20	<0.50	101	90-133			
4-Isopropyltoluene	**20.7**	0.20	ug/L	20	<1.0	103	83-149			
Methyl-tert-Butyl Ether (MTBE)	**45.4**	1.7	ug/L	40	<2.0	113	56-150			
Methylene Chloride	**19.8**	5.0	ug/L	20	<5.0	99.0	70-130			
4-Methyl-2-pentanone (MIBK)	**17.4**	0.70	ug/L	20	<20	87.1	60-148			J
Naphthalene	**19.4**	0.20	ug/L	20	<2.0	97.2	70-130			
n-Propylbenzene	**20.4**	0.20	ug/L	20	<0.50	102	88-133			
Styrene	**19.8**	0.20	ug/L	20	<0.50	99.0	65-141			
1,1,1,2-Tetrachloroethane	**19.2**	0.40	ug/L	20	<0.50	96.2	70-130			
1,1,2,2-Tetrachloroethane	**19.1**	0.30	ug/L	20	<0.50	95.4	62-134			
Tetrachloroethylene (PCE)	**19.0**	0.50	ug/L	20	<0.50	95.0	82-129			
Toluene	**18.6**	0.30	ug/L	20	<0.50	93.2	81-123			
1,2,3-Trichlorobenzene	**19.1**	0.20	ug/L	20	<0.50	95.4	73-144			
1,1,2-Trichloroethane	**17.8**	0.30	ug/L	20	<0.50	89.0	76-122			
1,1,1-Trichloroethane	**22.4**	0.30	ug/L	20	<0.50	112	62-164			
Trichloroethylene (TCE)	**22.7**	0.20	ug/L	20	0.810	109	72-136			
Trichlorofluoromethane (R11)	**17.9**	0.20	ug/L	20	<0.50	89.6	59-144			
1,2,3-Trichloropropane	**18.6**	0.30	ug/L	20	<0.50	92.9	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.3**	0.30	ug/L	20	<0.50	96.6	62-126			
1,2,4-Trimethylbenzene	**21.1**	0.30	ug/L	20	<0.50	105	89-134			
1,3,5-Trimethylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	78-148			
Vinyl chloride	**16.1**	0.50	ug/L	20	<0.50	80.4	54-150			
o-Xylene	**20.5**	0.30	ug/L	20	<0.50	102	87-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Matrix Spike (B9E0714-MS1) Continued	**Source: 9D24021-02**	Prepared & Analyzed: 05/07/19								
m,p-Xylenes	**40.7**	0.40	ug/L	40	<1.0	102	88-124			
Surrogate: 4-Bromofluorobenzene	*53.8*		*ug/L*	*50*		*108*	*80-129*			
Surrogate: Dibromofluoromethane	*56.1*		*ug/L*	*50*		*112*	*68-137*			
Surrogate: Toluene-d8	*51.2*		*ug/L*	*50*		*102*	*83-134*			
Matrix Spike Dup (B9E0714-MSD1)	**Source: 9D24021-02**	Prepared & Analyzed: 05/07/19								
Acetone	**44.3**	2.0	ug/L	20	19.8	122	11-169	25.7	30	J
Benzene	**21.0**	0.20	ug/L	20	<0.50	105	56-135	1.58	30	
Bromobenzene	**20.0**	0.30	ug/L	20	<0.50	99.8	92-123	2.74	30	
Bromochloromethane	**21.2**	0.50	ug/L	20	<0.50	106	74-125	3.93	30	
Bromodichloromethane	**20.8**	0.20	ug/L	20	<0.50	104	68-144	3.59	30	
Bromoform	**16.6**	0.50	ug/L	20	<0.50	82.8	68-151	13.6	30	
Bromomethane	**17.1**	0.50	ug/L	20	<0.50	85.7	54-142	14.8	30	
2-Butanone (MEK)	**28.4**	2.0	ug/L	20	<20	142	62-145	11.3	30	
tert-Butylbenzene	**21.1**	0.20	ug/L	20	<0.50	105	87-142	1.92	30	
n-Butylbenzene	**21.2**	0.20	ug/L	20	<0.50	106	83-142	2.15	30	
sec-Butylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	84-145	1.97	30	
Carbon Disulfide	**23.5**	0.30	ug/L	20	<0.50	118	28-151	0.811	30	
Carbon Tetrachloride	**23.1**	0.30	ug/L	20	<0.50	115	58-164	0.784	30	
Chlorobenzene	**18.0**	0.30	ug/L	20	<0.50	89.8	87-125	9.24	30	
Chloroethane	**20.0**	0.50	ug/L	20	<0.50	99.8	42-164	0.603	30	
Chloroform	**20.8**	0.30	ug/L	20	<0.50	104	65-138	1.57	30	
Chloromethane	**15.0**	0.40	ug/L	20	<0.50	75.2	50-152	11.2	30	
4-Chlorotoluene	**20.7**	0.20	ug/L	20	<0.50	104	88-129	2.49	30	
2-Chlorotoluene	**20.6**	0.30	ug/L	20	<0.50	103	89-132	2.85	30	
1,2-Dibromo-3-chloropropane	**18.2**	0.40	ug/L	20	<1.0	90.8	53-161	4.39	30	
Dibromochloromethane	**17.4**	0.30	ug/L	20	<0.50	87.2	70-130	8.67	30	
1,2-Dibromoethane (EDB)	**16.9**	0.30	ug/L	20	<0.50	84.5	76-130	9.95	30	
Dibromomethane	**20.1**	0.40	ug/L	20	<0.50	100	62-135	3.48	30	
1,3-Dichlorobenzene	**19.9**	0.10	ug/L	20	<0.50	99.5	93-120	0.554	30	
1,4-Dichlorobenzene	**20.6**	0.30	ug/L	20	<0.50	103	94-121	2.21	30	
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20	<0.50	101	94-125	1.95	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Matrix Spike Dup (B9E0714-MSD1) Continued				**Source: 9D24021-02**	Prepared & Analyzed: 05/07/19					
Dichlorodifluoromethane (R12)	**4.08**	0.50	ug/L	20	<0.50	20.4	17-153	3.61	30	
1,1-Dichloroethane	**20.6**	0.20	ug/L	20	1.09	97.6	55-131	0.436	30	
1,2-Dichloroethane (EDC)	**23.2**	0.30	ug/L	20	1.59	108	52-168	2.13	30	
cis-1,2-Dichloroethylene	**44.8**	0.20	ug/L	20	27.5	86.2	70-130	1.51	30	
1,1-Dichloroethylene	**24.5**	0.30	ug/L	20	<0.50	123	51-140	4.29	30	
trans-1,2-Dichloroethylene	**24.0**	0.40	ug/L	20	3.07	105	59-127	3.39	30	
1,3-Dichloropropane	**17.0**	0.10	ug/L	20	<0.50	85.1	80-121	3.58	30	
1,2-Dichloropropane	**20.2**	0.50	ug/L	20	<0.50	101	52-142	3.84	30	
2,2-Dichloropropane	**19.3**	0.40	ug/L	20	<0.50	96.6	36-168	6.56	30	
trans-1,3-Dichloropropylene	**17.0**	0.20	ug/L	20	<0.50	84.8	78-130	9.65	30	
1,1-Dichloropropylene	**21.2**	0.20	ug/L	20	<0.50	106	76-132	0.519	30	
cis-1,3-Dichloropropylene	**19.4**	0.20	ug/L	20	<0.50	97.0	66-130	1.38	30	
Ethylbenzene	**18.4**	0.20	ug/L	20	<0.50	92.2	86-128	8.02	30	
Hexachlorobutadiene	**18.8**	0.40	ug/L	20	<1.0	94.0	70-130	1.84	30	
2-Hexanone (MBK)	**14.9**	2.0	ug/L	20	<20	74.5	52-141	8.54	30	J
Isopropylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	90-133	3.98	30	
4-Isopropyltoluene	**21.3**	0.20	ug/L	20	<1.0	106	83-149	2.91	30	
Methyl-tert-Butyl Ether (MTBE)	**44.3**	1.7	ug/L	40	<2.0	111	56-150	2.45	30	
Methylene Chloride	**19.5**	5.0	ug/L	20	<5.0	97.6	70-130	1.53	30	
4-Methyl-2-pentanone (MIBK)	**16.3**	0.70	ug/L	20	<20	81.6	60-148	6.52	30	J
Naphthalene	**20.8**	0.20	ug/L	20	<2.0	104	70-130	6.66	30	
n-Propylbenzene	**21.2**	0.20	ug/L	20	<0.50	106	88-133	3.46	30	
Styrene	**18.2**	0.20	ug/L	20	<0.50	91.2	65-141	8.31	30	
1,1,1,2-Tetrachloroethane	**18.1**	0.40	ug/L	20	<0.50	90.6	70-130	5.94	30	
1,1,2,2-Tetrachloroethane	**17.6**	0.30	ug/L	20	<0.50	87.8	62-134	8.30	30	
Tetrachloroethylene (PCE)	**17.2**	0.50	ug/L	20	<0.50	85.8	82-129	10.1	30	
Toluene	**17.5**	0.30	ug/L	20	<0.50	87.6	81-123	6.08	30	
1,2,3-Trichlorobenzene	**19.3**	0.20	ug/L	20	<0.50	96.4	73-144	0.991	30	
1,1,2-Trichloroethane	**16.2**	0.30	ug/L	20	<0.50	80.9	76-122	9.54	30	
1,1,1-Trichloroethane	**21.9**	0.30	ug/L	20	<0.50	110	62-164	2.30	30	
Trichloroethylene (TCE)	**22.6**	0.20	ug/L	20	0.810	109	72-136	0.221	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874349
Date Received: 04/24/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9E0714 - EPA 5030B										
Matrix Spike Dup (B9E0714-MSD1) Continued		**Source: 9D24021-02**			Prepared & Analyzed: 05/07/19					
Trichlorofluoromethane (R11)	**18.5**	0.20	ug/L	20	<0.50	92.5	59-144	3.19	30	
1,2,3-Trichloropropane	**17.3**	0.30	ug/L	20	<0.50	86.6	69-135	7.02	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**19.2**	0.30	ug/L	20	<0.50	96.2	62-126	0.467	30	
1,2,4-Trimethylbenzene	**21.3**	0.30	ug/L	20	<0.50	107	89-134	1.18	30	
1,3,5-Trimethylbenzene	**21.2**	0.20	ug/L	20	<0.50	106	78-148	0.758	30	
Vinyl chloride	**17.6**	0.50	ug/L	20	<0.50	88.1	54-150	9.08	30	
o-Xylene	**19.1**	0.30	ug/L	20	<0.50	95.4	87-125	6.98	30	
m,p-Xylenes	**37.4**	0.40	ug/L	40	<1.0	93.4	88-124	8.55	30	
Surrogate: 4-Bromofluorobenzene	*54.8*		*ug/L*	*50*		*110*	*80-129*			
Surrogate: Dibromofluoromethane	*54.6*		*ug/L*	*50*		*109*	*68-137*			
Surrogate: Toluene-d8	*47.0*		*ug/L*	*50*		*94.1*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874349
Project No:	130072-024	**Date Received:**	04/24/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19

Special Notes

[1] = ****** : Exceeds upper control limit.

J : Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

[2] = **QM-07** : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No. 1-7984

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 Fax: 818-998-7258

Page of

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name:** ~~Alex Felix~~ Robert Bardy
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Robert Bardy
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush 4 = 72 Hour Rush

2 = 24 Hour Rush 5 = 5 Day Rush

3 = 48 Hour Rush X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane by 8270C	Special Instructions
						Please enter the TAT Turnaround Codes ** below		
EW-INF-042419-0001	9D24021 -01	4/24/2019		Water	4	X	X	
TOTAL-EFF-042419-0001	-02	4/24/2019		Water	4	X	X	

SAMPLE INTEGRITY

INTACT (Y) N TEMP 4.6

'19 APR 24 6:00PM

For Laboratory Use

REVIEWED

Date _____ Time _____

TAT ___ Days Sign: _____

A.A. Project No.: A874349 / 9D24021

Relinquished by	Date	Time	Received by
Robert Bardy	4-24-19	1220	
			Received by
Relinquished by	Date	Time	
	4.24.19	1810	
Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

May 10, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874350 / 9E01023

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 05/01/19 17:26 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACE-050119-0001	9E01023-01	Vapor	5	05/01/19 10:15	05/01/19 17:26
SVE-VGACM-050119-0001	9E01023-02	Vapor	5	05/01/19 10:20	05/01/19 17:26
SVE-VGACI-050119-0001	9E01023-03	Vapor	5	05/01/19 10:25	05/01/19 17:26
TO-3 VOCs as Hexane					
SVE-VGACE-050119-0001	9E01023-01	Vapor	5	05/01/19 10:15	05/01/19 17:26
SVE-VGACM-050119-0001	9E01023-02	Vapor	5	05/01/19 10:20	05/01/19 17:26
SVE-VGACI-050119-0001	9E01023-03	Vapor	5	05/01/19 10:25	05/01/19 17:26

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACE-050119-0001

9E01023-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.016**	ug/L	0.0081	**4.0**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACE-050119-0001

9E01023-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.050**	ug/L	0.0079	**13**	ppbv	2.0
1,1-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
trans-1,2-Dichloroethylene	<0.0079	ug/L	0.0079	<2.0	ppbv	2.0
1,2-Dichloropropane	<0.010	ug/L	0.010	<2.2	ppbv	2.2
trans-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
cis-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
Dichlorotetrafluoroethane	<0.050	ug/L	0.050	<7.2	ppbv	7.2
1,4-Dioxane	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Ethylbenzene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
4-Ethyltoluene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Hexachlorobutadiene	<0.050	ug/L	0.050	<4.7	ppbv	4.7
2-Hexanone (MBK)	<0.049	ug/L	0.049	<12	ppbv	12
Isopropanol (IPA)	<0.10	ug/L	0.10	<41	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Methylene Chloride	<0.049	ug/L	0.049	<14	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049	ug/L	0.049	<12	ppbv	12
Styrene	<0.0098	ug/L	0.0098	<2.3	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050	ug/L	0.050	<7.3	ppbv	7.3
Tetrachloroethylene (PCE)	<0.014	ug/L	0.014	<2.0	ppbv	2.0
Toluene	<0.049	ug/L	0.049	<13	ppbv	13
1,2,4-Trichlorobenzene	<0.020	ug/L	0.020	<2.7	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACE-050119-0001

9E01023-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	<0.011	ug/L	0.011	<2.0	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	109 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACM-050119-0001

9E01023-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.032**	ug/L	0.0081	**7.9**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACM-050119-0001

9E01023-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.091**	ug/L	0.0079	**23**	ppbv	2.0
1,1-Dichloroethylene	**0.016**	ug/L	0.0079	**3.9**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.011**	ug/L	0.0079	**2.8**	ppbv	2.0
1,2-Dichloropropane	<0.010	ug/L	0.010	<2.2	ppbv	2.2
trans-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
cis-1,3-Dichloropropylene	<0.01	ug/L	0.01	<2.2	ppbv	2.2
Dichlorotetrafluoroethane	<0.050	ug/L	0.050	<7.2	ppbv	7.2
1,4-Dioxane	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Ethylbenzene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
4-Ethyltoluene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Hexachlorobutadiene	<0.050	ug/L	0.050	<4.7	ppbv	4.7
2-Hexanone (MBK)	<0.049	ug/L	0.049	<12	ppbv	12
Isopropanol (IPA)	<0.10	ug/L	0.10	<41	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010	ug/L	0.010	<2.8	ppbv	2.8
Methylene Chloride	<0.049	ug/L	0.049	<14	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049	ug/L	0.049	<12	ppbv	12
Styrene	<0.0098	ug/L	0.0098	<2.3	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050	ug/L	0.050	<7.3	ppbv	7.3
Tetrachloroethylene (PCE)	**0.22**	ug/L	0.014	**32**	ppbv	2.0
Toluene	<0.049	ug/L	0.049	<13	ppbv	13
1,2,4-Trichlorobenzene	<0.020	ug/L	0.020	<2.7	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	1	**Prepared:**	05/02/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/02/19

SVE-VGACM-050119-0001

9E01023-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	**0.20**	ug/L	0.011	**37**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	107 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	2	**Prepared:**	05/03/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/03/19

SVE-VGACI-050119-0001

9E01023-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.100	ug/L	0.050	<42	ppbv	21
Benzene	<0.019	ug/L	0.0096	<6.0	ppbv	3.0
Benzyl chloride	<0.10	ug/L	0.050	<19	ppbv	9.7
Bromodichloromethane	<0.10	ug/L	0.050	<15	ppbv	7.5
Bromoform	<0.099	ug/L	0.050	<9.6	ppbv	4.8
Bromomethane	<0.020	ug/L	0.010	<5.2	ppbv	2.6
2-Butanone (MEK)	<0.10	ug/L	0.050	<34	ppbv	17
Carbon Disulfide	<0.100	ug/L	0.050	<32	ppbv	16
Carbon Tetrachloride	<0.026	ug/L	0.013	<4.2	ppbv	2.1
Chlorobenzene	<0.020	ug/L	0.010	<4.4	ppbv	2.2
Chloroethane	<0.020	ug/L	0.010	<7.6	ppbv	3.8
Chloroform	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Chloromethane	<0.020	ug/L	0.0099	<9.6	ppbv	4.8
Dibromochloromethane	<0.039	ug/L	0.020	<4.6	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.040	ug/L	0.020	<5.2	ppbv	2.6
1,2-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,3-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,4-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.099	ug/L	0.049	<20	ppbv	10
1,1-Dichloroethane	**0.036**	ug/L	0.0081	**8.9**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.020	ug/L	0.010	<5.0	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	2	**Prepared:**	05/03/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/03/19

SVE-VGACI-050119-0001

9E01023-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.12**	ug/L	0.0079	**31**	ppbv	2.0
1,1-Dichloroethylene	**0.017**	ug/L	0.0079	**4.2**	ppbv	2.0
trans-1,2-Dichloroethylene	<0.016	ug/L	0.0079	<4.0	ppbv	2.0
1,2-Dichloropropane	<0.020	ug/L	0.010	<4.4	ppbv	2.2
trans-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
cis-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
Dichlorotetrafluoroethane	<0.10	ug/L	0.050	<14	ppbv	7.2
1,4-Dioxane	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Ethylbenzene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
4-Ethyltoluene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Hexachlorobutadiene	<0.10	ug/L	0.050	<9.4	ppbv	4.7
2-Hexanone (MBK)	<0.098	ug/L	0.049	<24	ppbv	12
Isopropanol (IPA)	<0.20	ug/L	0.10	<82	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Methylene Chloride	<0.097	ug/L	0.049	<28	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.098	ug/L	0.049	<24	ppbv	12
Styrene	<0.020	ug/L	0.0098	<4.6	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.10	ug/L	0.050	<15	ppbv	7.3
Tetrachloroethylene (PCE)	**0.80**	ug/L	0.014	**120**	ppbv	2.0
Toluene	<0.098	ug/L	0.049	<26	ppbv	13
1,2,4-Trichlorobenzene	<0.040	ug/L	0.020	<5.4	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Matrix:	Vapor	**Sampled:**	05/01/19
Dilution:	2	**Prepared:**	05/03/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	05/03/19

SVE-VGACI-050119-0001

9E01023-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
1,1,1-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
Trichloroethylene (TCE)	**0.31**	ug/L	0.011	**58**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.10	ug/L	0.050	<18	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.100	ug/L	0.050	<13	ppbv	6.5
1,3,5-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Vinyl acetate	<0.020	ug/L	0.0099	<5.6	ppbv	2.8
Vinyl chloride	<0.020	ug/L	0.01	<7.8	ppbv	3.9
o-Xylene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
m,p-Xylenes	<0.020	ug/L	0.01	<4.6	ppbv	2.3
1,2,3-Trichloropropane	<0.024	ug/L	0.012	<4.0	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	111 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19
Method:	VOCs by EPA TO-3 GC/MS	**Units:**	ppbv

Date Sampled:	05/01/19	05/01/19	05/01/19	
Date Prepared:	05/02/19	05/02/19	05/03/19	
Date Analyzed:	05/02/19	05/02/19	05/03/19	
AA ID No:	9E01023-01	9E01023-02	9E01023-03	
Client ID No:	SVE-VGACE-050119-0001	SVE-VGACM-050119-0001	SVE-VGACI-050119-0001	
Matrix:	Vapor	Vapor	Vapor	
Dilution Factor:	1	1	1	MRL
TO-3 VOCs as Hexane (TO-3)				
TNMOC as Hexane	<1200	<1200	<1200	1200
Surrogates				**%REC Limits**
4-Bromofluorobenzene	107%	104%	107%	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
Blank (B9E0317-BLK1)				Prepared & Analyzed: 05/02/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
Blank (B9E0317-BLK1) Continued				Prepared & Analyzed: 05/02/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*20.1*		*ppbv*	*20*		*101*	*70-130*			
LCS (B9E0317-BS1)				Prepared & Analyzed: 05/03/19						
Acetone	**35.5**	21	ppbv	40		88.6	70-130		30	
Benzene	**37.5**	3.0	ppbv	40		93.7	70-130		30	
Benzyl chloride	**35.0**	9.7	ppbv	40		87.6	70-130		30	
Bromodichloromethane	**40.1**	7.5	ppbv	40		100	70-130		30	
Bromoform	**40.0**	4.8	ppbv	40		100	70-130		30	
Bromomethane	**34.4**	2.6	ppbv	40		86.0	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
LCS (B9E0317-BS1) Continued				Prepared & Analyzed: 05/03/19						
2-Butanone (MEK)	**37.0**	17	ppbv	40		92.6	70-130		30	
Carbon Disulfide	**36.2**	16	ppbv	40		90.6	70-130		30	
Carbon Tetrachloride	**40.9**	2.1	ppbv	40		102	70-130		30	
Chlorobenzene	**37.9**	2.2	ppbv	40		94.7	70-130		30	
Chloroethane	**37.4**	3.8	ppbv	40		93.4	70-130		30	
Chloroform	**38.5**	2.0	ppbv	40		96.2	70-130		30	
Chloromethane	**36.4**	4.8	ppbv	40		90.9	70-130		30	
Dibromochloromethane	**41.0**	2.3	ppbv	40		103	70-130		30	
1,2-Dibromoethane (EDB)	**39.8**	2.6	ppbv	40		99.6	70-130		30	
1,2-Dichlorobenzene	**37.4**	3.3	ppbv	40		93.6	70-130		30	
1,3-Dichlorobenzene	**36.5**	3.3	ppbv	40		91.4	70-130		30	
1,4-Dichlorobenzene	**38.6**	3.3	ppbv	40		96.5	70-130		30	
Dichlorodifluoromethane (R12)	**34.3**	10	ppbv	40		85.8	70-130		30	
1,1-Dichloroethane	**36.2**	2.0	ppbv	40		90.6	70-130		30	
1,2-Dichloroethane (EDC)	**39.2**	2.5	ppbv	40		98.1	70-130		30	
cis-1,2-Dichloroethylene	**36.4**	2.0	ppbv	40		91.1	70-130		30	
1,1-Dichloroethylene	**38.3**	2.0	ppbv	40		95.8	70-130		30	
trans-1,2-Dichloroethylene	**37.4**	2.0	ppbv	40		93.6	70-130		30	
1,2-Dichloropropane	**39.2**	2.2	ppbv	40		97.9	70-130		30	
trans-1,3-Dichloropropylene	**38.2**	2.2	ppbv	40		95.4	70-130		30	
cis-1,3-Dichloropropylene	**38.6**	2.2	ppbv	40		96.5	70-130		30	
Dichlorotetrafluoroethane	**34.7**	7.2	ppbv	40		86.7	70-130		30	
Ethylbenzene	**36.0**	2.3	ppbv	40		90.0	70-130		30	
4-Ethyltoluene	**39.8**	2.0	ppbv	40		99.6	70-130		30	
Hexachlorobutadiene	**41.9**	4.7	ppbv	40		105	70-130		30	
2-Hexanone (MBK)	**45.8**	12	ppbv	40		115	70-130		30	
Isopropanol (IPA)	**39.5**	41	ppbv	40		98.8	70-130		30	
Methylene Chloride	**31.9**	14	ppbv	40		79.8	70-130		30	
4-Methyl-2-pentanone (MIBK)	**48.8**	12	ppbv	40		122	70-130		30	
Styrene	**37.1**	2.3	ppbv	40		92.7	70-130		30	
1,1,2,2-Tetrachloroethane	**29.4**	7.3	ppbv	40		73.4	70-130		30	
Tetrachloroethylene (PCE)	**38.5**	2.0	ppbv	40		96.2	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
LCS (B9E0317-BS1) Continued				Prepared & Analyzed: 05/03/19						
Toluene	**39.0**	13	ppbv	40		97.6	70-130		30	
1,2,4-Trichlorobenzene	**31.2**	2.7	ppbv	40		78.1	70-130		30	
1,1,2-Trichloroethane	**39.7**	3.7	ppbv	40		99.4	70-130		30	
1,1,1-Trichloroethane	**38.8**	3.7	ppbv	40		97.1	70-130		30	
Trichloroethylene (TCE)	**36.3**	2.0	ppbv	40		90.8	70-130		30	
Trichlorofluoromethane (R11)	**40.4**	8.9	ppbv	40		101	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**40.0**	6.5	ppbv	40		100	70-130		30	
1,3,5-Trimethylbenzene	**38.9**	2.0	ppbv	40		97.2	70-130		30	
1,2,4-Trimethylbenzene	**36.7**	2.0	ppbv	40		91.8	70-130		30	
Vinyl acetate	**35.7**	2.8	ppbv	40		89.2	70-130		30	
Vinyl chloride	**39.6**	3.9	ppbv	40		99.1	70-130		30	
o-Xylene	**36.1**	2.3	ppbv	40		90.2	70-130		30	
m,p-Xylenes	**69.3**	2.3	ppbv	80		86.6	70-130		30	
1,2,3-Trichloropropane	**37.6**	2.0	ppbv	40		94.0	70-130		30	
Surrogate: 4-Bromofluorobenzene	*20.3*		*ppbv*	*20*		*102*	*70-130*			
LCS Dup (B9E0317-BSD1)				Prepared & Analyzed: 05/02/19						
Acetone	**40.8**	21	ppbv	40		102	70-130	14.0	30	
Benzene	**44.1**	3.0	ppbv	40		110	70-130	16.3	30	
Benzyl chloride	**41.6**	9.7	ppbv	40		104	70-130	17.0	30	
Bromodichloromethane	**47.8**	7.5	ppbv	40		119	70-130	17.4	30	
Bromoform	**47.6**	4.8	ppbv	40		119	70-130	17.3	30	
Bromomethane	**40.6**	2.6	ppbv	40		101	70-130	16.5	30	
2-Butanone (MEK)	**44.4**	17	ppbv	40		111	70-130	18.0	30	
Carbon Disulfide	**44.1**	16	ppbv	40		110	70-130	19.7	30	
Carbon Tetrachloride	**48.8**	2.1	ppbv	40		122	70-130	17.6	30	
Chlorobenzene	**44.6**	2.2	ppbv	40		111	70-130	16.2	30	
Chloroethane	**46.1**	3.8	ppbv	40		115	70-130	21.0	30	
Chloroform	**45.8**	2.0	ppbv	40		114	70-130	17.3	30	
Chloromethane	**47.4**	4.8	ppbv	40		118	70-130	26.3	30	
Dibromochloromethane	**47.4**	2.3	ppbv	40		119	70-130	14.5	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
LCS Dup (B9E0317-BSD1) Continued				Prepared & Analyzed: 05/02/19						
1,2-Dibromoethane (EDB)	**46.6**	2.6	ppbv	40		116	70-130	15.5	30	
1,2-Dichlorobenzene	**41.6**	3.3	ppbv	40		104	70-130	10.5	30	
1,3-Dichlorobenzene	**41.6**	3.3	ppbv	40		104	70-130	13.0	30	
1,4-Dichlorobenzene	**44.4**	3.3	ppbv	40		111	70-130	14.0	30	
Dichlorodifluoromethane (R12)	**43.4**	10	ppbv	40		108	70-130	23.3	30	
1,1-Dichloroethane	**42.8**	2.0	ppbv	40		107	70-130	16.6	30	
1,2-Dichloroethane (EDC)	**46.5**	2.5	ppbv	40		116	70-130	17.0	30	
cis-1,2-Dichloroethylene	**43.0**	2.0	ppbv	40		107	70-130	16.4	30	
1,1-Dichloroethylene	**46.2**	2.0	ppbv	40		116	70-130	18.7	30	
trans-1,2-Dichloroethylene	**45.0**	2.0	ppbv	40		112	70-130	18.2	30	
1,2-Dichloropropane	**46.4**	2.2	ppbv	40		116	70-130	16.9	30	
trans-1,3-Dichloropropylene	**46.2**	2.2	ppbv	40		116	70-130	19.1	30	
cis-1,3-Dichloropropylene	**46.1**	2.2	ppbv	40		115	70-130	17.6	30	
Dichlorotetrafluoroethane	**42.9**	7.2	ppbv	40		107	70-130	21.1	30	
Ethylbenzene	**41.5**	2.3	ppbv	40		104	70-130	14.1	30	
4-Ethyltoluene	**47.2**	2.0	ppbv	40		118	70-130	17.0	30	
Hexachlorobutadiene	**48.6**	4.7	ppbv	40		121	70-130	14.8	30	
2-Hexanone (MBK)	**54.7**	12	ppbv	40		137	70-130	17.7	30	**
Isopropanol (IPA)	**46.8**	41	ppbv	40		117	70-130	17.0	30	
Methylene Chloride	**38.7**	14	ppbv	40		96.6	70-130	19.1	30	
4-Methyl-2-pentanone (MIBK)	**57.8**	12	ppbv	40		144	70-130	17.0	30	**
Styrene	**43.2**	2.3	ppbv	40		108	70-130	15.2	30	
1,1,2,2-Tetrachloroethane	**34.6**	7.3	ppbv	40		86.6	70-130	16.5	30	
Tetrachloroethylene (PCE)	**45.1**	2.0	ppbv	40		113	70-130	15.8	30	
Toluene	**46.1**	13	ppbv	40		115	70-130	16.6	30	
1,2,4-Trichlorobenzene	**37.7**	2.7	ppbv	40		94.3	70-130	18.8	30	
1,1,2-Trichloroethane	**46.0**	3.7	ppbv	40		115	70-130	14.7	30	
1,1,1-Trichloroethane	**46.6**	3.7	ppbv	40		117	70-130	18.2	30	
Trichloroethylene (TCE)	**42.7**	2.0	ppbv	40		107	70-130	16.2	30	
Trichlorofluoromethane (R11)	**47.0**	8.9	ppbv	40		118	70-130	15.0	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**46.6**	6.5	ppbv	40		116	70-130	15.2	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
LCS Dup (B9E0317-BSD1) Continued				Prepared & Analyzed: 05/02/19						
1,3,5-Trimethylbenzene	**44.8**	2.0	ppbv	40		112	70-130	14.1	30	
1,2,4-Trimethylbenzene	**41.8**	2.0	ppbv	40		104	70-130	12.9	30	
Vinyl acetate	**43.4**	2.8	ppbv	40		109	70-130	19.6	30	
Vinyl chloride	**47.7**	3.9	ppbv	40		119	70-130	18.4	30	
o-Xylene	**41.6**	2.3	ppbv	40		104	70-130	14.1	30	
m,p-Xylenes	**81.1**	2.3	ppbv	80		101	70-130	15.7	30	
1,2,3-Trichloropropane	**43.7**	2.0	ppbv	40		109	70-130	14.9	30	
Surrogate: 4-Bromofluorobenzene	*20.1*		*ppbv*	*20*		*101*	*70-130*			
Duplicate (B9E0317-DUP1)			**Source: 9E01022-03**	Prepared & Analyzed: 05/03/19						
Acetone	**<63000**	63000	ppbv						30	
Benzene	**<9000**	9000	ppbv						30	
Benzyl chloride	**<29000**	29000	ppbv						30	
Bromodichloromethane	**<22000**	22000	ppbv						30	
Bromoform	**<14000**	14000	ppbv						30	
Bromomethane	**<7800**	7800	ppbv						30	
2-Butanone (MEK)	**<51000**	51000	ppbv						30	
Carbon Disulfide	**<48000**	48000	ppbv						30	
Carbon Tetrachloride	**<6300**	6300	ppbv						30	
Chlorobenzene	**<6600**	6600	ppbv						30	
Chloroethane	**<11000**	11000	ppbv						30	
Chloroform	**<6000**	6000	ppbv						30	
Chloromethane	**<14000**	14000	ppbv						30	
Dibromochloromethane	**<6900**	6900	ppbv						30	
1,2-Dibromoethane (EDB)	**<7800**	7800	ppbv						30	
1,2-Dichlorobenzene	**<9900**	9900	ppbv						30	
1,3-Dichlorobenzene	**<9900**	9900	ppbv						30	
1,4-Dichlorobenzene	**<9900**	9900	ppbv						30	
Dichlorodifluoromethane (R12)	**<30000**	30000	ppbv						30	
1,1-Dichloroethane	**<6000**	6000	ppbv						30	
1,2-Dichloroethane (EDC)	**<7500**	7500	ppbv						30	
cis-1,2-Dichloroethylene	**<6000**	6000	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
Duplicate (B9E0317-DUP1) Continued	**Source: 9E01022-03**	Prepared & Analyzed: 05/03/19								
1,1-Dichloroethylene	**<6000**	6000	ppbv						30	
trans-1,2-Dichloroethylene	**<6000**	6000	ppbv						30	
1,2-Dichloropropane	**<6600**	6600	ppbv						30	
trans-1,3-Dichloropropylene	**<6600**	6600	ppbv						30	
cis-1,3-Dichloropropylene	**<6600**	6600	ppbv						30	
Dichlorotetrafluoroethane	**<22000**	22000	ppbv						30	
1,4-Dioxane	**<8400**	8400	ppbv						30	
Ethylbenzene	**<6900**	6900	ppbv						30	
4-Ethyltoluene	**<6000**	6000	ppbv						30	
Hexachlorobutadiene	**<14000**	14000	ppbv						30	
2-Hexanone (MBK)	**<36000**	36000	ppbv						30	
Isopropanol (IPA)	**<120000**	120000	ppbv						30	
Methyl-tert-Butyl Ether (MTBE)	**<8400**	8400	ppbv						30	
Methylene Chloride	**<42000**	42000	ppbv						30	
4-Methyl-2-pentanone (MIBK)	**<36000**	36000	ppbv						30	
Styrene	**<6900**	6900	ppbv						30	
1,1,2,2-Tetrachloroethane	**<22000**	22000	ppbv						30	
Tetrachloroethylene (PCE)	**<6000**	6000	ppbv						30	
Toluene	**<39000**	39000	ppbv						30	
1,2,4-Trichlorobenzene	**<8100**	8100	ppbv						30	
1,1,2-Trichloroethane	**<11000**	11000	ppbv						30	
1,1,1-Trichloroethane	**<11000**	11000	ppbv						30	
Trichloroethylene (TCE)	**<6000**	6000	ppbv						30	
Trichlorofluoromethane (R11)	**<27000**	27000	ppbv						30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<20000**	20000	ppbv						30	
1,3,5-Trimethylbenzene	**<6000**	6000	ppbv						30	
1,2,4-Trimethylbenzene	**<6000**	6000	ppbv						30	
Vinyl acetate	**<8400**	8400	ppbv						30	
Vinyl chloride	**97500**	12000	ppbv		97900			0.338	30	
o-Xylene	**<6900**	6900	ppbv						30	
m,p-Xylenes	**<6900**	6900	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0317 - *** DEFAULT PREP ****										
Duplicate (B9E0317-DUP1) Continued	**Source: 9E01022-03**		Prepared & Analyzed: 05/03/19							
1,2,3-Trichloropropane	**<6000**	6000	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*20.1*		*ppbv*	*20*		*100*	*70-130*			
*Batch B9E0319 - *** DEFAULT PREP ****										
Blank (B9E0319-BLK1)			Prepared & Analyzed: 05/03/19							
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
Blank (B9E0319-BLK1) Continued				Prepared & Analyzed: 05/03/19						
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*20.3*		*ppbv*	*20*		*101*	*70-130*			
LCS (B9E0319-BS1)				Prepared & Analyzed: 05/03/19						
Acetone	**37.3**	21	ppbv	40		93.2	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
LCS (B9E0319-BS1) Continued				Prepared & Analyzed: 05/03/19						
Benzene	**38.8**	3.0	ppbv	40		97.0	70-130		30	
Benzyl chloride	**37.8**	9.7	ppbv	40		94.5	70-130		30	
Bromodichloromethane	**41.8**	7.5	ppbv	40		105	70-130		30	
Bromoform	**41.8**	4.8	ppbv	40		104	70-130		30	
Bromomethane	**35.7**	2.6	ppbv	40		89.2	70-130		30	
2-Butanone (MEK)	**39.7**	17	ppbv	40		99.3	70-130		30	
Carbon Disulfide	**38.3**	16	ppbv	40		95.8	70-130		30	
Carbon Tetrachloride	**42.6**	2.1	ppbv	40		106	70-130		30	
Chlorobenzene	**38.6**	2.2	ppbv	40		96.6	70-130		30	
Chloroethane	**38.6**	3.8	ppbv	40		96.4	70-130		30	
Chloroform	**40.2**	2.0	ppbv	40		100	70-130		30	
Chloromethane	**45.2**	4.8	ppbv	40		113	70-130		30	
Dibromochloromethane	**42.8**	2.3	ppbv	40		107	70-130		30	
1,2-Dibromoethane (EDB)	**41.4**	2.6	ppbv	40		103	70-130		30	
1,2-Dichlorobenzene	**37.8**	3.3	ppbv	40		94.6	70-130		30	
1,3-Dichlorobenzene	**37.5**	3.3	ppbv	40		93.8	70-130		30	
1,4-Dichlorobenzene	**38.6**	3.3	ppbv	40		96.5	70-130		30	
Dichlorodifluoromethane (R12)	**35.5**	10	ppbv	40		88.6	70-130		30	
1,1-Dichloroethane	**37.9**	2.0	ppbv	40		94.7	70-130		30	
1,2-Dichloroethane (EDC)	**40.6**	2.5	ppbv	40		102	70-130		30	
cis-1,2-Dichloroethylene	**38.5**	2.0	ppbv	40		96.2	70-130		30	
1,1-Dichloroethylene	**40.1**	2.0	ppbv	40		100	70-130		30	
trans-1,2-Dichloroethylene	**39.4**	2.0	ppbv	40		98.4	70-130		30	
1,2-Dichloropropane	**40.8**	2.2	ppbv	40		102	70-130		30	
trans-1,3-Dichloropropylene	**40.3**	2.2	ppbv	40		101	70-130		30	
cis-1,3-Dichloropropylene	**40.4**	2.2	ppbv	40		101	70-130		30	
Dichlorotetrafluoroethane	**37.4**	7.2	ppbv	40		93.5	70-130		30	
Ethylbenzene	**37.0**	2.3	ppbv	40		92.4	70-130		30	
4-Ethyltoluene	**38.5**	2.0	ppbv	40		96.2	70-130		30	
Hexachlorobutadiene	**44.1**	4.7	ppbv	40		110	70-130		30	
2-Hexanone (MBK)	**49.2**	12	ppbv	40		123	70-130		30	
Isopropanol (IPA)	**42.4**	41	ppbv	40		106	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
LCS (B9E0319-BS1) Continued				Prepared & Analyzed: 05/03/19						
Methylene Chloride	**32.2**	14	ppbv	40		80.4	70-130		30	
4-Methyl-2-pentanone (MIBK)	**51.8**	12	ppbv	40		130	70-130		30	
Styrene	**38.2**	2.3	ppbv	40		95.6	70-130		30	
1,1,2,2-Tetrachloroethane	**30.4**	7.3	ppbv	40		75.9	70-130		30	
Tetrachloroethylene (PCE)	**39.9**	2.0	ppbv	40		99.8	70-130		30	
Toluene	**40.4**	13	ppbv	40		101	70-130		30	
1,2,4-Trichlorobenzene	**35.2**	2.7	ppbv	40		87.9	70-130		30	
1,1,2-Trichloroethane	**41.0**	3.7	ppbv	40		103	70-130		30	
1,1,1-Trichloroethane	**41.2**	3.7	ppbv	40		103	70-130		30	
Trichloroethylene (TCE)	**37.4**	2.0	ppbv	40		93.5	70-130		30	
Trichlorofluoromethane (R11)	**42.8**	8.9	ppbv	40		107	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**41.2**	6.5	ppbv	40		103	70-130		30	
1,3,5-Trimethylbenzene	**38.6**	2.0	ppbv	40		96.4	70-130		30	
1,2,4-Trimethylbenzene	**37.3**	2.0	ppbv	40		93.2	70-130		30	
Vinyl acetate	**38.1**	2.8	ppbv	40		95.2	70-130		30	
Vinyl chloride	**41.3**	3.9	ppbv	40		103	70-130		30	
o-Xylene	**36.1**	2.3	ppbv	40		90.3	70-130		30	
m,p-Xylenes	**71.9**	2.3	ppbv	80		89.9	70-130		30	
1,2,3-Trichloropropane	**37.9**	2.0	ppbv	40		94.7	70-130		30	
Surrogate: 4-Bromofluorobenzene	*20.0*		*ppbv*	*20*		*100*	*70-130*			
LCS Dup (B9E0319-BSD1)				Prepared & Analyzed: 05/04/19						
Acetone	**39.5**	21	ppbv	40		98.8	70-130	5.83	30	
Benzene	**42.5**	3.0	ppbv	40		106	70-130	9.15	30	
Benzyl chloride	**40.2**	9.7	ppbv	40		100	70-130	6.10	30	
Bromodichloromethane	**46.4**	7.5	ppbv	40		116	70-130	10.4	30	
Bromoform	**45.6**	4.8	ppbv	40		114	70-130	8.81	30	
Bromomethane	**40.1**	2.6	ppbv	40		100	70-130	11.6	30	
2-Butanone (MEK)	**42.8**	17	ppbv	40		107	70-130	7.56	30	
Carbon Disulfide	**42.5**	16	ppbv	40		106	70-130	10.2	30	
Carbon Tetrachloride	**47.1**	2.1	ppbv	40		118	70-130	9.99	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
LCS Dup (B9E0319-BSD1) Continued				Prepared & Analyzed: 05/04/19						
Chlorobenzene	**42.7**	2.2	ppbv	40		107	70-130	9.96	30	
Chloroethane	**42.8**	3.8	ppbv	40		107	70-130	10.3	30	
Chloroform	**44.5**	2.0	ppbv	40		111	70-130	10.2	30	
Chloromethane	**44.6**	4.8	ppbv	40		112	70-130	1.38	30	
Dibromochloromethane	**46.6**	2.3	ppbv	40		117	70-130	8.70	30	
1,2-Dibromoethane (EDB)	**46.0**	2.6	ppbv	40		115	70-130	10.6	30	
1,2-Dichlorobenzene	**41.6**	3.3	ppbv	40		104	70-130	9.57	30	
1,3-Dichlorobenzene	**36.2**	3.3	ppbv	40		90.4	70-130	3.74	30	
1,4-Dichlorobenzene	**41.1**	3.3	ppbv	40		103	70-130	6.40	30	
Dichlorodifluoromethane (R12)	**38.9**	10	ppbv	40		97.2	70-130	9.20	30	
1,1-Dichloroethane	**43.0**	2.0	ppbv	40		107	70-130	12.6	30	
1,2-Dichloroethane (EDC)	**45.2**	2.5	ppbv	40		113	70-130	10.7	30	
cis-1,2-Dichloroethylene	**41.8**	2.0	ppbv	40		104	70-130	8.15	30	
1,1-Dichloroethylene	**44.0**	2.0	ppbv	40		110	70-130	9.19	30	
trans-1,2-Dichloroethylene	**43.2**	2.0	ppbv	40		108	70-130	9.37	30	
1,2-Dichloropropane	**44.8**	2.2	ppbv	40		112	70-130	9.35	30	
trans-1,3-Dichloropropylene	**42.8**	2.2	ppbv	40		107	70-130	6.02	30	
cis-1,3-Dichloropropylene	**44.2**	2.2	ppbv	40		111	70-130	9.10	30	
Dichlorotetrafluoroethane	**36.7**	7.2	ppbv	40		91.6	70-130	2.03	30	
Ethylbenzene	**40.4**	2.3	ppbv	40		101	70-130	8.81	30	
4-Ethyltoluene	**43.8**	2.0	ppbv	40		110	70-130	13.0	30	
Hexachlorobutadiene	**48.6**	4.7	ppbv	40		122	70-130	9.78	30	
2-Hexanone (MBK)	**50.0**	12	ppbv	40		125	70-130	1.65	30	
Isopropanol (IPA)	**43.9**	41	ppbv	40		110	70-130	3.40	30	
Methylene Chloride	**37.5**	14	ppbv	40		93.6	70-130	15.2	30	
4-Methyl-2-pentanone (MIBK)	**50.9**	12	ppbv	40		127	70-130	1.77	30	
Styrene	**41.1**	2.3	ppbv	40		103	70-130	7.33	30	
1,1,2,2-Tetrachloroethane	**30.9**	7.3	ppbv	40		77.2	70-130	1.70	30	
Tetrachloroethylene (PCE)	**45.1**	2.0	ppbv	40		113	70-130	12.3	30	
Toluene	**44.9**	13	ppbv	40		112	70-130	10.6	30	
1,2,4-Trichlorobenzene	**33.5**	2.7	ppbv	40		83.6	70-130	4.93	30	
1,1,2-Trichloroethane	**45.2**	3.7	ppbv	40		113	70-130	9.60	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
LCS Dup (B9E0319-BSD1) Continued				Prepared & Analyzed: 05/04/19						
1,1,1-Trichloroethane	**45.7**	3.7	ppbv	40		114	70-130	10.3	30	
Trichloroethylene (TCE)	**42.5**	2.0	ppbv	40		106	70-130	12.7	30	
Trichlorofluoromethane (R11)	**45.3**	8.9	ppbv	40		113	70-130	5.59	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**46.3**	6.5	ppbv	40		116	70-130	11.7	30	
1,3,5-Trimethylbenzene	**43.1**	2.0	ppbv	40		108	70-130	11.0	30	
1,2,4-Trimethylbenzene	**41.1**	2.0	ppbv	40		103	70-130	9.77	30	
Vinyl acetate	**41.7**	2.8	ppbv	40		104	70-130	9.07	30	
Vinyl chloride	**45.7**	3.9	ppbv	40		114	70-130	10.2	30	
o-Xylene	**39.8**	2.3	ppbv	40		99.6	70-130	9.74	30	
m,p-Xylenes	**75.6**	2.3	ppbv	80		94.5	70-130	4.97	30	
1,2,3-Trichloropropane	**41.6**	2.0	ppbv	40		104	70-130	9.44	30	
Surrogate: 4-Bromofluorobenzene	*20.9*		*ppbv*	*20*		*105*	*70-130*			
Duplicate (B9E0319-DUP1)				**Source: 9D25008-03** Prepared & Analyzed: 05/03/19						
Acetone	**<21**	21	ppbv						30	
Benzene	**<3.0**	3.0	ppbv						30	
Benzyl chloride	**<9.7**	9.7	ppbv						30	
Bromodichloromethane	**<7.5**	7.5	ppbv						30	
Bromoform	**<4.8**	4.8	ppbv						30	
Bromomethane	**<2.6**	2.6	ppbv						30	
2-Butanone (MEK)	**<17**	17	ppbv						30	
Carbon Disulfide	**<16**	16	ppbv						30	
Carbon Tetrachloride	**<2.1**	2.1	ppbv						30	
Chlorobenzene	**<2.2**	2.2	ppbv						30	
Chloroethane	**<3.8**	3.8	ppbv						30	
Chloroform	**<2.0**	2.0	ppbv						30	
Chloromethane	**<4.8**	4.8	ppbv						30	
Dibromochloromethane	**<2.3**	2.3	ppbv						30	
1,2-Dibromoethane (EDB)	**<2.6**	2.6	ppbv						30	
1,2-Dichlorobenzene	**<3.3**	3.3	ppbv						30	
1,3-Dichlorobenzene	**<3.3**	3.3	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
Duplicate (B9E0319-DUP1) Continued	**Source: 9D25008-03**	Prepared & Analyzed: 05/03/19								
1,4-Dichlorobenzene	**<3.3**	3.3	ppbv						30	
Dichlorodifluoromethane (R12)	**<10**	10	ppbv						30	
1,1-Dichloroethane	**<2.0**	2.0	ppbv						30	
1,2-Dichloroethane (EDC)	**<2.5**	2.5	ppbv						30	
cis-1,2-Dichloroethylene	**<2.0**	2.0	ppbv						30	
1,1-Dichloroethylene	**<2.0**	2.0	ppbv						30	
trans-1,2-Dichloroethylene	**<2.0**	2.0	ppbv						30	
1,2-Dichloropropane	**<2.2**	2.2	ppbv						30	
trans-1,3-Dichloropropylene	**<2.2**	2.2	ppbv						30	
cis-1,3-Dichloropropylene	**<2.2**	2.2	ppbv						30	
Dichlorotetrafluoroethane	**<7.2**	7.2	ppbv						30	
1,4-Dioxane	**<2.8**	2.8	ppbv						30	
Ethylbenzene	**<2.3**	2.3	ppbv						30	
4-Ethyltoluene	**<2.0**	2.0	ppbv						30	
Hexachlorobutadiene	**<4.7**	4.7	ppbv						30	
2-Hexanone (MBK)	**<12**	12	ppbv						30	
Isopropanol (IPA)	**<41**	41	ppbv						30	
Methyl-tert-Butyl Ether (MTBE)	**<2.8**	2.8	ppbv						30	
Methylene Chloride	**<14**	14	ppbv						30	
4-Methyl-2-pentanone (MIBK)	**<12**	12	ppbv						30	
Styrene	**<2.3**	2.3	ppbv						30	
1,1,2,2-Tetrachloroethane	**<7.3**	7.3	ppbv						30	
Tetrachloroethylene (PCE)	**<2.0**	2.0	ppbv						30	
Toluene	**<13**	13	ppbv						30	
1,2,4-Trichlorobenzene	**<2.7**	2.7	ppbv						30	
1,1,2-Trichloroethane	**<3.7**	3.7	ppbv						30	
1,1,1-Trichloroethane	**<3.7**	3.7	ppbv						30	
Trichloroethylene (TCE)	**<2.0**	2.0	ppbv						30	
Trichlorofluoromethane (R11)	**<8.9**	8.9	ppbv						30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<6.5**	6.5	ppbv						30	
1,3,5-Trimethylbenzene	**<2.0**	2.0	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9E0319 - *** DEFAULT PREP ****										
Duplicate (B9E0319-DUP1) Continued	**Source: 9D25008-03**			Prepared & Analyzed: 05/03/19						
1,2,4-Trimethylbenzene	**<2.0**	2.0	ppbv						30	
Vinyl acetate	**<2.8**	2.8	ppbv						30	
Vinyl chloride	**<3.9**	3.9	ppbv						30	
o-Xylene	**<2.3**	2.3	ppbv						30	
m,p-Xylenes	**<2.3**	2.3	ppbv						30	
1,2,3-Trichloropropane	**<2.0**	2.0	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*20.2*		*ppbv*	*20*		*101*	*70-130*			
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9E0318 - *** DEFAULT PREP ****										
Blank (B9E0318-BLK1)				Prepared & Analyzed: 05/02/19						
TNMOC as Hexane	<1200	1200	ppbv							
Surrogate: 4-Bromofluorobenzene	*4.90*		*ppbv*	*5.0*		*98.0*	*70-130*			
LCS (B9E0318-BS1)				Prepared & Analyzed: 05/03/19						
GRO as Hexane	**194**	1200	ppbv	200		97.2	70-130		30	
Surrogate: 4-Bromofluorobenzene	*4.79*		*ppbv*	*5.0*		*95.8*	*70-130*			
LCS Dup (B9E0318-BSD1)				Prepared & Analyzed: 05/03/19						
GRO as Hexane	**197**	1200	ppbv	200		98.5	70-130	1.29	30	
Surrogate: 4-Bromofluorobenzene	*4.82*		*ppbv*	*5.0*		*96.4*	*70-130*			
*Batch B9E0626 - *** DEFAULT PREP ****										
Blank (B9E0626-BLK1)				Prepared & Analyzed: 05/03/19						
TNMOC as Hexane	<1200	1200	ppbv							
Surrogate: 4-Bromofluorobenzene	*4.98*		*ppbv*	*5.0*		*99.6*	*70-130*			
LCS (B9E0626-BS1)				Prepared & Analyzed: 05/04/19						
GRO as Hexane	**221**	1200	ppbv	200		110	70-130		30	
Surrogate: 4-Bromofluorobenzene	*4.91*		*ppbv*	*5.0*		*98.2*	*70-130*			
LCS Dup (B9E0626-BSD1)				Prepared & Analyzed: 05/04/19						
GRO as Hexane	**227**	1200	ppbv	200		113	70-130	2.75	30	
Surrogate: 4-Bromofluorobenzene	*5.12*		*ppbv*	*5.0*		*102*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874350
Date Received: 05/01/19
Date Reported: 05/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9E0626 - *** DEFAULT PREP ****										
Duplicate (B9E0626-DUP1)			**Source: 9D25008-03**	Prepared & Analyzed: 05/03/19						
TNMOC as Hexane	**<1200**	1200	ppbv						30	
GRO as Hexane	**<1200**	1200	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*4.99*		*ppbv*	*5.0*		*99.8*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874350
Project No:	130072-024	**Date Received:**	05/01/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	05/10/19

Special Notes

[1] = ****** : Exceeds upper control limit.

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 18039
70047569
Page 1 of 1

Client: Haley & Aldrich ; JHA Environmental	Project Name / No.: Cooper Drum	Sampler's Name: Alex Felix
Project Manager: Chris Tristao / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature: Alex Felix
Phone: 714 371-1820 / 714-392-5970	City: South Gate	P.O. No.:
Fax:	State & Zip: CA	Quote No.:

TAT Turnaround Codes **

(1) = Same Day Rush
(2) = 24 Hour Rush
(3) = 48 Hour Rush
(4) = 72 Hour Rush
(5) = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15	Special Instructions
						Please enter the TAT Turnaround Codes ** below		
SVE-VGACE-050119-0001	9E01023-01	5-1-19	1015	AIR	1	X	X	
SVE-VGACM-050119-0001	-02	5-1-19	1020	AIR	1	X	X	
SVE-VGACI-050119-0001	-03	5-1-19	1025	AIR	1	X	X	

'19 MAY 1 PM

For Laboratory Use

PRIORITY
Rush ___ Hrs SH ✓
Date 5/2/19 Time 0630 Sign

A.A. Project No.: A874350 / 9E01023

	Date	Time	
Relinquished by: Alex Felix	5-1-19	1215	Received by:
Relinquished by:	5.1.19	17:20	Received by:
Relinquished by:	Date	Time	Received by:

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 10, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874351 / 9E29007

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 05/29/19 11:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-052919-0001	9E29007-01	Water	5	05/29/19 07:45	05/29/19 11:17
TOTAL-EFF-052919-0001	9E29007-02	Water	5	05/29/19 08:00	05/29/19 11:17
8270CM 1,4-Dioxane Only					
EW-INF-052919-0001	9E29007-01	Water	5	05/29/19 07:45	05/29/19 11:17
TOTAL-EFF-052919-0001	9E29007-02	Water	5	05/29/19 08:00	05/29/19 11:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9E29007-01	EW-INF-052919-0001	05/29/19	05/30/19	05/30/19	1	**9.0**	ug/L	1	2
9E29007-02	TOTAL-EFF-052919-0001	05/29/19	05/30/19	05/30/19	1	**9.6**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874351
Project No:	130072-024	**Date Received:**	05/29/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/10/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	05/29/19	05/29/19		
Date Prepared:	06/05/19	06/05/19		
Date Analyzed:	06/05/19	06/05/19		
AA ID No:	9E29007-01	9E29007-02		
Client ID No:	EW-INF-052919-0001	TOTAL-EFF-052919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<2.0	<2.0	2.0	50
Benzene	**0.86**	**0.68**	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	20
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19
Units: ug/L

Date Sampled:	05/29/19	05/29/19		
Date Prepared:	06/05/19	06/05/19		
Date Analyzed:	06/05/19	06/05/19		
AA ID No:	9E29007-01	9E29007-02		
Client ID No:	EW-INF-052919-0001	TOTAL-EFF-052919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50
1,1-Dichloroethane	**1.8**	**1.6**	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	<0.30	0.30	0.50
cis-1,2-Dichloroethylene	**26**	**24**	0.20	0.50
1,1-Dichloroethylene	**0.94**	**0.67**	0.30	0.50
trans-1,2-Dichloroethylene	**4.6**	**3.4**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	<0.50	<0.50	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	20
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	20
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19
Units: ug/L

Date Sampled:	05/29/19	05/29/19		
Date Prepared:	06/05/19	06/05/19		
Date Analyzed:	06/05/19	06/05/19		
AA ID No:	9E29007-01	9E29007-02		
Client ID No:	EW-INF-052919-0001	TOTAL-EFF-052919-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.4**	**1.2**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	**1.7**	**1.1**	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0

Surrogates			**%REC Limits**
4-Bromofluorobenzene	99%	98%	80-129
Dibromofluoromethane	84%	86%	68-137
Toluene-d8	114%	114%	83-134

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9E3003 - EPA 3510C_MS										
Blank (B9E3003-BLK1)				Prepared & Analyzed: 05/30/19						
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9E3003-BS1)				Prepared & Analyzed: 05/30/19						
1,4-Dioxane	**8.99**	1.0	ug/L	10		89.9	75-125			
LCS Dup (B9E3003-BSD1)				Prepared & Analyzed: 05/30/19						
1,4-Dioxane	**10.6**	1.0	ug/L	10		106	75-125	16.0	30	
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
Blank (B9F0522-BLK1)				Prepared & Analyzed: 06/05/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
Blank (B9F0522-BLK1) Continued				Prepared & Analyzed: 06/05/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
Blank (B9F0522-BLK1) Continued				Prepared & Analyzed: 06/05/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*47.0*		*ug/L*	*50*		*94.1*	*80-129*			
Surrogate: Dibromofluoromethane	*47.8*		*ug/L*	*50*		*95.6*	*68-137*			
Surrogate: Toluene-d8	*54.0*		*ug/L*	*50*		*108*	*83-134*			
LCS (B9F0522-BS1)				Prepared & Analyzed: 06/05/19						
Acetone	**17.7**	2.0	ug/L	20		88.4	27-123			J
Benzene	**15.1**	0.20	ug/L	20		75.3	60-134			
Bromobenzene	**19.4**	0.30	ug/L	20		96.9	93-119			
Bromochloromethane	**16.6**	0.50	ug/L	20		83.2	78-121			
Bromodichloromethane	**16.6**	0.20	ug/L	20		83.2	74-135			
Bromoform	**15.4**	0.50	ug/L	20		77.2	68-132			
Bromomethane	**40.1**	0.50	ug/L	20		200	58-142			**
2-Butanone (MEK)	**15.0**	2.0	ug/L	20		75.0	62-138			J
tert-Butylbenzene	**21.4**	0.20	ug/L	20		107	86-144			
n-Butylbenzene	**23.6**	0.20	ug/L	20		118	88-136			
sec-Butylbenzene	**22.4**	0.20	ug/L	20		112	84-142			
Carbon Disulfide	**20.5**	0.30	ug/L	20		102	17-177			
Carbon Tetrachloride	**19.6**	0.30	ug/L	20		98.1	66-155			
Chlorobenzene	**19.2**	0.30	ug/L	20		95.8	86-122			
Chloroethane	**31.4**	0.50	ug/L	20		157	45-166			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
LCS (B9F0522-BS1) Continued				Prepared & Analyzed: 06/05/19						
Chloroform	**19.4**	0.30	ug/L	20		96.8	71-131			
Chloromethane	**21.0**	0.40	ug/L	20		105	48-152			
4-Chlorotoluene	**21.1**	0.20	ug/L	20		106	94-121			
2-Chlorotoluene	**20.2**	0.30	ug/L	20		101	95-123			
1,2-Dibromo-3-chloropropane	**13.9**	0.40	ug/L	20		69.4	53-145			
Dibromochloromethane	**17.0**	0.30	ug/L	20		85.0	72-133			
1,2-Dibromoethane (EDB)	**15.6**	0.30	ug/L	20		78.0	79-120			
Dibromomethane	**15.4**	0.40	ug/L	20		77.2	68-124			
1,3-Dichlorobenzene	**21.0**	0.10	ug/L	20		105	94-115			
1,4-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	95-116			
1,2-Dichlorobenzene	**20.7**	0.30	ug/L	20		103	95-120			
Dichlorodifluoromethane (R12)	**22.3**	0.50	ug/L	20		111	16-148			
1,1-Dichloroethane	**18.9**	0.20	ug/L	20		94.5	67-120			
1,2-Dichloroethane (EDC)	**17.0**	0.30	ug/L	20		85.2	57-156			
cis-1,2-Dichloroethylene	**18.6**	0.20	ug/L	20		93.2	70-124			
1,1-Dichloroethylene	**21.6**	0.30	ug/L	20		108	50-149			
trans-1,2-Dichloroethylene	**20.0**	0.40	ug/L	20		99.8	66-126			
1,3-Dichloropropane	**15.7**	0.10	ug/L	20		78.6	79-113			
1,2-Dichloropropane	**17.7**	0.50	ug/L	20		88.4	53-139			
2,2-Dichloropropane	**17.1**	0.40	ug/L	20		85.4	44-162			
trans-1,3-Dichloropropylene	**15.6**	0.20	ug/L	20		77.8	76-121			
1,1-Dichloropropylene	**18.3**	0.20	ug/L	20		91.4	84-124			
cis-1,3-Dichloropropylene	**16.4**	0.20	ug/L	20		82.2	67-127			
Ethylbenzene	**20.1**	0.20	ug/L	20		100	86-124			
Hexachlorobutadiene	**22.5**	0.40	ug/L	20		112	76-140			
2-Hexanone (MBK)	**12.0**	2.0	ug/L	20		59.8	52-123			J
Isopropylbenzene	**22.0**	0.20	ug/L	20		110	95-128			
4-Isopropyltoluene	**22.1**	0.20	ug/L	20		111	70-130			
Methyl-tert-Butyl Ether (MTBE)	**33.0**	1.7	ug/L	40		82.6	58-144			
Methylene Chloride	**20.7**	5.0	ug/L	20		104	50-135			
4-Methyl-2-pentanone (MIBK)	**8.99**	0.70	ug/L	20		45.0	49-139			***, J
Naphthalene	**19.2**	0.20	ug/L	20		95.8	74-128			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
LCS (B9F0522-BS1) Continued				Prepared & Analyzed: 06/05/19						
n-Propylbenzene	**22.2**	0.20	ug/L	20		111	96-124			
Styrene	**17.8**	0.20	ug/L	20		88.8	84-123			
1,1,1,2-Tetrachloroethane	**18.1**	0.40	ug/L	20		90.5	70-130			
1,1,2,2-Tetrachloroethane	**14.6**	0.30	ug/L	20		72.8	58-126			
Tetrachloroethylene (PCE)	**19.5**	0.50	ug/L	20		97.6	84-125			
Toluene	**18.6**	0.30	ug/L	20		93.0	83-118			
1,2,3-Trichlorobenzene	**20.4**	0.20	ug/L	20		102	77-134			
1,1,2-Trichloroethane	**16.9**	0.30	ug/L	20		84.3	75-115			
1,1,1-Trichloroethane	**18.8**	0.30	ug/L	20		94.1	66-158			
Trichloroethylene (TCE)	**17.2**	0.20	ug/L	20		85.9	82-128			
Trichlorofluoromethane (R11)	**25.6**	0.20	ug/L	20		128	65-137			
1,2,3-Trichloropropane	**13.8**	0.30	ug/L	20		69.0	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**23.2**	0.30	ug/L	20		116	62-130			
1,2,4-Trimethylbenzene	**21.2**	0.30	ug/L	20		106	70-130			
1,3,5-Trimethylbenzene	**21.4**	0.20	ug/L	20		107	89-138			
Vinyl chloride	**25.1**	0.50	ug/L	20		125	51-151			
o-Xylene	**18.0**	0.30	ug/L	20		90.2	89-120			
m,p-Xylenes	**38.1**	0.40	ug/L	40		95.3	90-121			
Surrogate: 4-Bromofluorobenzene	*44.2*		*ug/L*	*50*		*88.5*	*80-129*			
Surrogate: Dibromofluoromethane	*46.2*		*ug/L*	*50*		*92.4*	*68-137*			
Surrogate: Toluene-d8	*53.5*		*ug/L*	*50*		*107*	*83-134*			
LCS Dup (B9F0522-BSD1)				Prepared & Analyzed: 06/05/19						
Acetone	**16.1**	2.0	ug/L	20		80.6	27-123	9.35	30	J
Benzene	**14.9**	0.20	ug/L	20		74.6	60-134	0.867	30	
Bromobenzene	**19.2**	0.30	ug/L	20		96.0	93-119	0.933	30	
Bromochloromethane	**16.7**	0.50	ug/L	20		83.6	78-121	0.479	30	
Bromodichloromethane	**16.6**	0.20	ug/L	20		82.8	74-135	0.361	30	
Bromoform	**15.3**	0.50	ug/L	20		76.6	68-132	0.780	30	
Bromomethane	**38.4**	0.50	ug/L	20		192	58-142	4.28	30	**
2-Butanone (MEK)	**18.1**	2.0	ug/L	20		90.6	62-138	18.8	30	J

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
LCS Dup (B9F0522-BSD1) Continued				Prepared & Analyzed: 06/05/19						
tert-Butylbenzene	**21.8**	0.20	ug/L	20		109	86-144	1.39	30	
n-Butylbenzene	**23.9**	0.20	ug/L	20		119	88-136	1.01	30	
sec-Butylbenzene	**22.6**	0.20	ug/L	20		113	84-142	1.07	30	
Carbon Disulfide	**20.5**	0.30	ug/L	20		103	17-177	0.195	30	
Carbon Tetrachloride	**19.5**	0.30	ug/L	20		97.6	66-155	0.460	30	
Chlorobenzene	**19.5**	0.30	ug/L	20		97.7	86-122	1.96	30	
Chloroethane	**27.8**	0.50	ug/L	20		139	45-166	12.4	30	
Chloroform	**19.5**	0.30	ug/L	20		97.4	71-131	0.669	30	
Chloromethane	**21.4**	0.40	ug/L	20		107	48-152	2.31	30	
4-Chlorotoluene	**21.0**	0.20	ug/L	20		105	94-121	0.713	30	
2-Chlorotoluene	**20.3**	0.30	ug/L	20		101	95-123	0.247	30	
1,2-Dibromo-3-chloropropane	**13.1**	0.40	ug/L	20		65.7	53-145	5.55	30	
Dibromochloromethane	**17.1**	0.30	ug/L	20		85.4	72-133	0.469	30	
1,2-Dibromoethane (EDB)	**16.0**	0.30	ug/L	20		80.0	79-120	2.66	30	
Dibromomethane	**15.0**	0.40	ug/L	20		74.9	68-124	3.02	30	
1,3-Dichlorobenzene	**21.1**	0.10	ug/L	20		106	94-115	0.332	30	
1,4-Dichlorobenzene	**20.5**	0.30	ug/L	20		102	95-116	1.28	30	
1,2-Dichlorobenzene	**20.6**	0.30	ug/L	20		103	95-120	0.0484	30	
Dichlorodifluoromethane (R12)	**21.2**	0.50	ug/L	20		106	16-148	5.07	30	
1,1-Dichloroethane	**19.6**	0.20	ug/L	20		97.8	67-120	3.38	30	
1,2-Dichloroethane (EDC)	**16.7**	0.30	ug/L	20		83.4	57-156	2.02	30	
cis-1,2-Dichloroethylene	**18.6**	0.20	ug/L	20		93.2	70-124	0.0537	30	
1,1-Dichloroethylene	**21.2**	0.30	ug/L	20		106	50-149	2.20	30	
trans-1,2-Dichloroethylene	**19.9**	0.40	ug/L	20		99.6	66-126	0.251	30	
1,3-Dichloropropane	**15.8**	0.10	ug/L	20		79.0	79-113	0.635	30	
1,2-Dichloropropane	**17.8**	0.50	ug/L	20		88.8	53-139	0.452	30	
2,2-Dichloropropane	**17.5**	0.40	ug/L	20		87.4	44-162	2.37	30	
trans-1,3-Dichloropropylene	**15.7**	0.20	ug/L	20		78.4	76-121	0.768	30	
1,1-Dichloropropylene	**18.1**	0.20	ug/L	20		90.4	84-124	1.10	30	
cis-1,3-Dichloropropylene	**16.7**	0.20	ug/L	20		83.6	67-127	1.75	30	
Ethylbenzene	**20.6**	0.20	ug/L	20		103	86-124	2.41	30	
Hexachlorobutadiene	**22.8**	0.40	ug/L	20		114	76-140	1.41	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874351
Date Received: 05/29/19
Date Reported: 06/10/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F0522 - Default Prep VOC										
LCS Dup (B9F0522-BSD1) Continued				Prepared & Analyzed: 06/05/19						
2-Hexanone (MBK)	**11.0**	2.0	ug/L	20		55.2	52-123	7.99	30	J
Isopropylbenzene	**22.3**	0.20	ug/L	20		112	95-128	1.40	30	
4-Isopropyltoluene	**22.5**	0.20	ug/L	20		112	70-130	1.70	30	
Methyl-tert-Butyl Ether (MTBE)	**33.0**	1.7	ug/L	40		82.5	58-144	0.151	30	
Methylene Chloride	**20.2**	5.0	ug/L	20		101	50-135	2.59	30	
4-Methyl-2-pentanone (MIBK)	**8.12**	0.70	ug/L	20		40.6	49-139	10.2	30	***, J
Naphthalene	**15.6**	0.20	ug/L	20		77.8	74-128	20.7	30	
n-Propylbenzene	**22.4**	0.20	ug/L	20		112	96-124	0.761	30	
Styrene	**17.8**	0.20	ug/L	20		89.0	84-123	0.281	30	
1,1,1,2-Tetrachloroethane	**18.4**	0.40	ug/L	20		91.8	70-130	1.43	30	
1,1,2,2-Tetrachloroethane	**14.6**	0.30	ug/L	20		72.9	58-126	0.206	30	
Tetrachloroethylene (PCE)	**20.2**	0.50	ug/L	20		101	84-125	3.37	30	
Toluene	**18.8**	0.30	ug/L	20		94.0	83-118	1.12	30	
1,2,3-Trichlorobenzene	**19.0**	0.20	ug/L	20		95.1	77-134	7.10	30	
1,1,2-Trichloroethane	**16.6**	0.30	ug/L	20		82.8	75-115	1.86	30	
1,1,1-Trichloroethane	**18.9**	0.30	ug/L	20		94.4	66-158	0.265	30	
Trichloroethylene (TCE)	**17.1**	0.20	ug/L	20		85.4	82-128	0.584	30	
Trichlorofluoromethane (R11)	**23.0**	0.20	ug/L	20		115	65-137	10.6	30	
1,2,3-Trichloropropane	**13.7**	0.30	ug/L	20		68.6	68-123	0.509	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**22.7**	0.30	ug/L	20		114	62-130	2.26	30	
1,2,4-Trimethylbenzene	**21.2**	0.30	ug/L	20		106	70-130	0.283	30	
1,3,5-Trimethylbenzene	**21.6**	0.20	ug/L	20		108	89-138	1.21	30	
Vinyl chloride	**24.8**	0.50	ug/L	20		124	51-151	1.20	30	
o-Xylene	**18.4**	0.30	ug/L	20		92.2	89-120	2.30	30	
m,p-Xylenes	**39.3**	0.40	ug/L	40		98.2	90-121	2.97	30	
Surrogate: 4-Bromofluorobenzene	*45.1*		*ug/L*	*50*		*90.2*	*80-129*			
Surrogate: Dibromofluoromethane	*46.2*		*ug/L*	*50*		*92.3*	*68-137*			
Surrogate: Toluene-d8	*54.3*		*ug/L*	*50*		*109*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874351
Project No:	130072-024	**Date Received:**	05/29/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/10/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = ******* : Exceeds lower control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No. 18211

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 Fax: 818-998-7258

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum**	**Sampler's Name: ~~Alex Felix~~ Bryan Rodriguez**
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:** Bryan Rodriguez
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane by 8270C										Special Instructions
						Please enter the TAT Turnaround Codes ** below											
~~EW-INF-052819-0001~~		~~5/29/19 5/28/2019~~	~~0745~~	~~Water~~	~~5~~	~~X~~	~~X~~										
~~TOTAL-EFF-052819-0001~~		~~5/29/19 5/28/2019~~	~~0800~~	~~Water~~	~~5~~	~~X~~	~~X~~										
EW-INF-052919-0001	9E29007 -01	5/29/2019	0745	Water	5	X	X										
TOTAL-EFF-052919-0001	-02	5/29/2019	0800	Water	5	X	X										

19MAY29 11:17AM

For Laboratory Use

REVIEWED
Date 5/29/19 Time 1330
TAT N Days Sign:

A.A. Project No.: A874351 / 9E29007

Relinquished by	Date	Time	Received by
Bryan Rodriguez	052919	1000	
Relinquished by	Date	Time	Received by
	5/29/19	11:17	
Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project.
Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 26, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874353 / 9F12012

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/12/19 16:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
QC01-061119	9F12012-01	Water	5	06/11/19 07:00	06/12/19 16:17
MW-23-061119	9F12012-02	Water	5	06/11/19 09:34	06/12/19 16:17
MW-23B-061119	9F12012-03	Water	5	06/11/19 10:12	06/12/19 16:17
MW-20B-061119	9F12012-04	Water	5	06/11/19 12:08	06/12/19 16:17
MW-63-061119	9F12012-05	Water	5	06/11/19 14:16	06/12/19 16:17
QC03-061119	9F12012-06	Water	5	06/11/19 14:30	06/12/19 16:17
QC02-061119	9F12012-07	Water	5	06/11/19 14:40	06/12/19 16:17
MW-37-061119	9F12012-08	Water	5	06/11/19 09:06	06/12/19 16:17
MW-32-061119	9F12012-09	Water	5	06/11/19 09:42	06/12/19 16:17
MW-28-061119	9F12012-10	Water	5	06/11/19 10:31	06/12/19 16:17
QC05-061119	9F12012-11	Water	5	06/11/19 10:41	06/12/19 16:17
MW-29-061119	9F12012-12	Water	5	06/11/19 11:06	06/12/19 16:17
MW-41-061119	9F12012-13	Water	5	06/11/19 11:54	06/12/19 16:17
MW-64B-061119	9F12012-14	Water	5	06/11/19 13:46	06/12/19 16:17
MW-64A-061119	9F12012-15	Water	5	06/11/19 14:22	06/12/19 16:17
QC04-061119	9F12012-16	Water	5	06/11/19 14:40	06/12/19 16:17
8270CM 1,4-Dioxane Only					
MW-23-061119	9F12012-02	Water	5	06/11/19 09:34	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
MW-23B-061119	9F12012-03	Water	5	06/11/19 10:12	06/12/19 16:17
MW-20B-061119	9F12012-04	Water	5	06/11/19 12:08	06/12/19 16:17
MW-63-061119	9F12012-05	Water	5	06/11/19 14:16	06/12/19 16:17
QC03-061119	9F12012-06	Water	5	06/11/19 14:30	06/12/19 16:17
QC02-061119	9F12012-07	Water	5	06/11/19 14:40	06/12/19 16:17
MW-37-061119	9F12012-08	Water	5	06/11/19 09:06	06/12/19 16:17
MW-32-061119	9F12012-09	Water	5	06/11/19 09:42	06/12/19 16:17
MW-28-061119	9F12012-10	Water	5	06/11/19 10:31	06/12/19 16:17
QC05-061119	9F12012-11	Water	5	06/11/19 10:41	06/12/19 16:17
MW-29-061119	9F12012-12	Water	5	06/11/19 11:06	06/12/19 16:17
MW-41-061119	9F12012-13	Water	5	06/11/19 11:54	06/12/19 16:17
MW-64B-061119	9F12012-14	Water	5	06/11/19 13:46	06/12/19 16:17
MW-64A-061119	9F12012-15	Water	5	06/11/19 14:22	06/12/19 16:17
QC04-061119	9F12012-16	Water	5	06/11/19 14:40	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F12012-02	MW-23-061119	06/11/19	06/18/19	06/18/19	1	**5.6**	ug/L	1	2
9F12012-03	MW-23B-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2
9F12012-04	MW-20B-061119	06/11/19	06/18/19	06/18/19	2	**20**	ug/L	1	2
9F12012-05	MW-63-061119	06/11/19	06/18/19	06/18/19	1	**14**	ug/L	1	2
9F12012-06	QC03-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2
9F12012-07	QC02-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2
9F12012-08	MW-37-061119	06/11/19	06/18/19	06/18/19	1	**10**	ug/L	1	2
9F12012-09	MW-32-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2
9F12012-10	MW-28-061119	06/11/19	06/18/19	06/18/19	1	**1.4**J	ug/L	1	2
9F12012-11	QC05-061119	06/11/19	06/18/19	06/18/19	1	**1.7**J	ug/L	1	2
9F12012-12	MW-29-061119	06/11/19	06/18/19	06/18/19	1	**2.4**	ug/L	1	2
9F12012-13	MW-41-061119	06/11/19	06/18/19	06/18/19	1	**3.2**	ug/L	1	2
9F12012-14	MW-64B-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2
9F12012-15	MW-64A-061119	06/11/19	06/18/19	06/18/19	1	**6.4**	ug/L	1	2
9F12012-16	QC04-061119	06/11/19	06/18/19	06/18/19	1	<1.0	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-01	9F12012-02	9F12012-03	9F12012-04		
Client ID No:	QC01-061119	MW-23-061119	MW-23B-061119	MW-20B-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	**10 J**	**14 J**	**16 J**	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-01	9F12012-02	9F12012-03	9F12012-04		
Client ID No:	QC01-061119	MW-23-061119	MW-23B-061119	MW-20B-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	**1.3**	<0.20	**4.2**	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	<0.20	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**6.2**	**0.42 J**	**26**	0.30	0.50
1,1-Dichloroethylene	<0.40	**2.3**	<0.40	**1.6**	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	<0.30	**1.7**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-01	9F12012-02	9F12012-03	9F12012-04		
Client ID No:	QC01-061119	MW-23-061119	MW-23B-061119	MW-20B-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**14**	**0.39 J**	**1.7**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	**4.1**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	97%	96%	96%	97%		80-129
Dibromofluoromethane	104%	101%	103%	103%		68-137
Toluene-d8	95%	95%	95%	95%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-05	9F12012-06	9F12012-07	9F12012-08		
Client ID No:	MW-63-061119	QC03-061119	QC02-061119	MW-37-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**9.2 J**	**12 J**	**11 J**	**7.9 J**	7.7	50
Benzene	**4.7**	<0.40	<0.40	**0.76**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-05	9F12012-06	9F12012-07	9F12012-08		
Client ID No:	MW-63-061119	QC03-061119	QC02-061119	MW-37-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	**1.6**	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	<0.20	**2.4**	0.20	0.50
cis-1,2-Dichloroethylene	**4.0**	<0.30	<0.30	**99**	0.30	0.50
1,1-Dichloroethylene	**4.3**	<0.40	<0.40	**0.96**	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	<0.30	**9.0**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874353
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/26/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-05	9F12012-06	9F12012-07	9F12012-08		
Client ID No:	MW-63-061119	QC03-061119	QC02-061119	MW-37-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.54**	<0.30	<0.30	**2.2**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	**3.3**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	96%	99%	97%	97%		80-129
Dibromofluoromethane	102%	104%	104%	101%		68-137
Toluene-d8	96%	94%	95%	95%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-09	9F12012-10	9F12012-11	9F12012-12		
Client ID No:	MW-32-061119	MW-28-061119	QC05-061119	MW-29-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	**9.2 J**	**9.8 J**	**11 J**	7.7	50
Benzene	<0.40	**0.45 J**	**0.48 J**	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-09	9F12012-10	9F12012-11	9F12012-12		
Client ID No:	MW-32-061119	MW-28-061119	QC05-061119	MW-29-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	**1.9**	**1.9**	**1.2**	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**16**	**17**	**21**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	**2.0**	**2.1**	**5.5**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-09	9F12012-10	9F12012-11	9F12012-12		
Client ID No:	MW-32-061119	MW-28-061119	QC05-061119	MW-29-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**0.92**	**1.0**	**0.95**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	**4.0**	**4.3**	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	98%	98%	97%	96%		80-129
Dibromofluoromethane	104%	99%	102%	104%		68-137
Toluene-d8	97%	97%	98%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-13	9F12012-14	9F12012-15	9F12012-16		
Client ID No:	MW-41-061119	MW-64B-061119	MW-64A-061119	QC04-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	200	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	**12 J**	**3500 J**	**16 J**	7.7	50
Benzene	<0.40	<0.40	<80	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<80	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<40	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<80	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<80	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<60	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<1700	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<40	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<40	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<40	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<40	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<60	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<80	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<80	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<60	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<80	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<40	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<40	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<80	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<80	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<80	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<80	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<80	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<60	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<60	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<80	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874353
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/26/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-13	9F12012-14	9F12012-15	9F12012-16		
Client ID No:	MW-41-061119	MW-64B-061119	MW-64A-061119	QC04-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	200	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<40	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**7.0**	**2.1**	<40	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**33**	**3.1**	<60	<0.30	0.30	0.50
1,1-Dichloroethylene	**0.40 J**	<0.40	<80	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	**1.1**	<0.30	<60	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<80	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<60	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<60	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<60	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<60	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<80	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<60	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<100	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<1700	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<60	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<60	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<280	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<880	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<2000	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<80	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<40	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<40	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<60	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<80	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<100	<0.50	0.50	0.50
Toluene	<0.20	<0.20	**8100**	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<60	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874353
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/26/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/11/19	06/11/19	06/11/19	06/11/19		
Date Prepared:	06/19/19	06/19/19	06/19/19	06/19/19		
Date Analyzed:	06/19/19	06/19/19	06/19/19	06/19/19		
AA ID No:	9F12012-13	9F12012-14	9F12012-15	9F12012-16		
Client ID No:	MW-41-061119	MW-64B-061119	MW-64A-061119	QC04-061119		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	200	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<100	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<60	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<60	<0.30	0.30	0.50
Trichloroethylene (TCE)	**2.3**	<0.30	<60	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<80	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<40	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<60	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<60	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<40	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<80	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<60	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<120	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	96%	99%	100%	99%		80-129
Dibromofluoromethane	101%	98%	99%	104%		68-137
Toluene-d8	96%	98%	99%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F1710 - EPA 3510C_MS										
Blank (B9F1710-BLK1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F1710-BS1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**8.90**	1.0	ug/L	10		89.0	75-125			
LCS Dup (B9F1710-BSD1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**10.0**	1.0	ug/L	10		100	75-125	12.1	30	
Matrix Spike (B9F1710-MS1)		**Source: 9F12012-04**		Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**29.1**	1.0	ug/L	10	20.0	90.6	70-130			
Matrix Spike Dup (B9F1710-MSD1)		**Source: 9F12012-04**		Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**31.1**	1.0	ug/L	10	20.0	111	70-130	6.78	30	
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Blank (B9F1914-BLK1)				Prepared & Analyzed: 06/19/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Blank (B9F1914-BLK1) Continued				Prepared & Analyzed: 06/19/19						
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Blank (B9F1914-BLK1) Continued				Prepared & Analyzed: 06/19/19						
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.1*	*80-129*			
Surrogate: Dibromofluoromethane	*49.9*		*ug/L*	*50*		*99.8*	*68-137*			
Surrogate: Toluene-d8	*47.2*		*ug/L*	*50*		*94.5*	*83-134*			
LCS (B9F1914-BS1)				Prepared & Analyzed: 06/19/19						
Acetone	**16.3**	7.7	ug/L	20		81.3	27-123			J
Benzene	**17.2**	0.40	ug/L	20		85.9	60-134			
Bromobenzene	**20.6**	0.40	ug/L	20		103	70-130			
Bromochloromethane	**20.4**	0.20	ug/L	20		102	78-121			
Bromodichloromethane	**19.9**	0.40	ug/L	20		99.4	74-135			
Bromoform	**21.1**	0.40	ug/L	20		105	68-132			
Bromomethane	**25.0**	0.30	ug/L	20		125	58-142			
2-Butanone (MEK)	**18.3**	8.6	ug/L	20		91.6	62-138			J
tert-Butylbenzene	**20.4**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**20.4**	0.20	ug/L	20		102	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
LCS (B9F1914-BS1) Continued				Prepared & Analyzed: 06/19/19						
sec-Butylbenzene	**20.4**	0.20	ug/L	20		102	84-142			
Carbon Disulfide	**20.0**	0.20	ug/L	20		100	17-177			
Carbon Tetrachloride	**20.0**	0.30	ug/L	20		100	66-155			
Chlorobenzene	**20.3**	0.40	ug/L	20		101	70-130			
Chloroethane	**40.4**	0.40	ug/L	20		202	45-166			**
Chloroform	**19.4**	0.30	ug/L	20		97.2	71-131			
Chloromethane	**18.1**	0.40	ug/L	20		90.3	48-152			
4-Chlorotoluene	**20.6**	0.20	ug/L	20		103	70-130			
2-Chlorotoluene	**20.2**	0.20	ug/L	20		101	70-130			
1,2-Dibromo-3-chloropropane	**22.7**	0.40	ug/L	20		114	53-145			
Dibromochloromethane	**21.4**	0.40	ug/L	20		107	72-133			
1,2-Dibromoethane (EDB)	**22.2**	0.40	ug/L	20		111	79-120			
Dibromomethane	**19.4**	0.40	ug/L	20		96.8	68-124			
1,3-Dichlorobenzene	**19.9**	0.40	ug/L	20		99.7	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		99.2	70-130			
1,2-Dichlorobenzene	**20.8**	0.30	ug/L	20		104	70-130			
Dichlorodifluoromethane (R12)	**17.0**	0.40	ug/L	20		85.0	16-148			
1,1-Dichloroethane	**19.6**	0.20	ug/L	20		97.9	67-120			
1,2-Dichloroethane (EDC)	**20.7**	0.20	ug/L	20		104	57-156			
cis-1,2-Dichloroethylene	**20.3**	0.30	ug/L	20		101	70-124			
1,1-Dichloroethylene	**20.8**	0.40	ug/L	20		104	50-149			
trans-1,2-Dichloroethylene	**20.5**	0.30	ug/L	20		102	66-126			
1,3-Dichloropropane	**20.5**	0.40	ug/L	20		102	79-113			
1,2-Dichloropropane	**19.9**	0.30	ug/L	20		99.4	53-139			
2,2-Dichloropropane	**16.2**	0.30	ug/L	20		81.2	44-162			
trans-1,3-Dichloropropylene	**21.2**	0.30	ug/L	20		106	76-121			
1,1-Dichloropropylene	**19.9**	0.30	ug/L	20		99.7	84-124			
cis-1,3-Dichloropropylene	**20.8**	0.40	ug/L	20		104	67-127			
Ethylbenzene	**20.5**	0.30	ug/L	20		103	86-124			
Hexachlorobutadiene	**20.4**	0.50	ug/L	20		102	76-140			
2-Hexanone (MBK)	**20.6**	8.4	ug/L	20		103	52-123			
Isopropylbenzene	**20.7**	0.30	ug/L	20		104	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
LCS (B9F1914-BS1) Continued				Prepared & Analyzed: 06/19/19						
4-Isopropyltoluene	**20.4**	0.30	ug/L	20		102	70-130			
Methyl-tert-Butyl Ether (MTBE)	**40.6**	1.4	ug/L	40		102	58-144			
Methylene Chloride	**17.8**	4.4	ug/L	20		88.8	50-135			
4-Methyl-2-pentanone (MIBK)	**21.0**	9.8	ug/L	20		105	49-139			
Naphthalene	**21.6**	0.40	ug/L	20		108	74-128			
n-Propylbenzene	**20.6**	0.20	ug/L	20		103	70-130			
Styrene	**21.0**	0.20	ug/L	20		105	84-123			
1,1,1,2-Tetrachloroethane	**20.5**	0.30	ug/L	20		102	70-130			
1,1,2,2-Tetrachloroethane	**22.7**	0.40	ug/L	20		113	58-126			
Tetrachloroethylene (PCE)	**20.0**	0.50	ug/L	20		99.8	70-130			
Toluene	**20.1**	0.20	ug/L	20		100	83-118			
1,2,4-Trichlorobenzene	**20.4**	0.30	ug/L	20		102	84-128			
1,2,3-Trichlorobenzene	**20.0**	0.50	ug/L	20		100	77-134			
1,1,2-Trichloroethane	**21.3**	0.30	ug/L	20		107	75-115			
1,1,1-Trichloroethane	**20.0**	0.30	ug/L	20		100	66-158			
Trichloroethylene (TCE)	**20.2**	0.30	ug/L	20		101	82-128			
Trichlorofluoromethane (R11)	**16.2**	0.40	ug/L	20		81.2	65-137			
1,2,3-Trichloropropane	**21.7**	0.20	ug/L	20		108	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.5**	0.30	ug/L	20		82.6	62-130			
1,2,4-Trimethylbenzene	**20.4**	0.30	ug/L	20		102	70-130			
1,3,5-Trimethylbenzene	**20.8**	0.20	ug/L	20		104	70-130			
Vinyl chloride	**19.0**	0.40	ug/L	20		94.8	51-151			
o-Xylene	**21.0**	0.30	ug/L	20		105	70-130			
m,p-Xylenes	**41.8**	0.60	ug/L	40		104	70-130			
Surrogate: 4-Bromofluorobenzene	*46.8*		*ug/L*	*50*		*93.5*	*80-129*			
Surrogate: Dibromofluoromethane	*47.5*		*ug/L*	*50*		*95.0*	*68-137*			
Surrogate: Toluene-d8	*47.2*		*ug/L*	*50*		*94.5*	*83-134*			
LCS Dup (B9F1914-BSD1)				Prepared & Analyzed: 06/19/19						
Acetone	**15.3**	7.7	ug/L	20		76.7	27-123	5.82	30	J
Benzene	**18.4**	0.40	ug/L	20		91.8	60-134	6.59	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
LCS Dup (B9F1914-BSD1) Continued				Prepared & Analyzed: 06/19/19						
Bromobenzene	**19.9**	0.40	ug/L	20		99.6	70-130	3.36	30	
Bromochloromethane	**20.8**	0.20	ug/L	20		104	78-121	1.99	30	
Bromodichloromethane	**22.3**	0.40	ug/L	20		112	74-135	11.5	30	
Bromoform	**18.3**	0.40	ug/L	20		91.5	68-132	14.2	30	
Bromomethane	**16.8**	0.30	ug/L	20		84.0	58-142	39.3	30	AA-C1
2-Butanone (MEK)	**17.9**	8.6	ug/L	20		89.7	62-138	2.04	30	J
tert-Butylbenzene	**20.4**	0.20	ug/L	20		102	70-130	0.196	30	
n-Butylbenzene	**21.2**	0.20	ug/L	20		106	70-130	3.51	30	
sec-Butylbenzene	**20.8**	0.20	ug/L	20		104	84-142	1.94	30	
Carbon Disulfide	**21.4**	0.20	ug/L	20		107	17-177	6.67	30	
Carbon Tetrachloride	**22.0**	0.30	ug/L	20		110	66-155	9.66	30	
Chlorobenzene	**20.2**	0.40	ug/L	20		101	70-130	0.643	30	
Chloroethane	**25.1**	0.40	ug/L	20		126	45-166	46.6	30	AA-C1
Chloroform	**21.9**	0.30	ug/L	20		110	71-131	12.0	30	
Chloromethane	**22.0**	0.40	ug/L	20		110	48-152	19.6	30	
4-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130	0.969	30	
2-Chlorotoluene	**20.6**	0.20	ug/L	20		103	70-130	1.81	30	
1,2-Dibromo-3-chloropropane	**18.8**	0.40	ug/L	20		93.9	53-145	19.0	30	
Dibromochloromethane	**20.2**	0.40	ug/L	20		101	72-133	5.38	30	
1,2-Dibromoethane (EDB)	**20.7**	0.40	ug/L	20		104	79-120	6.86	30	
Dibromomethane	**20.6**	0.40	ug/L	20		103	68-124	6.21	30	
1,3-Dichlorobenzene	**19.8**	0.40	ug/L	20		99.0	70-130	0.654	30	
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		98.0	70-130	1.22	30	
1,2-Dichlorobenzene	**20.3**	0.30	ug/L	20		102	70-130	2.28	30	
Dichlorodifluoromethane (R12)	**21.9**	0.40	ug/L	20		110	16-148	25.2	30	
1,1-Dichloroethane	**21.9**	0.20	ug/L	20		110	67-120	11.3	30	
1,2-Dichloroethane (EDC)	**23.5**	0.20	ug/L	20		118	57-156	12.5	30	
cis-1,2-Dichloroethylene	**20.7**	0.30	ug/L	20		104	70-124	2.29	30	
1,1-Dichloroethylene	**20.8**	0.40	ug/L	20		104	50-149	0.337	30	
trans-1,2-Dichloroethylene	**20.8**	0.30	ug/L	20		104	66-126	1.50	30	
1,3-Dichloropropane	**21.4**	0.40	ug/L	20		107	79-113	4.30	30	
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		110	53-139	9.76	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
LCS Dup (B9F1914-BSD1) Continued				Prepared & Analyzed: 06/19/19						
2,2-Dichloropropane	**18.8**	0.30	ug/L	20		94.0	44-162	14.6	30	
trans-1,3-Dichloropropylene	**20.9**	0.30	ug/L	20		105	76-121	1.47	30	
1,1-Dichloropropylene	**21.5**	0.30	ug/L	20		107	84-124	7.39	30	
cis-1,3-Dichloropropylene	**21.2**	0.40	ug/L	20		106	67-127	2.14	30	
Ethylbenzene	**21.0**	0.30	ug/L	20		105	86-124	2.12	30	
Hexachlorobutadiene	**19.1**	0.50	ug/L	20		95.4	76-140	6.64	30	
2-Hexanone (MBK)	**18.8**	8.4	ug/L	20		94.0	52-123	9.04	30	J
Isopropylbenzene	**21.0**	0.30	ug/L	20		105	70-130	1.39	30	
4-Isopropyltoluene	**20.5**	0.30	ug/L	20		102	70-130	0.244	30	
Methyl-tert-Butyl Ether (MTBE)	**41.0**	1.4	ug/L	40		102	58-144	0.980	30	
Methylene Chloride	**20.5**	4.4	ug/L	20		103	50-135	14.4	30	
4-Methyl-2-pentanone (MIBK)	**17.4**	9.8	ug/L	20		86.8	49-139	18.9	30	J
Naphthalene	**19.1**	0.40	ug/L	20		95.5	74-128	12.1	30	
n-Propylbenzene	**21.0**	0.20	ug/L	20		105	70-130	2.11	30	
Styrene	**20.8**	0.20	ug/L	20		104	84-123	1.15	30	
1,1,1,2-Tetrachloroethane	**20.0**	0.30	ug/L	20		100	70-130	2.07	30	
1,1,2,2-Tetrachloroethane	**21.2**	0.40	ug/L	20		106	58-126	6.56	30	
Tetrachloroethylene (PCE)	**19.6**	0.50	ug/L	20		97.9	70-130	1.92	30	
Toluene	**20.5**	0.20	ug/L	20		103	83-118	2.12	30	
1,2,4-Trichlorobenzene	**19.4**	0.30	ug/L	20		97.2	84-128	5.07	30	
1,2,3-Trichlorobenzene	**18.8**	0.50	ug/L	20		94.1	77-134	6.33	30	
1,1,2-Trichloroethane	**20.9**	0.30	ug/L	20		105	75-115	1.85	30	
1,1,1-Trichloroethane	**22.3**	0.30	ug/L	20		112	66-158	10.9	30	
Trichloroethylene (TCE)	**21.2**	0.30	ug/L	20		106	82-128	4.63	30	
Trichlorofluoromethane (R11)	**19.5**	0.40	ug/L	20		97.4	65-137	18.0	30	
1,2,3-Trichloropropane	**20.5**	0.20	ug/L	20		102	68-123	5.69	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20		80.2	62-130	2.89	30	
1,2,4-Trimethylbenzene	**20.8**	0.30	ug/L	20		104	70-130	2.28	30	
1,3,5-Trimethylbenzene	**20.8**	0.20	ug/L	20		104	70-130	0.0480	30	
Vinyl chloride	**23.0**	0.40	ug/L	20		115	51-151	19.1	30	
o-Xylene	**21.1**	0.30	ug/L	20		106	70-130	0.617	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
LCS Dup (B9F1914-BSD1) Continued				Prepared & Analyzed: 06/19/19						
m,p-Xylenes	**42.0**	0.60	ug/L	40		105	70-130	0.430	30	
Surrogate: 4-Bromofluorobenzene	*48.4*		*ug/L*	*50*		*96.9*	*80-129*			
Surrogate: Dibromofluoromethane	*50.8*		*ug/L*	*50*		*102*	*68-137*			
Surrogate: Toluene-d8	*48.6*		*ug/L*	*50*		*97.3*	*83-134*			
Matrix Spike (B9F1914-MS1)			**Source: 9F12012-04**	Prepared & Analyzed: 06/19/19						
Acetone	**35.0**	7.7	ug/L	20	15.7	96.4	11-169			J
Benzene	**18.2**	0.40	ug/L	20	<0.50	90.8	56-135			
Bromobenzene	**20.4**	0.40	ug/L	20	<0.50	102	70-130			
Bromochloromethane	**20.8**	0.20	ug/L	20	<0.50	104	74-125			
Bromodichloromethane	**21.7**	0.40	ug/L	20	<0.50	108	68-144			
Bromoform	**18.7**	0.40	ug/L	20	<0.50	93.7	68-151			
Bromomethane	**16.5**	0.30	ug/L	20	<0.50	82.4	54-142			
2-Butanone (MEK)	**18.8**	8.6	ug/L	20	<20	93.9	62-145			J
tert-Butylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	70-130			
n-Butylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130			
sec-Butylbenzene	**20.7**	0.20	ug/L	20	<0.50	104	84-145			
Carbon Disulfide	**21.7**	0.20	ug/L	20	<0.50	109	28-151			
Carbon Tetrachloride	**21.2**	0.30	ug/L	20	<0.50	106	58-164			
Chlorobenzene	**19.8**	0.40	ug/L	20	<0.50	99.0	70-130			
Chloroethane	**42.0**	0.40	ug/L	20	<0.50	210	42-164			**
Chloroform	**20.5**	0.30	ug/L	20	<0.50	102	65-138			
Chloromethane	**19.7**	0.40	ug/L	20	<0.50	98.3	50-152			
4-Chlorotoluene	**20.6**	0.20	ug/L	20	<0.50	103	70-130			
2-Chlorotoluene	**20.6**	0.20	ug/L	20	<0.50	103	70-130			
1,2-Dibromo-3-chloropropane	**20.2**	0.40	ug/L	20	<1.0	101	53-161			
Dibromochloromethane	**20.4**	0.40	ug/L	20	<0.50	102	70-130			
1,2-Dibromoethane (EDB)	**20.9**	0.40	ug/L	20	<0.50	105	76-130			
Dibromomethane	**20.3**	0.40	ug/L	20	<0.50	102	62-135			
1,3-Dichlorobenzene	**19.9**	0.40	ug/L	20	<0.50	99.3	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20	<0.50	98.8	70-130			
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20	<0.50	102	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Matrix Spike (B9F1914-MS1) Continued	**Source: 9F12012-04**		Prepared & Analyzed: 06/19/19							
Dichlorodifluoromethane (R12)	**18.8**	0.40	ug/L	20	<0.50	94.2	17-153			
1,1-Dichloroethane	**24.8**	0.20	ug/L	20	4.22	103	55-131			
1,2-Dichloroethane (EDC)	**23.4**	0.20	ug/L	20	<0.50	117	52-168			
cis-1,2-Dichloroethylene	**43.9**	0.30	ug/L	20	25.5	91.8	70-130			
1,1-Dichloroethylene	**21.9**	0.40	ug/L	20	1.57	102	51-140			
trans-1,2-Dichloroethylene	**22.4**	0.30	ug/L	20	1.66	104	59-127			
1,3-Dichloropropane	**20.3**	0.40	ug/L	20	<0.50	102	80-121			
1,2-Dichloropropane	**21.6**	0.30	ug/L	20	<0.50	108	52-142			
2,2-Dichloropropane	**17.5**	0.30	ug/L	20	<0.50	87.6	36-168			
trans-1,3-Dichloropropylene	**20.3**	0.30	ug/L	20	<0.50	101	78-130			
1,1-Dichloropropylene	**20.9**	0.30	ug/L	20	<0.50	105	76-132			
cis-1,3-Dichloropropylene	**20.6**	0.40	ug/L	20	<0.50	103	66-130			
Ethylbenzene	**20.7**	0.30	ug/L	20	<0.50	103	86-128			
Hexachlorobutadiene	**19.0**	0.50	ug/L	20	<1.0	95.2	70-130			
2-Hexanone (MBK)	**19.4**	8.4	ug/L	20	<20	97.1	52-141			J
Isopropylbenzene	**21.1**	0.30	ug/L	20	<0.50	106	70-130			
4-Isopropyltoluene	**20.4**	0.30	ug/L	20	<1.0	102	83-149			
Methyl-tert-Butyl Ether (MTBE)	**40.3**	1.4	ug/L	40	<2.0	101	56-150			
Methylene Chloride	**19.1**	4.4	ug/L	20	<5.0	95.4	70-130			
4-Methyl-2-pentanone (MIBK)	**18.6**	9.8	ug/L	20	<20	93.2	60-148			J
Naphthalene	**19.8**	0.40	ug/L	20	<2.0	99.1	70-130			
n-Propylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	70-130			
Styrene	**20.7**	0.20	ug/L	20	<0.50	103	65-141			
1,1,1,2-Tetrachloroethane	**19.7**	0.30	ug/L	20	<0.50	98.4	70-130			
1,1,2,2-Tetrachloroethane	**21.5**	0.40	ug/L	20	<0.50	108	62-134			
Tetrachloroethylene (PCE)	**19.6**	0.50	ug/L	20	<0.50	98.0	70-130			
Toluene	**19.9**	0.20	ug/L	20	<0.50	99.7	81-123			
1,2,4-Trichlorobenzene	**19.2**	0.30	ug/L	20	<0.50	96.1	80-137			
1,2,3-Trichlorobenzene	**18.9**	0.50	ug/L	20	<0.50	94.6	73-144			
1,1,2-Trichloroethane	**20.9**	0.30	ug/L	20	<0.50	105	76-122			
1,1,1-Trichloroethane	**20.9**	0.30	ug/L	20	<0.50	105	62-164			
Trichloroethylene (TCE)	**22.9**	0.30	ug/L	20	1.71	106	72-136			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Matrix Spike (B9F1914-MS1) Continued	**Source: 9F12012-04**		Prepared & Analyzed: 06/19/19							
Trichlorofluoromethane (R11)	**18.1**	0.40	ug/L	20	<0.50	90.6	59-144			
1,2,3-Trichloropropane	**20.4**	0.20	ug/L	20	<0.50	102	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20	<0.50	80.1	62-126			
1,2,4-Trimethylbenzene	**20.7**	0.30	ug/L	20	<0.50	103	89-134			
1,3,5-Trimethylbenzene	**20.9**	0.20	ug/L	20	<0.50	104	70-130			
Vinyl chloride	**23.9**	0.40	ug/L	20	4.14	99.0	54-150			
o-Xylene	**20.7**	0.30	ug/L	20	<0.50	104	70-130			
m,p-Xylenes	**40.8**	0.60	ug/L	40	<1.0	102	70-130			
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.1*	*80-129*			
Surrogate: Dibromofluoromethane	*49.6*		*ug/L*	*50*		*99.3*	*68-137*			
Surrogate: Toluene-d8	*47.5*		*ug/L*	*50*		*95.1*	*83-134*			
Matrix Spike Dup (B9F1914-MSD1)	**Source: 9F12012-04**		Prepared & Analyzed: 06/19/19							
Acetone	**32.0**	7.7	ug/L	20	15.7	81.7	11-169	8.80	30	J
Benzene	**17.8**	0.40	ug/L	20	<0.50	88.8	56-135	2.23	30	
Bromobenzene	**20.2**	0.40	ug/L	20	<0.50	101	70-130	0.839	30	
Bromochloromethane	**20.1**	0.20	ug/L	20	<0.50	101	74-125	3.46	30	
Bromodichloromethane	**20.8**	0.40	ug/L	20	<0.50	104	68-144	4.29	30	
Bromoform	**19.3**	0.40	ug/L	20	<0.50	96.4	68-151	2.89	30	
Bromomethane	**22.6**	0.30	ug/L	20	<0.50	113	54-142	31.3	30	AA-C1
2-Butanone (MEK)	**17.3**	8.6	ug/L	20	<20	86.4	62-145	8.26	30	J
tert-Butylbenzene	**20.5**	0.20	ug/L	20	<0.50	102	70-130	0.438	30	
n-Butylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130	0.241	30	
sec-Butylbenzene	**20.5**	0.20	ug/L	20	<0.50	102	84-145	1.07	30	
Carbon Disulfide	**20.3**	0.20	ug/L	20	<0.50	102	28-151	6.66	30	
Carbon Tetrachloride	**20.8**	0.30	ug/L	20	<0.50	104	58-164	2.00	30	
Chlorobenzene	**19.9**	0.40	ug/L	20	<0.50	99.4	70-130	0.353	30	
Chloroethane	**43.1**	0.40	ug/L	20	<0.50	216	42-164	2.56	30	**
Chloroform	**20.3**	0.30	ug/L	20	<0.50	101	65-138	1.18	30	
Chloromethane	**20.2**	0.40	ug/L	20	<0.50	101	50-152	2.46	30	
4-Chlorotoluene	**20.5**	0.20	ug/L	20	<0.50	103	70-130	0.341	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Matrix Spike Dup (B9F1914-MSD1) Continued	**Source: 9F12012-04** Prepared & Analyzed: 06/19/19									
2-Chlorotoluene	**20.6**	0.20	ug/L	20	<0.50	103	70-130	0.00	30	
1,2-Dibromo-3-chloropropane	**21.4**	0.40	ug/L	20	<1.0	107	53-161	5.67	30	
Dibromochloromethane	**20.6**	0.40	ug/L	20	<0.50	103	70-130	1.37	30	
1,2-Dibromoethane (EDB)	**21.0**	0.40	ug/L	20	<0.50	105	76-130	0.191	30	
Dibromomethane	**19.5**	0.40	ug/L	20	<0.50	97.3	62-135	4.37	30	
1,3-Dichlorobenzene	**19.8**	0.40	ug/L	20	<0.50	99.0	70-130	0.353	30	
1,4-Dichlorobenzene	**19.4**	0.30	ug/L	20	<0.50	97.0	70-130	1.84	30	
1,2-Dichlorobenzene	**20.1**	0.30	ug/L	20	<0.50	100	70-130	1.53	30	
Dichlorodifluoromethane (R12)	**18.4**	0.40	ug/L	20	<0.50	92.2	17-153	2.09	30	
1,1-Dichloroethane	**23.5**	0.20	ug/L	20	4.22	96.4	55-131	5.63	30	
1,2-Dichloroethane (EDC)	**22.6**	0.20	ug/L	20	<0.50	113	52-168	3.09	30	
cis-1,2-Dichloroethylene	**41.0**	0.30	ug/L	20	25.5	77.2	70-130	6.83	30	
1,1-Dichloroethylene	**22.1**	0.40	ug/L	20	1.57	102	51-140	0.774	30	
trans-1,2-Dichloroethylene	**21.4**	0.30	ug/L	20	1.66	99.0	59-127	4.33	30	
1,3-Dichloropropane	**21.0**	0.40	ug/L	20	<0.50	105	80-121	3.44	30	
1,2-Dichloropropane	**21.3**	0.30	ug/L	20	<0.50	107	52-142	1.54	30	
2,2-Dichloropropane	**16.7**	0.30	ug/L	20	<0.50	83.4	36-168	4.91	30	
trans-1,3-Dichloropropylene	**20.7**	0.30	ug/L	20	<0.50	104	78-130	2.15	30	
1,1-Dichloropropylene	**20.3**	0.30	ug/L	20	<0.50	102	76-132	3.01	30	
cis-1,3-Dichloropropylene	**21.0**	0.40	ug/L	20	<0.50	105	66-130	2.02	30	
Ethylbenzene	**20.7**	0.30	ug/L	20	<0.50	104	86-128	0.0483	30	
Hexachlorobutadiene	**19.8**	0.50	ug/L	20	<1.0	99.2	70-130	4.11	30	
2-Hexanone (MBK)	**18.7**	8.4	ug/L	20	<20	93.4	52-141	3.88	30	J
Isopropylbenzene	**20.9**	0.30	ug/L	20	<0.50	104	70-130	1.14	30	
4-Isopropyltoluene	**20.2**	0.30	ug/L	20	<1.0	101	83-149	0.690	30	
Methyl-tert-Butyl Ether (MTBE)	**39.7**	1.4	ug/L	40	<2.0	99.3	56-150	1.55	30	
Methylene Chloride	**19.4**	4.4	ug/L	20	<5.0	96.8	70-130	1.41	30	
4-Methyl-2-pentanone (MIBK)	**19.1**	9.8	ug/L	20	<20	95.7	60-148	2.65	30	J
Naphthalene	**20.5**	0.40	ug/L	20	<2.0	103	70-130	3.47	30	
n-Propylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130	0.526	30	
Styrene	**20.6**	0.20	ug/L	20	<0.50	103	65-141	0.630	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874353
Date Received: 06/12/19
Date Reported: 06/26/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1914 - EPA 5030B										
Matrix Spike Dup (B9F1914-MSD1) Continued	**Source: 9F12012-04** Prepared & Analyzed: 06/19/19									
1,1,1,2-Tetrachloroethane	**20.2**	0.30	ug/L	20	<0.50	101	70-130	2.51	30	
1,1,2,2-Tetrachloroethane	**21.9**	0.40	ug/L	20	<0.50	110	62-134	1.79	30	
Tetrachloroethylene (PCE)	**19.9**	0.50	ug/L	20	<0.50	99.4	70-130	1.47	30	
Toluene	**20.1**	0.20	ug/L	20	<0.50	101	81-123	0.849	30	
1,2,4-Trichlorobenzene	**19.4**	0.30	ug/L	20	<0.50	97.0	80-137	0.881	30	
1,2,3-Trichlorobenzene	**18.9**	0.50	ug/L	20	<0.50	94.3	73-144	0.318	30	
1,1,2-Trichloroethane	**21.1**	0.30	ug/L	20	<0.50	105	76-122	0.714	30	
1,1,1-Trichloroethane	**20.7**	0.30	ug/L	20	<0.50	103	62-164	1.15	30	
Trichloroethylene (TCE)	**22.5**	0.30	ug/L	20	1.71	104	72-136	1.54	30	
Trichlorofluoromethane (R11)	**17.3**	0.40	ug/L	20	<0.50	86.6	59-144	4.40	30	
1,2,3-Trichloropropane	**21.3**	0.20	ug/L	20	<0.50	106	69-135	4.03	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20	<0.50	79.9	62-126	0.250	30	
1,2,4-Trimethylbenzene	**20.8**	0.30	ug/L	20	<0.50	104	89-134	0.290	30	
1,3,5-Trimethylbenzene	**20.9**	0.20	ug/L	20	<0.50	105	70-130	0.335	30	
Vinyl chloride	**24.0**	0.40	ug/L	20	4.14	99.4	54-150	0.292	30	
o-Xylene	**20.6**	0.30	ug/L	20	<0.50	103	70-130	0.242	30	
m,p-Xylenes	**41.4**	0.60	ug/L	40	<1.0	104	70-130	1.46	30	
Surrogate: 4-Bromofluorobenzene	*47.8*		*ug/L*	*50*		*95.6*	*80-129*			
Surrogate: Dibromofluoromethane	*47.8*		*ug/L*	*50*		*95.6*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.7*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874353
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/26/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

18342

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

LAB: American Analytics

COC 1 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874353/9F0102012

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (AQ=Water)	CONTAINERS #	Preservative	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM	Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
QC01-061119	6/11/19	0700	AQ	2	HCL	VOA	X						9F12012-9
MW-23-061119	6/11/19	0934	AQ	4	HCL/NP	VOA/Amber	X	X					-02
MW-23B-061119	6/11/19	1012	AQ	4	HCL/NP	VOA/Amber	X	X					-03
[illegible]	[illegible]	[illegible]	AQ	4	[illegible]	[illegible]	X	X					-04
MW-20B-061119	6/11/19	1208	AQ	6	HCL/NP	VOA/Amber	X	X		*ms/msD*			04 -05
[illegible]	[illegible]	[illegible]	AQ	4	HCL/NP	VOA/Amber	X	X					-06
MW-63-061119	6/11/19	1416	AQ	4	HCL/NP	VOA/Amber	X	X					-05
QC03-061119	6/11/19	1430	AQ	4	HCL/NP	VOA/Amber	X	X					-06
QC02-061119	6/11/19	1440	AQ	4	HCL/NP	VOA/Amber	X	X					-07

REVIEWED
Date 6/12/19 Time 1715
TAT N Days Sign:

SAMPLE INTEGRITY
INTACT Y N TEMP 4.3

	DATE	TIME
SAMPLING COMPLETED		

SAMPLING PERFORMED BY: Phil Alonzo

RESULTS NEEDED NO LATER THAN: Standard

	TIME	RECEIVED BY	DATE	TIME
RELEASED BY	1320		6/11/19	1520
RELEASED BY	12:25		6.12.19	12:25
RELEASED BY	16:17		6/12/19	16:17

SHIPPED VIA | TIME SENT | COOLER #

18343

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 2 of 2

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874353/9P12012

SAMPLE I.D.	DATE	TIME	MATRIX AQ=Water	CONTAINERS #	Preservation	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM	Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-57-061119	6/11/19	0906	AQ	4	HCl/none	VOA/amber	X	X					9P12012-08
MW-32-061119	6/11/19	0942		4			X	X					-09
MW-28-061119	6/11/19	1031		4			X	X					-10
QCOS-061119	6/11/19	1041		4			X	X					-11
MW-29-061119	6/11/19	1106		4			X	X					-12
MW-41-061119	6/11/19	1154		4			X	X					-13
MW-64B-061119	6/11/19	1346		4			X	X					-14
MW-64A-061119	6/11/19	1422		4			X	X					-15
QC04-061119	6/11/19	1440		4			X	X					-16

REVIEWED Date 6/12/19 Time 1715 Sign: TAT N Days

SAMPLE INTEGRITY INTACT (Y) N TEMP 4.3

'19 JUN 12 4:17pm

SAMPLING COMPLETED: DATE 6/11/19 TIME 1500

SAMPLING PERFORMED BY: Jordan Torrence

RESULTS NEEDED NO LATER THAN: Standard

RELEASED BY		TIME 1520	RECEIVED BY	DATE 6/12/19	TIME 1520
RELEASED BY		TIME 12:25	RECEIVED BY	DATE 6-12-19	TIME 12:25
RELEASED BY		TIME 16:17	RECEIVED BY	DATE 6/12/19	TIME 16:17
SHIPPED VIA		TIME SENT	COOLER #		

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 14, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874354 / 9F12013

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/12/19 16:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
MW-20-061119	9F12013-01	Water	2	06/11/19 11:30	06/12/19 16:17
MW-21-061119	9F12013-02	Water	2	06/11/19 13:44	06/12/19 16:17
8270CM 1,4-Dioxane Only					
MW-20-061119	9F12013-01	Water	2	06/11/19 11:30	06/12/19 16:17
MW-21-061119	9F12013-02	Water	2	06/11/19 13:44	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F12013-01	MW-20-061119	06/11/19	06/13/19	06/13/19	20	**280**	ug/L	1	2
9F12013-02	MW-21-061119	06/11/19	06/13/19	06/13/19	5	**36**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874354
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/14/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/11/19	06/11/19		
Date Prepared:	06/13/19	06/13/19		
Date Analyzed:	06/13/19	06/13/19		
AA ID No:	9F12013-01	9F12013-02		
Client ID No:	MW-20-061119	MW-21-061119		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	**25**	**21**	2.0	10
Benzene	<0.20	**0.49 J**	0.20	0.50
Bromobenzene	<0.30	<0.30	0.30	0.50
Bromochloromethane	<0.50	<0.50	0.50	0.50
Bromodichloromethane	<0.20	<0.20	0.20	0.50
Bromoform	<0.50	<0.50	0.50	0.50
Bromomethane	<0.50	<0.50	0.50	0.50
2-Butanone (MEK)	<2.0	<2.0	2.0	10
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.30	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	**0.44 J**	<0.30	0.30	0.50
Chloroethane	<0.50	<0.50	0.50	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.30	0.50
1,2-Dibromo-3-chloropropane	<2.0	<2.0	2.0	2.0
Dibromochloromethane	<0.30	<0.30	0.30	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.30	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.10	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874354
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/14/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/11/19	06/11/19		
Date Prepared:	06/13/19	06/13/19		
Date Analyzed:	06/13/19	06/13/19		
AA ID No:	9F12013-01	9F12013-02		
Client ID No:	MW-20-061119	MW-21-061119		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
1,1-Dichloroethane	**10**	**6.3**	0.20	0.50
1,2-Dichloroethane (EDC)	**1.7**	**1.5**	0.30	0.50
cis-1,2-Dichloroethylene	**44**	**59**	0.20	0.50
1,1-Dichloroethylene	**0.48 J**	**1.8**	0.30	0.50
trans-1,2-Dichloroethylene	**1.1**	**1.7**	0.40	0.50
1,3-Dichloropropane	<0.10	<0.10	0.10	0.50
1,2-Dichloropropane	**0.93**	**0.74**	0.50	0.50
2,2-Dichloropropane	<0.40	<0.40	0.40	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.20	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.20	0.50
Ethylbenzene	<0.20	<0.20	0.20	0.50
Hexachlorobutadiene	<0.40	<0.40	0.40	1.0
2-Hexanone (MBK)	<2.0	<2.0	2.0	10
Isopropylbenzene	<0.20	<0.20	0.20	0.50
4-Isopropyltoluene	<0.20	<0.20	0.20	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.7	2.0
Methylene Chloride	<5.0	<5.0	5.0	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	0.70	10
Naphthalene	<0.20	<0.20	0.20	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50
Toluene	<0.30	<0.30	0.30	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.20	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19
Units: ug/L

Date Sampled:	06/11/19	06/11/19		
Date Prepared:	06/13/19	06/13/19		
Date Analyzed:	06/13/19	06/13/19		
AA ID No:	9F12013-01	9F12013-02		
Client ID No:	MW-20-061119	MW-21-061119		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
1,2,3-Trichlorobenzene	<0.20	<0.20	0.20	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**12**	**1.1**	0.20	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.20	0.50
1,2,3-Trichloropropane	**2.8**	<0.30	0.30	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.50	**4.4**	0.50	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.40	1.0
Surrogates				**%REC Limits**
4-Bromofluorobenzene	104%	104%		70-130
Dibromofluoromethane	104%	104%		70-130
Toluene-d8	105%	103%		70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F1301 - EPA 3510C_MS										
Blank (B9F1301-BLK1)				Prepared & Analyzed: 06/13/19						
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F1301-BS1)				Prepared & Analyzed: 06/13/19						
1,4-Dioxane	**8.78**	1.0	ug/L	10		87.8	70-130		30	
LCS Dup (B9F1301-BSD1)				Prepared & Analyzed: 06/13/19						
1,4-Dioxane	**10.1**	1.0	ug/L	10		101	70-130	14.0	30	
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
Blank (B9F1305-BLK1)				Prepared & Analyzed: 06/13/19						
Acetone	<2.0	2.0	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<2.0	2.0	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
Blank (B9F1305-BLK1) Continued				Prepared & Analyzed: 06/13/19						
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
Blank (B9F1305-BLK1) Continued				Prepared & Analyzed: 06/13/19						
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*53.1*		*ug/L*	*50*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*50.1*		*ug/L*	*50*		*100*	*70-130*			
Surrogate: Toluene-d8	*53.0*		*ug/L*	*50*		*106*	*70-130*			
LCS (B9F1305-BS1)				Prepared & Analyzed: 06/13/19						
Acetone	**23.9**	2.0	ug/L	20		120	27-123		30	
Benzene	**22.2**	0.20	ug/L	20		111	70-130		30	
Bromobenzene	**19.1**	0.30	ug/L	20		95.4	93-119		30	
Bromochloromethane	**21.2**	0.50	ug/L	20		106	78-121		30	
Bromodichloromethane	**21.3**	0.20	ug/L	20		106	70-130		30	
Bromoform	**21.3**	0.50	ug/L	20		106	70-130		30	
Bromomethane	**29.5**	0.50	ug/L	20		147	70-130		30	**
2-Butanone (MEK)	**28.0**	2.0	ug/L	20		140	62-138		30	**
tert-Butylbenzene	**18.1**	0.20	ug/L	20		90.4	86-144		30	
n-Butylbenzene	**18.8**	0.20	ug/L	20		93.8	88-136		30	
sec-Butylbenzene	**19.1**	0.20	ug/L	20		95.6	84-142		30	
Carbon Disulfide	**22.2**	0.30	ug/L	20		111	17-177		30	
Carbon Tetrachloride	**19.7**	0.30	ug/L	20		98.6	70-130		30	
Chlorobenzene	**19.3**	0.30	ug/L	20		96.4	70-130		30	
Chloroethane	**17.7**	0.50	ug/L	20		88.6	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
LCS (B9F1305-BS1) Continued				Prepared & Analyzed: 06/13/19						
Chloroform	**22.3**	0.30	ug/L	20		111	70-130		30	
Chloromethane	**18.4**	0.40	ug/L	20		92.2	70-130		30	
4-Chlorotoluene	**18.9**	0.20	ug/L	20		94.4	94-121		30	
2-Chlorotoluene	**18.9**	0.30	ug/L	20		94.4	95-123		30	
1,2-Dibromo-3-chloropropane	**22.4**	2.0	ug/L	20		112	53-145		30	
Dibromochloromethane	**20.1**	0.30	ug/L	20		101	70-130		30	
1,2-Dibromoethane (EDB)	**21.5**	0.30	ug/L	20		107	79-120		30	
Dibromomethane	**22.8**	0.40	ug/L	20		114	68-124		30	
1,3-Dichlorobenzene	**18.2**	0.10	ug/L	20		90.8	94-115		30	
1,4-Dichlorobenzene	**18.3**	0.30	ug/L	20		91.4	70-130		30	
1,2-Dichlorobenzene	**18.9**	0.30	ug/L	20		94.6	95-120		30	
Dichlorodifluoromethane (R12)	**19.1**	0.50	ug/L	20		95.4	16-148		30	
1,1-Dichloroethane	**23.6**	0.20	ug/L	20		118	70-130		30	
1,2-Dichloroethane (EDC)	**25.6**	0.30	ug/L	20		128	70-130		30	
cis-1,2-Dichloroethylene	**21.7**	0.20	ug/L	20		109	70-130		30	
1,1-Dichloroethylene	**20.8**	0.30	ug/L	20		104	70-130		30	
trans-1,2-Dichloroethylene	**22.2**	0.40	ug/L	20		111	70-130		30	
1,3-Dichloropropane	**24.0**	0.10	ug/L	20		120	79-113		30	
1,2-Dichloropropane	**22.3**	0.50	ug/L	20		111	70-130		30	
2,2-Dichloropropane	**26.4**	0.40	ug/L	20		132	44-162		30	
trans-1,3-Dichloropropylene	**23.5**	0.20	ug/L	20		118	76-121		30	
1,1-Dichloropropylene	**22.1**	0.20	ug/L	20		111	84-124		30	
cis-1,3-Dichloropropylene	**23.5**	0.20	ug/L	20		118	70-130		30	
Ethylbenzene	**20.0**	0.20	ug/L	20		100	70-130		30	
Hexachlorobutadiene	**19.2**	0.40	ug/L	20		96.2	76-140		30	
2-Hexanone (MBK)	**29.8**	2.0	ug/L	20		149	52-123		30	**
Isopropylbenzene	**18.8**	0.20	ug/L	20		94.0	95-128		30	
4-Isopropyltoluene	**18.4**	0.20	ug/L	20		91.8	70-130		30	
Methyl-tert-Butyl Ether (MTBE)	**54.9**	1.7	ug/L	40		137	70-130		30	
Methylene Chloride	**21.9**	5.0	ug/L	20		109	70-130		30	
4-Methyl-2-pentanone (MIBK)	**29.7**	0.70	ug/L	20		148	49-139		30	**
Naphthalene	**23.9**	0.20	ug/L	20		120	74-128		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
LCS (B9F1305-BS1) Continued				Prepared & Analyzed: 06/13/19						
n-Propylbenzene	**19.2**	0.20	ug/L	20		96.2	96-124		30	
Styrene	**19.5**	0.20	ug/L	20		97.4	84-123		30	
1,1,1,2-Tetrachloroethane	**18.7**	0.40	ug/L	20		93.6	70-130		30	
1,1,2,2-Tetrachloroethane	**21.9**	0.30	ug/L	20		110	70-130		30	
Tetrachloroethylene (PCE)	**17.4**	0.50	ug/L	20		87.0	70-130		30	
Toluene	**20.6**	0.30	ug/L	20		103	70-130		30	
1,2,4-Trichlorobenzene	**20.6**	0.20	ug/L	20		103	84-128		30	
1,2,3-Trichlorobenzene	**22.6**	0.20	ug/L	20		113	77-134		30	
1,1,2-Trichloroethane	**20.9**	0.30	ug/L	20		105	70-130		30	
1,1,1-Trichloroethane	**20.8**	0.30	ug/L	20		104	70-130		30	
Trichloroethylene (TCE)	**19.8**	0.20	ug/L	20		99.0	70-130		30	
Trichlorofluoromethane (R11)	**22.3**	0.20	ug/L	20		112	65-137		30	
1,2,3-Trichloropropane	**23.4**	0.30	ug/L	20		117	68-123		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**21.3**	0.30	ug/L	20		106	62-130		30	
1,2,4-Trimethylbenzene	**18.6**	0.30	ug/L	20		93.0	70-130		30	
1,3,5-Trimethylbenzene	**18.6**	0.20	ug/L	20		93.0	89-138		30	
Vinyl chloride	**24.4**	0.50	ug/L	20		122	70-130		30	
o-Xylene	**19.4**	0.30	ug/L	20		96.8	70-130		30	
m,p-Xylenes	**36.4**	0.40	ug/L	40		91.0	90-121		30	
Surrogate: 4-Bromofluorobenzene	*50.3*		*ug/L*	*50*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*54.3*		*ug/L*	*50*		*109*	*70-130*			
Surrogate: Toluene-d8	*53.4*		*ug/L*	*50*		*107*	*70-130*			
LCS Dup (B9F1305-BSD1)				Prepared & Analyzed: 06/13/19						
Acetone	**28.8**	2.0	ug/L	20		144	27-123	18.3	30	**
Benzene	**22.3**	0.20	ug/L	20		112	70-130	0.224	30	
Bromobenzene	**19.4**	0.30	ug/L	20		97.0	93-119	1.66	30	
Bromochloromethane	**22.0**	0.50	ug/L	20		110	78-121	3.75	30	
Bromodichloromethane	**21.7**	0.20	ug/L	20		109	70-130	2.05	30	
Bromoform	**21.8**	0.50	ug/L	20		109	70-130	2.32	30	
Bromomethane	**37.0**	0.50	ug/L	20		185	70-130	22.6	30	**

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
LCS Dup (B9F1305-BSD1) Continued				Prepared & Analyzed: 06/13/19						
2-Butanone (MEK)	**28.4**	2.0	ug/L	20		142	62-138	1.74	30	**
tert-Butylbenzene	**17.8**	0.20	ug/L	20		88.9	86-144	1.73	30	
n-Butylbenzene	**18.5**	0.20	ug/L	20		92.4	88-136	1.50	30	
sec-Butylbenzene	**18.7**	0.20	ug/L	20		93.5	84-142	2.22	30	
Carbon Disulfide	**22.2**	0.30	ug/L	20		111	17-177	0.270	30	
Carbon Tetrachloride	**19.6**	0.30	ug/L	20		98.2	70-130	0.356	30	
Chlorobenzene	**19.0**	0.30	ug/L	20		95.0	70-130	1.51	30	
Chloroethane	**19.2**	0.50	ug/L	20		96.0	70-130	8.02	30	
Chloroform	**22.6**	0.30	ug/L	20		113	70-130	1.65	30	
Chloromethane	**21.4**	0.40	ug/L	20		107	70-130	15.0	30	
4-Chlorotoluene	**19.1**	0.20	ug/L	20		95.5	94-121	1.16	30	
2-Chlorotoluene	**18.3**	0.30	ug/L	20		91.6	95-123	2.90	30	
1,2-Dibromo-3-chloropropane	**27.3**	2.0	ug/L	20		136	53-145	19.9	30	
Dibromochloromethane	**21.2**	0.30	ug/L	20		106	70-130	5.32	30	
1,2-Dibromoethane (EDB)	**23.1**	0.30	ug/L	20		115	79-120	7.23	30	
Dibromomethane	**24.2**	0.40	ug/L	20		121	68-124	6.04	30	
1,3-Dichlorobenzene	**18.2**	0.10	ug/L	20		91.0	94-115	0.220	30	
1,4-Dichlorobenzene	**18.2**	0.30	ug/L	20		91.0	70-130	0.493	30	
1,2-Dichlorobenzene	**19.2**	0.30	ug/L	20		96.0	95-120	1.47	30	
Dichlorodifluoromethane (R12)	**20.5**	0.50	ug/L	20		102	16-148	7.13	30	
1,1-Dichloroethane	**24.2**	0.20	ug/L	20		121	70-130	2.43	30	
1,2-Dichloroethane (EDC)	**26.4**	0.30	ug/L	20		132	70-130	2.81	30	**
cis-1,2-Dichloroethylene	**22.2**	0.20	ug/L	20		111	70-130	2.01	30	
1,1-Dichloroethylene	**22.1**	0.30	ug/L	20		110	70-130	5.64	30	
trans-1,2-Dichloroethylene	**22.0**	0.40	ug/L	20		110	70-130	0.905	30	
1,3-Dichloropropane	**25.0**	0.10	ug/L	20		125	79-113	3.80	30	
1,2-Dichloropropane	**22.6**	0.50	ug/L	20		113	70-130	1.52	30	
2,2-Dichloropropane	**29.6**	0.40	ug/L	20		148	44-162	11.6	30	
trans-1,3-Dichloropropylene	**24.3**	0.20	ug/L	20		121	76-121	3.06	30	
1,1-Dichloropropylene	**22.0**	0.20	ug/L	20		110	84-124	0.453	30	
cis-1,3-Dichloropropylene	**23.6**	0.20	ug/L	20		118	70-130	0.340	30	
Ethylbenzene	**19.6**	0.20	ug/L	20		98.2	70-130	2.07	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874354
Date Received: 06/12/19
Date Reported: 06/14/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F1305 - EPA 5030B										
LCS Dup (B9F1305-BSD1) Continued				Prepared & Analyzed: 06/13/19						
Hexachlorobutadiene	**19.4**	0.40	ug/L	20		97.0	76-140	0.829	30	
2-Hexanone (MBK)	**33.7**	2.0	ug/L	20		168	52-123	12.0	30	**
Isopropylbenzene	**18.8**	0.20	ug/L	20		93.8	95-128	0.106	30	
4-Isopropyltoluene	**17.5**	0.20	ug/L	20		87.6	70-130	4.68	30	
Methyl-tert-Butyl Ether (MTBE)	**58.5**	1.7	ug/L	40		146	70-130	6.39	30	**
Methylene Chloride	**22.5**	5.0	ug/L	20		113	70-130	2.97	30	
4-Methyl-2-pentanone (MIBK)	**29.4**	0.70	ug/L	20		147	49-139	0.744	30	**
Naphthalene	**25.2**	0.20	ug/L	20		126	74-128	5.26	30	
n-Propylbenzene	**19.3**	0.20	ug/L	20		96.3	96-124	0.156	30	
Styrene	**18.9**	0.20	ug/L	20		94.4	84-123	3.08	30	
1,1,1,2-Tetrachloroethane	**18.8**	0.40	ug/L	20		93.8	70-130	0.267	30	
1,1,2,2-Tetrachloroethane	**24.2**	0.30	ug/L	20		121	70-130	9.76	30	
Tetrachloroethylene (PCE)	**17.4**	0.50	ug/L	20		87.0	70-130	0.00	30	
Toluene	**20.2**	0.30	ug/L	20		101	70-130	1.76	30	
1,2,4-Trichlorobenzene	**21.7**	0.20	ug/L	20		108	84-128	5.15	30	
1,2,3-Trichlorobenzene	**24.2**	0.20	ug/L	20		121	77-134	6.75	30	
1,1,2-Trichloroethane	**22.9**	0.30	ug/L	20		115	70-130	9.26	30	
1,1,1-Trichloroethane	**20.8**	0.30	ug/L	20		104	70-130	0.0480	30	
Trichloroethylene (TCE)	**20.0**	0.20	ug/L	20		99.8	70-130	0.805	30	
Trichlorofluoromethane (R11)	**23.5**	0.20	ug/L	20		118	65-137	5.41	30	
1,2,3-Trichloropropane	**25.2**	0.30	ug/L	20		126	68-123	7.44	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**22.6**	0.30	ug/L	20		113	62-130	5.93	30	
1,2,4-Trimethylbenzene	**18.4**	0.30	ug/L	20		92.2	70-130	0.864	30	
1,3,5-Trimethylbenzene	**18.1**	0.20	ug/L	20		90.4	89-138	2.89	30	
Vinyl chloride	**26.3**	0.50	ug/L	20		132	70-130	7.74	30	**
o-Xylene	**18.4**	0.30	ug/L	20		92.0	70-130	4.98	30	
m,p-Xylenes	**34.5**	0.40	ug/L	40		86.3	90-121	5.27	30	
Surrogate: 4-Bromofluorobenzene	*51.0*		*ug/L*	*50*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*56.6*		*ug/L*	*50*		*113*	*70-130*			
Surrogate: Toluene-d8	*53.9*		*ug/L*	*50*		*108*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874354
Project No:	130072-025	**Date Received:**	06/12/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/14/19

Special Notes

[1] = ****** : Exceeds upper control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

18344

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 1 of 1

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

* 48hr TAT

A87354/9F12013

SAMPLE I.D.	DATE	TIME	MATRIX AQ= Water	CONTAINERS #	Preservatic	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-20-061119	6/11/19	1130	AQ	4	HCl/ND	VOA/ Amber	X	X								9F12013-01
MW-21-061119	6/11/19	1344	AQ	4	HCl/NP	VOA/ Amber	X	X					PRIORITY Rush 48 Hrs Date 6/12/19 Time 1215 SM Sign			-02
																19 JUN 12 4:17PM
													SAMPLE INTEGRITY INTACT (Y) N TEMP 4.3			

SAMPLING COMPLETED | DATE | TIME

SAMPLING PERFORMED BY Phil Alonzo

RESULTS NEEDED NO LATER THAN ~~Standard~~ 48Hr TAT

RELEASED BY	TIME	RECEIVED BY	DATE	TIME
	1520		6/11/19	1520
RELEASED BY	TIME	RECEIVED BY	DATE	TIME
	1225		6.12.19	12:25
RELEASED BY	TIME	RECEIVED BY	DATE	TIME
	16:17		6/12/19	1617

SHIPPED VIA | TIME SENT | COOLER #

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 27, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874355 / 9F12014

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/12/19 16:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-INF-061219-0001	9F12014-01	Water	5	06/12/19 10:50	06/12/19 16:17
TOTAL-EFF-061219-0001	9F12014-02	Water	5	06/12/19 10:40	06/12/19 16:17
8270CM 1,4-Dioxane Only					
EW-INF-061219-0001	9F12014-01	Water	5	06/12/19 10:50	06/12/19 16:17
TOTAL-EFF-061219-0001	9F12014-02	Water	5	06/12/19 10:40	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F12014-01	EW-INF-061219-0001	06/12/19	06/17/19	06/18/19	1	**8.4**	ug/L	1	2
9F12014-02	TOTAL-EFF-061219-0001	06/12/19	06/17/19	06/18/19	1	**8.6**	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874355
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/27/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19		
AA ID No:	9F12014-01	9F12014-02		
Client ID No:	EW-INF-061219-0001	TOTAL-EFF-061219-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<7.7	<7.7	7.7	50
Benzene	**1.2**	**0.89**	0.40	0.50
Bromobenzene	<0.30	<0.30	0.40	0.50
Bromochloromethane	<0.50	<0.50	0.20	0.50
Bromodichloromethane	<0.20	<0.20	0.40	0.50
Bromoform	<0.50	<0.50	0.40	0.50
Bromomethane	<0.50	<0.50	0.30	0.50
2-Butanone (MEK)	<2.0	<2.0	8.6	20
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.30	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.30	0.40	0.50
Chloroethane	<0.50	<0.50	0.40	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.30	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.30	<0.30	0.40	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.30	0.40	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.10	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19		
AA ID No:	9F12014-01	9F12014-02		
Client ID No:	EW-INF-061219-0001	TOTAL-EFF-061219-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Dichlorodifluoromethane (R12)	<0.50	<0.50	0.40	0.50
1,1-Dichloroethane	**2.0**	**1.9**	0.20	0.50
1,2-Dichloroethane (EDC)	**1.4**	**1.4**	0.20	0.50
cis-1,2-Dichloroethylene	**35**	**32**	0.30	0.50
1,1-Dichloroethylene	**0.98**	**0.79**	0.40	0.50
trans-1,2-Dichloroethylene	**5.0**	**3.7**	0.30	0.50
1,3-Dichloropropane	<0.10	<0.10	0.40	0.50
1,2-Dichloropropane	<0.50	<0.50	0.30	0.50
2,2-Dichloropropane	<0.40	<0.40	0.30	0.50
trans-1,3-Dichloropropylene	<0.20	<0.20	0.30	0.50
1,1-Dichloropropylene	<0.20	<0.20	0.30	0.50
cis-1,3-Dichloropropylene	<0.20	<0.20	0.40	0.50
Ethylbenzene	<0.20	<0.20	0.30	0.50
Hexachlorobutadiene	<0.40	<0.40	0.50	1.0
2-Hexanone (MBK)	<2.0	<2.0	8.4	20
Isopropylbenzene	<0.20	<0.20	0.30	0.50
4-Isopropyltoluene	<0.20	<0.20	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.7	1.4	2.0
Methylene Chloride	<5.0	<5.0	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<0.70	9.8	20
Naphthalene	<0.20	<0.20	0.40	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.40	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.30	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate
Method: VOCs by GC/MS

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19		
AA ID No:	9F12014-01	9F12014-02		
Client ID No:	EW-INF-061219-0001	TOTAL-EFF-061219-0001		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
Toluene	<0.30	<0.30	0.20	0.50
1,2,4-Trichlorobenzene	<0.20	<0.20	0.30	0.50
1,2,3-Trichlorobenzene	<0.20	<0.20	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.8**	**1.6**	0.30	0.50
Trichlorofluoromethane (R11)	<0.20	<0.20	0.40	0.50
1,2,3-Trichloropropane	<0.30	<0.30	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	**0.79**	**0.51**	0.40	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.40	0.60	1.0

Surrogates			**%REC Limits**
4-Bromofluorobenzene	98%	98%	80-129
Dibromofluoromethane	102%	106%	68-137
Toluene-d8	95%	96%	83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F1710 - EPA 3510C_MS										
Blank (B9F1710-BLK1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F1710-BS1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**8.90**	1.0	ug/L	10		89.0	75-125			
LCS Dup (B9F1710-BSD1)				Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**10.0**	1.0	ug/L	10		100	75-125	12.1	30	
Matrix Spike (B9F1710-MS1)		**Source: 9F12012-04**		Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**29.1**	1.0	ug/L	10	20.0	90.6	70-130			
Matrix Spike Dup (B9F1710-MSD1)		**Source: 9F12012-04**		Prepared: 06/17/19 Analyzed: 06/18/19						
1,4-Dioxane	**31.1**	1.0	ug/L	10	20.0	111	70-130	6.78	30	
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1)				Prepared & Analyzed: 06/20/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1) Continued				Prepared & Analyzed: 06/20/19						
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1) Continued				Prepared & Analyzed: 06/20/19						
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.0*	*80-129*			
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.7*	*68-137*			
Surrogate: Toluene-d8	*48.5*		*ug/L*	*50*		*97.0*	*83-134*			
LCS (B9F2004-BS1)				Prepared & Analyzed: 06/20/19						
Acetone	**17.9**	7.7	ug/L	20		89.3	27-123			J
Benzene	**18.8**	0.20	ug/L	20		93.8	60-134			
Bromobenzene	**20.3**	0.30	ug/L	20		102	70-130			
Bromochloromethane	**20.8**	0.50	ug/L	20		104	78-121			
Bromodichloromethane	**22.4**	0.20	ug/L	20		112	74-135			
Bromoform	**19.2**	0.50	ug/L	20		96.0	68-132			
Bromomethane	**19.9**	0.50	ug/L	20		99.3	58-142			
2-Butanone (MEK)	**18.0**	2.0	ug/L	20		90.0	62-138			J
tert-Butylbenzene	**21.0**	0.20	ug/L	20		105	70-130			
n-Butylbenzene	**21.8**	0.20	ug/L	20		109	70-130			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS (B9F2004-BS1) Continued				Prepared & Analyzed: 06/20/19						
sec-Butylbenzene	**21.3**	0.20	ug/L	20		107	84-142			
Carbon Disulfide	**21.6**	0.30	ug/L	20		108	17-177			
Carbon Tetrachloride	**22.2**	0.30	ug/L	20		111	66-155			
Chlorobenzene	**20.6**	0.30	ug/L	20		103	70-130			
Chloroethane	**22.7**	0.50	ug/L	20		113	45-166			
Chloroform	**21.5**	0.30	ug/L	20		107	71-131			
Chloromethane	**22.5**	0.40	ug/L	20		112	48-152			
4-Chlorotoluene	**21.3**	0.20	ug/L	20		106	70-130			
2-Chlorotoluene	**21.1**	0.30	ug/L	20		106	70-130			
1,2-Dibromo-3-chloropropane	**21.3**	0.40	ug/L	20		106	53-145			
Dibromochloromethane	**21.1**	0.30	ug/L	20		105	72-133			
1,2-Dibromoethane (EDB)	**21.2**	0.30	ug/L	20		106	79-120			
Dibromomethane	**21.0**	0.40	ug/L	20		105	68-124			
1,3-Dichlorobenzene	**20.4**	0.10	ug/L	20		102	70-130			
1,4-Dichlorobenzene	**19.9**	0.30	ug/L	20		99.4	70-130			
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		105	70-130			
Dichlorodifluoromethane (R12)	**21.1**	0.50	ug/L	20		106	16-148			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		107	67-120			
1,2-Dichloroethane (EDC)	**23.1**	0.30	ug/L	20		115	57-156			
cis-1,2-Dichloroethylene	**21.0**	0.20	ug/L	20		105	70-124			
1,1-Dichloroethylene	**21.2**	0.30	ug/L	20		106	50-149			
trans-1,2-Dichloroethylene	**21.4**	0.40	ug/L	20		107	66-126			
1,3-Dichloropropane	**21.0**	0.10	ug/L	20		105	79-113			
1,2-Dichloropropane	**21.6**	0.50	ug/L	20		108	53-139			
2,2-Dichloropropane	**21.2**	0.40	ug/L	20		106	44-162			
trans-1,3-Dichloropropylene	**21.8**	0.20	ug/L	20		109	76-121			
1,1-Dichloropropylene	**21.9**	0.20	ug/L	20		109	84-124			
cis-1,3-Dichloropropylene	**21.8**	0.20	ug/L	20		109	67-127			
Ethylbenzene	**21.4**	0.20	ug/L	20		107	86-124			
Hexachlorobutadiene	**19.6**	0.40	ug/L	20		97.8	76-140			
2-Hexanone (MBK)	**20.3**	2.0	ug/L	20		102	52-123			
Isopropylbenzene	**21.6**	0.20	ug/L	20		108	70-130			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS (B9F2004-BS1) Continued				Prepared & Analyzed: 06/20/19						
4-Isopropyltoluene	**21.3**	0.20	ug/L	20		107	70-130			
Methyl-tert-Butyl Ether (MTBE)	**41.7**	1.7	ug/L	40		104	58-144			
Methylene Chloride	**20.4**	5.0	ug/L	20		102	50-135			
4-Methyl-2-pentanone (MIBK)	**19.2**	0.70	ug/L	20		96.1	49-139			J
Naphthalene	**21.0**	0.20	ug/L	20		105	74-128			
n-Propylbenzene	**21.8**	0.20	ug/L	20		109	70-130			
Styrene	**21.1**	0.20	ug/L	20		106	84-123			
1,1,1,2-Tetrachloroethane	**20.6**	0.40	ug/L	20		103	70-130			
1,1,2,2-Tetrachloroethane	**22.4**	0.30	ug/L	20		112	58-126			
Tetrachloroethylene (PCE)	**20.1**	0.50	ug/L	20		100	70-130			
Toluene	**20.8**	0.30	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.1**	0.20	ug/L	20		101	84-128			
1,2,3-Trichlorobenzene	**19.5**	0.20	ug/L	20		97.6	77-134			
1,1,2-Trichloroethane	**21.4**	0.30	ug/L	20		107	75-115			
1,1,1-Trichloroethane	**22.2**	0.30	ug/L	20		111	66-158			
Trichloroethylene (TCE)	**21.1**	0.20	ug/L	20		105	82-128			
Trichlorofluoromethane (R11)	**18.9**	0.20	ug/L	20		94.4	65-137			
1,2,3-Trichloropropane	**22.0**	0.30	ug/L	20		110	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20		80.0	62-130			
1,2,4-Trimethylbenzene	**21.3**	0.30	ug/L	20		106	70-130			
1,3,5-Trimethylbenzene	**21.5**	0.20	ug/L	20		108	70-130			
Vinyl chloride	**23.2**	0.50	ug/L	20		116	51-151			
o-Xylene	**21.5**	0.30	ug/L	20		108	70-130			
m,p-Xylenes	**42.9**	0.40	ug/L	40		107	70-130			
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.1*	*80-129*			
Surrogate: Dibromofluoromethane	*48.9*		*ug/L*	*50*		*97.8*	*68-137*			
Surrogate: Toluene-d8	*48.3*		*ug/L*	*50*		*96.7*	*83-134*			
LCS Dup (B9F2004-BSD1)				Prepared & Analyzed: 06/20/19						
Acetone	**19.1**	7.7	ug/L	20		95.6	27-123	6.76	30	J
Benzene	**19.4**	0.20	ug/L	20		96.8	60-134	3.15	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
Bromobenzene	**19.5**	0.30	ug/L	20		97.6	70-130	4.02	30	
Bromochloromethane	**22.3**	0.50	ug/L	20		112	78-121	6.90	30	
Bromodichloromethane	**23.1**	0.20	ug/L	20		115	74-135	3.12	30	
Bromoform	**19.5**	0.50	ug/L	20		97.4	68-132	1.55	30	
Bromomethane	**17.0**	0.50	ug/L	20		84.8	58-142	15.7	30	
2-Butanone (MEK)	**20.4**	2.0	ug/L	20		102	62-138	12.6	30	
tert-Butylbenzene	**20.8**	0.20	ug/L	20		104	70-130	1.24	30	
n-Butylbenzene	**20.7**	0.20	ug/L	20		104	70-130	5.26	30	
sec-Butylbenzene	**20.8**	0.20	ug/L	20		104	84-142	2.51	30	
Carbon Disulfide	**21.5**	0.30	ug/L	20		108	17-177	0.279	30	
Carbon Tetrachloride	**23.1**	0.30	ug/L	20		116	66-155	4.24	30	
Chlorobenzene	**20.2**	0.30	ug/L	20		101	70-130	2.01	30	
Chloroethane	**47.9**	0.50	ug/L	20		239	45-166	71.4	30	**, AA-C1
Chloroform	**22.6**	0.30	ug/L	20		113	71-131	5.17	30	
Chloromethane	**22.4**	0.40	ug/L	20		112	48-152	0.401	30	
4-Chlorotoluene	**20.5**	0.20	ug/L	20		103	70-130	3.78	30	
2-Chlorotoluene	**20.3**	0.30	ug/L	20		102	70-130	3.91	30	
1,2-Dibromo-3-chloropropane	**21.1**	0.40	ug/L	20		105	53-145	0.850	30	
Dibromochloromethane	**21.2**	0.30	ug/L	20		106	72-133	0.615	30	
1,2-Dibromoethane (EDB)	**21.3**	0.30	ug/L	20		106	79-120	0.329	30	
Dibromomethane	**21.9**	0.40	ug/L	20		110	68-124	4.33	30	
1,3-Dichlorobenzene	**19.4**	0.10	ug/L	20		97.2	70-130	4.52	30	
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		98.2	70-130	1.27	30	
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	70-130	3.31	30	
Dichlorodifluoromethane (R12)	**22.5**	0.50	ug/L	20		112	16-148	6.28	30	
1,1-Dichloroethane	**22.2**	0.20	ug/L	20		111	67-120	4.04	30	
1,2-Dichloroethane (EDC)	**25.8**	0.30	ug/L	20		129	57-156	11.0	30	
cis-1,2-Dichloroethylene	**21.8**	0.20	ug/L	20		109	70-124	3.65	30	
1,1-Dichloroethylene	**21.4**	0.30	ug/L	20		107	50-149	0.563	30	
trans-1,2-Dichloroethylene	**21.3**	0.40	ug/L	20		106	66-126	0.609	30	
1,3-Dichloropropane	**22.1**	0.10	ug/L	20		110	79-113	5.16	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
1,2-Dichloropropane	**23.0**	0.50	ug/L	20		115	53-139	6.23	30	
2,2-Dichloropropane	**18.1**	0.40	ug/L	20		90.5	44-162	16.0	30	
trans-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20		109	76-121	0.551	30	
1,1-Dichloropropylene	**22.4**	0.20	ug/L	20		112	84-124	2.35	30	
cis-1,3-Dichloropropylene	**22.1**	0.20	ug/L	20		110	67-127	1.14	30	
Ethylbenzene	**21.1**	0.20	ug/L	20		106	86-124	1.46	30	
Hexachlorobutadiene	**19.3**	0.40	ug/L	20		96.4	76-140	1.49	30	
2-Hexanone (MBK)	**21.3**	2.0	ug/L	20		107	52-123	4.85	30	
Isopropylbenzene	**21.1**	0.20	ug/L	20		105	70-130	2.67	30	
4-Isopropyltoluene	**20.4**	0.20	ug/L	20		102	70-130	4.46	30	
Methyl-tert-Butyl Ether (MTBE)	**44.3**	1.7	ug/L	40		111	58-144	6.14	30	
Methylene Chloride	**21.0**	5.0	ug/L	20		105	50-135	2.90	30	
4-Methyl-2-pentanone (MIBK)	**18.6**	0.70	ug/L	20		92.9	49-139	3.39	30	J
Naphthalene	**20.1**	0.20	ug/L	20		101	74-128	4.09	30	
n-Propylbenzene	**20.7**	0.20	ug/L	20		103	70-130	5.23	30	
Styrene	**20.8**	0.20	ug/L	20		104	84-123	1.53	30	
1,1,1,2-Tetrachloroethane	**20.4**	0.40	ug/L	20		102	70-130	1.07	30	
1,1,2,2-Tetrachloroethane	**23.3**	0.30	ug/L	20		116	58-126	4.03	30	
Tetrachloroethylene (PCE)	**19.4**	0.50	ug/L	20		97.2	70-130	3.34	30	
Toluene	**20.8**	0.30	ug/L	20		104	83-118	0.0961	30	
1,2,4-Trichlorobenzene	**19.0**	0.20	ug/L	20		95.0	84-128	5.67	30	
1,2,3-Trichlorobenzene	**19.0**	0.20	ug/L	20		94.8	77-134	2.91	30	
1,1,2-Trichloroethane	**21.6**	0.30	ug/L	20		108	75-115	0.744	30	
1,1,1-Trichloroethane	**23.5**	0.30	ug/L	20		117	66-158	5.42	30	
Trichloroethylene (TCE)	**22.2**	0.20	ug/L	20		111	82-128	5.08	30	
Trichlorofluoromethane (R11)	**19.6**	0.20	ug/L	20		98.0	65-137	3.69	30	
1,2,3-Trichloropropane	**22.7**	0.30	ug/L	20		114	68-123	3.17	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.2**	0.30	ug/L	20		76.2	62-130	4.74	30	
1,2,4-Trimethylbenzene	**20.7**	0.30	ug/L	20		103	70-130	3.00	30	
1,3,5-Trimethylbenzene	**20.9**	0.20	ug/L	20		105	70-130	2.78	30	
Vinyl chloride	**24.2**	0.50	ug/L	20		121	51-151	4.21	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
o-Xylene	**21.3**	0.30	ug/L	20		106	70-130	1.12	30	
m,p-Xylenes	**42.2**	0.40	ug/L	40		106	70-130	1.69	30	
Surrogate: 4-Bromofluorobenzene	*48.2*		*ug/L*	*50*		*96.4*	*80-129*			
Surrogate: Dibromofluoromethane	*51.6*		*ug/L*	*50*		*103*	*68-137*			
Surrogate: Toluene-d8	*49.1*		*ug/L*	*50*		*98.1*	*83-134*			
Matrix Spike (B9F2004-MS1)		**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19						
Acetone	**31.1**	7.7	ug/L	20	10.5	103	11-169			J
Benzene	**18.8**	0.20	ug/L	20		94.1	56-135			
Bromobenzene	**19.7**	0.30	ug/L	20		98.4	70-130			
Bromochloromethane	**20.7**	0.50	ug/L	20		104	74-125			
Bromodichloromethane	**22.6**	0.20	ug/L	20		113	68-144			
Bromoform	**19.5**	0.50	ug/L	20		97.4	68-151			
Bromomethane	**16.5**	0.50	ug/L	20		82.5	54-142			
2-Butanone (MEK)	**18.7**	2.0	ug/L	20		93.6	62-145			J
tert-Butylbenzene	**20.3**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**21.0**	0.20	ug/L	20		105	70-130			
sec-Butylbenzene	**20.4**	0.20	ug/L	20		102	84-145			
Carbon Disulfide	**22.1**	0.30	ug/L	20		110	28-151			
Carbon Tetrachloride	**22.6**	0.30	ug/L	20		113	58-164			
Chlorobenzene	**20.5**	0.30	ug/L	20		102	70-130			
Chloroethane	**32.2**	0.50	ug/L	20		161	42-164			
Chloroform	**21.3**	0.30	ug/L	20		107	65-138			
Chloromethane	**21.4**	0.40	ug/L	20		107	50-152			
4-Chlorotoluene	**20.6**	0.20	ug/L	20		103	70-130			
2-Chlorotoluene	**20.5**	0.30	ug/L	20		103	70-130			
1,2-Dibromo-3-chloropropane	**21.0**	0.40	ug/L	20		105	53-161			
Dibromochloromethane	**21.3**	0.30	ug/L	20		107	70-130			
1,2-Dibromoethane (EDB)	**21.7**	0.30	ug/L	20		108	76-130			
Dibromomethane	**21.3**	0.40	ug/L	20		106	62-135			
1,3-Dichlorobenzene	**19.8**	0.10	ug/L	20		99.2	70-130			
1,4-Dichlorobenzene	**19.4**	0.30	ug/L	20		96.8	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike (B9F2004-MS1) Continued	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	70-130			
Dichlorodifluoromethane (R12)	**20.8**	0.50	ug/L	20		104	17-153			
1,1-Dichloroethane	**30.1**	0.20	ug/L	20	7.50	113	55-131			
1,2-Dichloroethane (EDC)	**25.5**	0.30	ug/L	20		128	52-168			
cis-1,2-Dichloroethylene	**67.1**	0.20	ug/L	20	43.3	119	70-130			
1,1-Dichloroethylene	**25.4**	0.30	ug/L	20	3.39	110	51-140			
trans-1,2-Dichloroethylene	**23.6**	0.40	ug/L	20	1.89	109	59-127			
1,3-Dichloropropane	**21.6**	0.10	ug/L	20		108	80-121			
1,2-Dichloropropane	**22.6**	0.50	ug/L	20		113	52-142			
2,2-Dichloropropane	**19.2**	0.40	ug/L	20		95.8	36-168			
trans-1,3-Dichloropropylene	**21.4**	0.20	ug/L	20		107	78-130			
1,1-Dichloropropylene	**22.3**	0.20	ug/L	20		112	76-132			
cis-1,3-Dichloropropylene	**22.2**	0.20	ug/L	20		111	66-130			
Ethylbenzene	**21.1**	0.20	ug/L	20		105	86-128			
Hexachlorobutadiene	**18.8**	0.40	ug/L	20		94.0	70-130			
2-Hexanone (MBK)	**22.1**	2.0	ug/L	20		110	52-141			
Isopropylbenzene	**20.7**	0.20	ug/L	20		104	70-130			
4-Isopropyltoluene	**20.6**	0.20	ug/L	20		103	83-149			
Methyl-tert-Butyl Ether (MTBE)	**43.6**	1.7	ug/L	40		109	56-150			
Methylene Chloride	**19.8**	5.0	ug/L	20		99.0	70-130			
4-Methyl-2-pentanone (MIBK)	**19.7**	0.70	ug/L	20		98.6	60-148			J
Naphthalene	**20.3**	0.20	ug/L	20		102	70-130			
n-Propylbenzene	**20.7**	0.20	ug/L	20		104	70-130			
Styrene	**20.9**	0.20	ug/L	20		104	65-141			
1,1,1,2-Tetrachloroethane	**20.2**	0.40	ug/L	20		101	70-130			
1,1,2,2-Tetrachloroethane	**22.9**	0.30	ug/L	20		114	62-134			
Tetrachloroethylene (PCE)	**19.5**	0.50	ug/L	20		97.4	70-130			
Toluene	**20.9**	0.30	ug/L	20		104	81-123			
1,2,4-Trichlorobenzene	**19.2**	0.20	ug/L	20		95.8	80-137			
1,2,3-Trichlorobenzene	**18.7**	0.20	ug/L	20		93.6	73-144			
1,1,2-Trichloroethane	**21.9**	0.30	ug/L	20		110	76-122			
1,1,1-Trichloroethane	**22.0**	0.30	ug/L	20		110	62-164			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike (B9F2004-MS1) Continued	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
Trichloroethylene (TCE)	**31.8**	0.20	ug/L	20	8.80	115	72-136			
Trichlorofluoromethane (R11)	**19.7**	0.20	ug/L	20		98.4	59-144			
1,2,3-Trichloropropane	**22.7**	0.30	ug/L	20		113	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.3**	0.30	ug/L	20		76.3	62-126			
1,2,4-Trimethylbenzene	**20.5**	0.30	ug/L	20		103	89-134			
1,3,5-Trimethylbenzene	**20.8**	0.20	ug/L	20		104	70-130			
Vinyl chloride	**23.5**	0.50	ug/L	20		117	54-150			
o-Xylene	**21.2**	0.30	ug/L	20		106	70-130			
m,p-Xylenes	**42.3**	0.40	ug/L	40		106	70-130			
Surrogate: 4-Bromofluorobenzene	*48.0*		*ug/L*	*50*		*96.1*	*80-129*			
Surrogate: Dibromofluoromethane	*50.4*		*ug/L*	*50*		*101*	*68-137*			
Surrogate: Toluene-d8	*48.2*		*ug/L*	*50*		*96.4*	*83-134*			
Matrix Spike Dup (B9F2004-MSD1)	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
Acetone	**28.5**	7.7	ug/L	20	10.5	90.0	11-169	8.80	30	J
Benzene	**18.5**	0.20	ug/L	20		92.3	56-135	1.93	30	
Bromobenzene	**20.0**	0.30	ug/L	20		100	70-130	1.81	30	
Bromochloromethane	**20.0**	0.50	ug/L	20		99.8	74-125	3.69	30	
Bromodichloromethane	**22.2**	0.20	ug/L	20		111	68-144	1.88	30	
Bromoform	**19.5**	0.50	ug/L	20		97.6	68-151	0.205	30	
Bromomethane	**20.9**	0.50	ug/L	20		105	54-142	23.7	30	
2-Butanone (MEK)	**19.6**	2.0	ug/L	20		97.8	62-145	4.44	30	J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		103	70-130	1.03	30	
n-Butylbenzene	**20.8**	0.20	ug/L	20		104	70-130	1.29	30	
sec-Butylbenzene	**20.5**	0.20	ug/L	20		102	84-145	0.245	30	
Carbon Disulfide	**21.1**	0.30	ug/L	20		105	28-151	4.59	30	
Carbon Tetrachloride	**21.5**	0.30	ug/L	20		107	58-164	4.91	30	
Chlorobenzene	**20.0**	0.30	ug/L	20		100	70-130	2.27	30	
Chloroethane	**45.6**	0.50	ug/L	20		228	42-164	34.6	30	**, AA-C1
Chloroform	**20.4**	0.30	ug/L	20		102	65-138	4.66	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike Dup (B9F2004-MSD1) Continued	**Source: 9F13001-18**				Prepared & Analyzed: 06/20/19					
Chloromethane	**21.0**	0.40	ug/L	20		105	50-152	2.31	30	
4-Chlorotoluene	**20.6**	0.20	ug/L	20		103	70-130	0.146	30	
2-Chlorotoluene	**20.4**	0.30	ug/L	20		102	70-130	0.587	30	
1,2-Dibromo-3-chloropropane	**22.1**	0.40	ug/L	20		110	53-161	4.87	30	
Dibromochloromethane	**20.9**	0.30	ug/L	20		104	70-130	2.18	30	
1,2-Dibromoethane (EDB)	**21.4**	0.30	ug/L	20		107	76-130	1.21	30	
Dibromomethane	**20.5**	0.40	ug/L	20		102	62-135	3.69	30	
1,3-Dichlorobenzene	**19.7**	0.10	ug/L	20		98.4	70-130	0.861	30	
1,4-Dichlorobenzene	**19.7**	0.30	ug/L	20		98.3	70-130	1.59	30	
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20		102	70-130	0.789	30	
Dichlorodifluoromethane (R12)	**19.1**	0.50	ug/L	20		95.4	17-153	8.63	30	
1,1-Dichloroethane	**28.2**	0.20	ug/L	20	7.50	104	55-131	6.48	30	
1,2-Dichloroethane (EDC)	**24.5**	0.30	ug/L	20		123	52-168	3.92	30	
cis-1,2-Dichloroethylene	**63.1**	0.20	ug/L	20	43.3	99.2	70-130	6.14	30	
1,1-Dichloroethylene	**24.5**	0.30	ug/L	20	3.39	106	51-140	3.49	30	
trans-1,2-Dichloroethylene	**22.8**	0.40	ug/L	20	1.89	105	59-127	3.40	30	
1,3-Dichloropropane	**21.2**	0.10	ug/L	20		106	80-121	1.86	30	
1,2-Dichloropropane	**22.1**	0.50	ug/L	20		111	52-142	1.93	30	
2,2-Dichloropropane	**17.6**	0.40	ug/L	20		87.9	36-168	8.55	30	
trans-1,3-Dichloropropylene	**21.2**	0.20	ug/L	20		106	78-130	0.799	30	
1,1-Dichloropropylene	**21.3**	0.20	ug/L	20		106	76-132	4.82	30	
cis-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20		108	66-130	2.33	30	
Ethylbenzene	**20.7**	0.20	ug/L	20		104	86-128	1.68	30	
Hexachlorobutadiene	**19.5**	0.40	ug/L	20		97.4	70-130	3.55	30	
2-Hexanone (MBK)	**20.9**	2.0	ug/L	20		105	52-141	5.35	30	
Isopropylbenzene	**20.6**	0.20	ug/L	20		103	70-130	0.678	30	
4-Isopropyltoluene	**20.2**	0.20	ug/L	20		101	83-149	2.06	30	
Methyl-tert-Butyl Ether (MTBE)	**44.0**	1.7	ug/L	40		110	56-150	0.913	30	
Methylene Chloride	**19.3**	5.0	ug/L	20		96.6	70-130	2.35	30	
4-Methyl-2-pentanone (MIBK)	**20.2**	0.70	ug/L	20		101	60-148	2.16	30	
Naphthalene	**21.4**	0.20	ug/L	20		107	70-130	5.03	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874355
Date Received: 06/12/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike Dup (B9F2004-MSD1) Continued		**Source: 9F13001-18**			Prepared & Analyzed: 06/20/19					
n-Propylbenzene	**20.8**	0.20	ug/L	20		104	70-130	0.289	30	
Styrene	**20.6**	0.20	ug/L	20		103	65-141	1.20	30	
1,1,1,2-Tetrachloroethane	**20.0**	0.40	ug/L	20		100	70-130	0.944	30	
1,1,2,2-Tetrachloroethane	**23.2**	0.30	ug/L	20		116	62-134	1.30	30	
Tetrachloroethylene (PCE)	**19.4**	0.50	ug/L	20		96.8	70-130	0.567	30	
Toluene	**20.0**	0.30	ug/L	20		100	81-123	4.16	30	
1,2,4-Trichlorobenzene	**19.8**	0.20	ug/L	20		98.9	80-137	3.24	30	
1,2,3-Trichlorobenzene	**19.5**	0.20	ug/L	20		97.3	73-144	3.93	30	
1,1,2-Trichloroethane	**21.5**	0.30	ug/L	20		108	76-122	1.75	30	
1,1,1-Trichloroethane	**21.2**	0.30	ug/L	20		106	62-164	3.52	30	
Trichloroethylene (TCE)	**30.5**	0.20	ug/L	20	8.80	108	72-136	4.20	30	
Trichlorofluoromethane (R11)	**18.1**	0.20	ug/L	20		90.6	59-144	8.31	30	
1,2,3-Trichloropropane	**23.3**	0.30	ug/L	20		116	69-135	2.66	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**14.8**	0.30	ug/L	20		74.2	62-126	2.72	30	
1,2,4-Trimethylbenzene	**20.7**	0.30	ug/L	20		103	89-134	0.728	30	
1,3,5-Trimethylbenzene	**20.6**	0.20	ug/L	20		103	70-130	0.869	30	
Vinyl chloride	**22.6**	0.50	ug/L	20		113	54-150	3.64	30	
o-Xylene	**20.8**	0.30	ug/L	20		104	70-130	2.00	30	
m,p-Xylenes	**41.4**	0.40	ug/L	40		103	70-130	2.10	30	
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.3*	*80-129*			
Surrogate: Dibromofluoromethane	*49.1*		*ug/L*	*50*		*98.3*	*68-137*			
Surrogate: Toluene-d8	*47.4*		*ug/L*	*50*		*94.7*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874355
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/27/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No. 18345

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 Fax: 818-998-7258

Page 1 of 1

Client: Haley & Aldrich ; JHA Environmental, Inc.	Project Name / No.: Cooper Drum	Sampler's Name: Alex Felix
Project Manager: Chris Tsiatsios / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature:
Phone: 714-371-1820 / 714-392-5970	City: Southgate	P.O.No:
Fax: 949-453-1047	State & Zip: CA	Quote.:

TAT Turnaround Codes **

1 = Same Day Rush 4 = 72 Hour Rush

2 = 24 Hour Rush 5 = 5 Day Rush

3 = 48 Hour Rush X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	8260B	1,4 Dioxane by 8270C	Please enter the TAT Turnaround Codes ** below	Special Instructions
EW-INF-061219-0001	9F12014-01	6/12/2019	1050	Water	4	X	X		
TOTAL-EFF-061219-0001	-02	6/12/2019	1040	Water	4	X	X		

SAMPLE INTEGRITY

INTACT (Y) N TEMP 4.3

'19 JUN 12 4:17PM

For Laboratory Use

REVIEWED

Date 6/12/19 Time 1715

TAT N Days Sign:

A.A. Project No.: A8743559/9F12019

	Relinquished by	Date	Time	Received by
		6-12-19	1300	
	Relinquished by	Date	Time	Received by
		6-12-19	1617	
	Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 24, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874356 / 9F12015

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/12/19 16:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
VP-05A-061219-0001	9F12015-01	Vapor	5	06/12/19 11:05	06/12/19 16:17
VP-07C-061219-0001	9F12015-02	Vapor	5	06/12/19 11:20	06/12/19 16:17
VP-09D-061219-0001	9F12015-03	Vapor	5	06/12/19 11:40	06/12/19 16:17
VP-10B-061219-0001	9F12015-04	Vapor	5	06/12/19 10:30	06/12/19 16:17
VP-13B-061219-0001	9F12015-05	Vapor	5	06/12/19 10:00	06/12/19 16:17
VP-14B-061219-0001	9F12015-06	Vapor	5	06/12/19 09:10	06/12/19 16:17
VP-14C-061219-0001	9F12015-07	Vapor	5	06/12/19 08:50	06/12/19 16:17
VP-14D-061219-0001	9F12015-08	Vapor	5	06/12/19 08:30	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-05A-061219-0001

9F12015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.026**	ug/L	0.050	**11**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.014**	ug/L	0.0098	**2.9**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.0091**	ug/L	0.020	**1.5**	ppbv	3.3
1,3-Dichlorobenzene	**0.028**	ug/L	0.020	**4.7**	ppbv	3.3
1,4-Dichlorobenzene	**0.044**	ug/L	0.020	**7.3**	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.22** **c	ug/L	0.0081	**55** **c	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-05A-061219-0001

9F12015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.020**	ug/L	0.0079	**5.1**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	**0.085**	ug/L	0.0079	**21**	ppbv	2.0
1,2-Dichloropropane	**0.015**	ug/L	0.010	**3.3**	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	**0.0082**	ug/L	0.01	**1.9**	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	**0.0053**	ug/L	0.0098	**1.3**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**2.1** **c	ug/L	0.014	**320** **c	ppbv	2.0
Toluene	**0.019**	ug/L	0.049	**5.0**	ppbv	13
1,2,4-Trichlorobenzene	**0.020**	ug/L	0.020	**2.7**	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-05A-061219-0001

9F12015-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	**0.018**	ug/L	0.020	**3.4**	ppbv	3.7
Trichloroethylene (TCE)	**0.26** **c	ug/L	0.011	**49** **c	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**0.016**	ug/L	0.050	**2.0**	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	**0.0058**	ug/L	0.0098	**1.2**	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.017**	ug/L	0.01	**4.0**	ppbv	2.3
m,p-Xylenes	**0.032**	ug/L	0.01	**7.4**	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	109 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-07C-061219-0001

9F12015-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.021**	ug/L	0.050	**8.8**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	**0.0064**	ug/L	0.010	**1.4**	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.0068**	ug/L	0.0098	**1.4**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.048**	ug/L	0.020	**8.0**	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	**0.0051**	ug/L	0.020	**0.84**	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.012**	ug/L	0.0081	**3.0**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-07C-061219-0001

9F12015-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.019**	ug/L	0.0079	**4.8**	ppbv	2.0
1,1-Dichloroethylene	**0.0024**	ug/L	0.0079	**0.60**	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	**0.0052**	ug/L	0.01	**1.2**	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	**0.0034**	ug/L	0.0098	**0.80**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.15**	ug/L	0.014	**23**	ppbv	2.0
Toluene	**0.013**	ug/L	0.049	**3.4**	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-07C-061219-0001

9F12015-02 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
1,1,2-Trichloroethane	<0.005		ug/L	0.020	<0.92		ppbv	3.7
1,1,1-Trichloroethane	<0.005		ug/L	0.020	<0.92		ppbv	3.7
Trichloroethylene (TCE)	**0.25**	**	ug/L	0.011	**46**	**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013		ug/L	0.050	<2.2		ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012		ug/L	0.050	<1.6		ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
1,2,4-Trimethylbenzene	**0.0046**		ug/L	0.0098	**0.93**		ppbv	2.0
Vinyl acetate	<0.0025		ug/L	0.0099	<0.70		ppbv	2.8
Vinyl chloride	<0.0025		ug/L	0.01	<0.98		ppbv	3.9
o-Xylene	**0.011**		ug/L	0.01	**2.5**		ppbv	2.3
m,p-Xylenes	**0.020**		ug/L	0.01	**4.7**		ppbv	2.3
1,2,3-Trichloropropane	<0.003		ug/L	0.012	<0.50		ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	106 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-09D-061219-0001

9F12015-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.021**	ug/L	0.050	**8.8**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.003**	ug/L	0.0098	**0.60**	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.025**	ug/L	0.0081	**6.1**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	1	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-09D-061219-0001

9F12015-03 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.094**	**	ug/L	0.0079	**24**	**	ppbv	2.0
1,1-Dichloroethylene	**0.0032**		ug/L	0.0079	**0.82**		ppbv	2.0
trans-1,2-Dichloroethylene	**0.018**		ug/L	0.0079	**4.4**		ppbv	2.0
1,2-Dichloropropane	<0.0025		ug/L	0.010	<0.55		ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
Dichlorotetrafluoroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.2
1,4-Dioxane	<0.0025		ug/L	0.010	<0.70		ppbv	2.8
Ethylbenzene	<0.0025		ug/L	0.01	<0.58		ppbv	2.3
4-Ethyltoluene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
Hexachlorobutadiene	<0.013		ug/L	0.050	<1.2		ppbv	4.7
2-Hexanone (MBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Isopropanol (IPA)	<0.025		ug/L	0.10	<10		ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025		ug/L	0.010	<0.70		ppbv	2.8
Methylene Chloride	<0.012		ug/L	0.049	<3.5		ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Styrene	<0.0024		ug/L	0.0098	<0.58		ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.3
Tetrachloroethylene (PCE)	**0.024**		ug/L	0.014	**3.6**		ppbv	2.0
Toluene	<0.012		ug/L	0.049	<3.2		ppbv	13
1,2,4-Trichlorobenzene	<0.005		ug/L	0.020	<0.68		ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-09D-061219-0001

9F12015-03 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
1,1,2-Trichloroethane	<0.005		ug/L	0.020	<0.92		ppbv	3.7
1,1,1-Trichloroethane	<0.005		ug/L	0.020	<0.92		ppbv	3.7
Trichloroethylene (TCE)	**0.22**	**	ug/L	0.011	**41**	**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013		ug/L	0.050	<2.2		ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012		ug/L	0.050	<1.6		ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
Vinyl acetate	<0.0025		ug/L	0.0099	<0.70		ppbv	2.8
Vinyl chloride	<0.0025		ug/L	0.01	<0.98		ppbv	3.9
o-Xylene	**0.0033**		ug/L	0.01	**0.77**		ppbv	2.3
m,p-Xylenes	**0.0063**		ug/L	0.01	**1.4**		ppbv	2.3
1,2,3-Trichloropropane	<0.003		ug/L	0.012	<0.50		ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	104 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	2	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-10B-061219-0001

9F12015-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.20** **b	ug/L	0.050	**85** **b	ppbv	21
Benzene	**0.015**	ug/L	0.0096	**4.8**	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	**0.10** E	ug/L	0.050	**36** E	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	**0.051**	ug/L	0.010	**11**	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.013**	ug/L	0.020	**2.2**	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.061**	ug/L	0.0081	**15**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	2	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-10B-061219-0001

9F12015-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.12** **b	ug/L	0.0079	**30** **b	ppbv	2.0
1,1-Dichloroethylene	**0.029**	ug/L	0.0079	**7.3**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.035**	ug/L	0.0079	**8.9**	ppbv	2.0
1,2-Dichloropropane	**0.0033**	ug/L	0.010	**0.72**	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	**0.13** **b	ug/L	0.01	**31** **b	ppbv	2.3
4-Ethyltoluene	**0.015**	ug/L	0.0098	**3.0**	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	**0.11** E	ug/L	0.10	**45** E	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	**0.19** **b	ug/L	0.049	**47** **b	ppbv	12
Styrene	**0.10**	ug/L	0.0098	**24**	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.25** **b	ug/L	0.014	**37** **b	ppbv	2.0
Toluene	**0.48** **b	ug/L	0.049	**130** **b	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-10B-061219-0001

9F12015-04 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.17** **b	ug/L	0.011	**32** **b	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	**0.024**	ug/L	0.0098	**4.9**	ppbv	2.0
1,2,4-Trimethylbenzene	**0.050**	ug/L	0.0098	**10**	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	**0.019**	ug/L	0.01	**7.4**	ppbv	3.9
o-Xylene	**0.20** **b	ug/L	0.01	**45** **b	ppbv	2.3
m,p-Xylenes	**0.40** **b	ug/L	0.01	**93** **b	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	122 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	10	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-13B-061219-0001

9F12015-05 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.55** **a	ug/L	0.050	**230** **a	ppbv	21
Benzene	**0.034**	ug/L	0.0096	**11**	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	**0.062**	ug/L	0.050	**21**	ppbv	17
Carbon Disulfide	**0.017**	ug/L	0.050	**5.5**	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	**0.065**	ug/L	0.020	**11**	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	<0.002	ug/L	0.0081	<0.50	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-13B-061219-0001

9F12015-05 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
cis-1,2-Dichloroethylene	<0.002		ug/L	0.0079	<0.50		ppbv	2.0
1,1-Dichloroethylene	<0.002		ug/L	0.0079	<0.50		ppbv	2.0
trans-1,2-Dichloroethylene	<0.002		ug/L	0.0079	<0.50		ppbv	2.0
1,2-Dichloropropane	<0.0025		ug/L	0.010	<0.55		ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
Dichlorotetrafluoroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.2
1,4-Dioxane	**0.84**	**a	ug/L	0.010	**230**	**a	ppbv	2.8
Ethylbenzene	**0.16**	**a	ug/L	0.01	**36**	**a	ppbv	2.3
4-Ethyltoluene	**0.050**		ug/L	0.0098	**10**		ppbv	2.0
Hexachlorobutadiene	<0.013		ug/L	0.050	<1.2		ppbv	4.7
2-Hexanone (MBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Isopropanol (IPA)	<0.025		ug/L	0.10	<10		ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025		ug/L	0.010	<0.70		ppbv	2.8
Methylene Chloride	<0.012		ug/L	0.049	<3.5		ppbv	14
4-Methyl-2-pentanone (MIBK)	**0.28**	E	ug/L	0.049	**69**	E	ppbv	12
Styrene	<0.0024		ug/L	0.0098	<0.58		ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.3
Tetrachloroethylene (PCE)	**0.59**	**a	ug/L	0.014	**87**	**a	ppbv	2.0
Toluene	**0.16**	E	ug/L	0.049	**41**	E	ppbv	13
1,2,4-Trichlorobenzene	<0.005		ug/L	0.020	<0.68		ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-13B-061219-0001

9F12015-05 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.028**	ug/L	0.011	**5.3**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	**0.073**	ug/L	0.0098	**15**	ppbv	2.0
1,2,4-Trimethylbenzene	**0.13** **a	ug/L	0.0098	**27** **a	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	**0.33** **a	ug/L	0.01	**75** **a	ppbv	2.3
m,p-Xylenes	**0.67** **a	ug/L	0.01	**150** **a	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	122 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14B-061219-0001

9F12015-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.018**	ug/L	0.050	**7.5**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0097**	ug/L	0.0081	**2.4**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14B-061219-0001

9F12015-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.0031**	ug/L	0.0079	**0.78**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.075**	ug/L	0.014	**11**	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14B-061219-0001

9F12015-06 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.0047**	ug/L	0.011	**0.88**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	105 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14C-061219-0001

9F12015-07 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.015**	ug/L	0.050	**6.3**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	**0.012**	ug/L	0.0098	**2.5**	ppbv	2.0
Chloromethane	**0.0031**	ug/L	0.0099	**1.5**	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0048**	ug/L	0.0081	**1.2**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14C-061219-0001

9F12015-07 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.0067**		ug/L	0.0079	**1.7**		ppbv	2.0
1,1-Dichloroethylene	<0.002		ug/L	0.0079	<0.50		ppbv	2.0
trans-1,2-Dichloroethylene	**0.0054**		ug/L	0.0079	**1.4**		ppbv	2.0
1,2-Dichloropropane	<0.0025		ug/L	0.010	<0.55		ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025		ug/L	0.01	<0.55		ppbv	2.2
Dichlorotetrafluoroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.2
1,4-Dioxane	**0.28**	**	ug/L	0.010	**77**	**	ppbv	2.8
Ethylbenzene	<0.0025		ug/L	0.01	<0.58		ppbv	2.3
4-Ethyltoluene	<0.0025		ug/L	0.0098	<0.50		ppbv	2.0
Hexachlorobutadiene	<0.013		ug/L	0.050	<1.2		ppbv	4.7
2-Hexanone (MBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Isopropanol (IPA)	<0.025		ug/L	0.10	<10		ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025		ug/L	0.010	<0.70		ppbv	2.8
Methylene Chloride	<0.012		ug/L	0.049	<3.5		ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012		ug/L	0.049	<3.0		ppbv	12
Styrene	<0.0024		ug/L	0.0098	<0.58		ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013		ug/L	0.050	<1.8		ppbv	7.3
Tetrachloroethylene (PCE)	**0.21**	**	ug/L	0.014	**31**	**	ppbv	2.0
Toluene	**0.013**		ug/L	0.049	**3.4**		ppbv	13
1,2,4-Trichlorobenzene	<0.005		ug/L	0.020	<0.68		ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

VP-14C-061219-0001

9F12015-07 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.041**	ug/L	0.011	**7.6**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	**0.0031**	ug/L	0.01	**0.70**	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	112 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/14/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-14D-061219-0001

9F12015-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.014**	ug/L	0.050	**6.0**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.0022**	ug/L	0.0081	**0.56**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/14/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-14D-061219-0001

9F12015-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.014**	ug/L	0.0079	**3.5**	ppbv	2.0
1,1-Dichloroethylene	<0.002	ug/L	0.0079	<0.50	ppbv	2.0
trans-1,2-Dichloroethylene	**0.0098**	ug/L	0.0079	**2.5**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	**0.43** **b	ug/L	0.010	**120** **b	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	**0.33** **b	ug/L	0.014	**49** **b	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	0.25	**Prepared:**	06/14/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/14/19

VP-14D-061219-0001

9F12015-08 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	**0.068**	ug/L	0.011	**13**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	<0.0025	ug/L	0.01	<0.98	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	108 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Blank (B9F1924-BLK1)				Prepared & Analyzed: 06/13/19						
Acetone	<5.2	5.2	ppbv							
Benzene	<0.75	0.75	ppbv							
Benzyl chloride	<2.4	2.4	ppbv							
Bromodichloromethane	<1.9	1.9	ppbv							
Bromoform	<1.2	1.2	ppbv							
Bromomethane	<0.65	0.65	ppbv							
2-Butanone (MEK)	<4.2	4.2	ppbv							
Carbon Disulfide	<4.0	4.0	ppbv							
Carbon Tetrachloride	<0.52	0.52	ppbv							
Chlorobenzene	<0.55	0.55	ppbv							
Chloroethane	<0.95	0.95	ppbv							
Chloroform	<0.50	0.50	ppbv							
Chloromethane	<1.2	1.2	ppbv							
Dibromochloromethane	<0.58	0.58	ppbv							
1,2-Dibromoethane (EDB)	<0.65	0.65	ppbv							
1,2-Dichlorobenzene	<0.82	0.82	ppbv							
1,3-Dichlorobenzene	<0.82	0.82	ppbv							
1,4-Dichlorobenzene	<0.82	0.82	ppbv							
Dichlorodifluoromethane (R12)	<2.5	2.5	ppbv							
1,1-Dichloroethane	<0.50	0.50	ppbv							
1,2-Dichloroethane (EDC)	<0.62	0.62	ppbv							
cis-1,2-Dichloroethylene	<0.50	0.50	ppbv							
1,1-Dichloroethylene	<0.50	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.50	0.50	ppbv							
1,2-Dichloropropane	<0.55	0.55	ppbv							
trans-1,3-Dichloropropylene	<0.55	0.55	ppbv							
cis-1,3-Dichloropropylene	<0.55	0.55	ppbv							
Dichlorotetrafluoroethane	<1.8	1.8	ppbv							
1,4-Dioxane	<0.70	0.70	ppbv							
Ethylbenzene	<0.58	0.58	ppbv							
4-Ethyltoluene	<0.50	0.50	ppbv							
Hexachlorobutadiene	<1.2	1.2	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Blank (B9F1924-BLK1) Continued				Prepared & Analyzed: 06/13/19						
2-Hexanone (MBK)	<3.0	3.0	ppbv							
Isopropanol (IPA)	<10	10	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<0.70	0.70	ppbv							
Methylene Chloride	<3.5	3.5	ppbv							
4-Methyl-2-pentanone (MIBK)	<3.0	3.0	ppbv							
Styrene	<0.58	0.58	ppbv							
1,1,2,2-Tetrachloroethane	<1.8	1.8	ppbv							
Tetrachloroethylene (PCE)	<0.50	0.50	ppbv							
Toluene	<3.2	3.2	ppbv							
1,2,4-Trichlorobenzene	<0.68	0.68	ppbv							
1,1,2-Trichloroethane	<0.92	0.92	ppbv							
1,1,1-Trichloroethane	<0.92	0.92	ppbv							
Trichloroethylene (TCE)	<0.50	0.50	ppbv							
Trichlorofluoromethane (R11)	<2.2	2.2	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<1.6	1.6	ppbv							
1,3,5-Trimethylbenzene	<0.50	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.50	0.50	ppbv							
Vinyl acetate	<0.70	0.70	ppbv							
Vinyl chloride	<0.98	0.98	ppbv							
o-Xylene	<0.58	0.58	ppbv							
m,p-Xylenes	<0.58	0.58	ppbv							
1,2,3-Trichloropropane	<0.50	0.50	ppbv							
Surrogate: 4-Bromofluorobenzene	*18.1*		*ppbv*	*20*		*90.3*	*70-130*			
LCS (B9F1924-BS1)				Prepared & Analyzed: 06/13/19						
Acetone	**32.2**	21	ppbv	40		80.4	70-130		30	
Benzene	**36.9**	3.0	ppbv	40		92.4	70-130		30	
Benzyl chloride	**39.4**	9.7	ppbv	40		98.6	70-130		30	
Bromodichloromethane	**36.4**	7.5	ppbv	40		91.0	70-130		30	
Bromoform	**36.6**	4.8	ppbv	40		91.6	70-130		30	
Bromomethane	**41.8**	2.6	ppbv	40		104	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS (B9F1924-BS1) Continued				Prepared & Analyzed: 06/13/19						
2-Butanone (MEK)	**37.4**	17	ppbv	40		93.4	70-130		30	
Carbon Disulfide	**36.3**	16	ppbv	40		90.7	70-130		30	
Carbon Tetrachloride	**36.6**	2.1	ppbv	40		91.4	70-130		30	
Chlorobenzene	**37.3**	2.2	ppbv	40		93.2	70-130		30	
Chloroethane	**43.4**	3.8	ppbv	40		108	70-130		30	
Chloroform	**36.8**	2.0	ppbv	40		92.0	70-130		30	
Chloromethane	**44.2**	4.8	ppbv	40		110	70-130		30	
Dibromochloromethane	**37.0**	2.3	ppbv	40		92.5	70-130		30	
1,2-Dibromoethane (EDB)	**38.5**	2.6	ppbv	40		96.2	70-130		30	
1,2-Dichlorobenzene	**37.3**	3.3	ppbv	40		93.3	70-130		30	
1,3-Dichlorobenzene	**38.3**	3.3	ppbv	40		95.7	70-130		30	
1,4-Dichlorobenzene	**38.8**	3.3	ppbv	40		96.9	70-130		30	
Dichlorodifluoromethane (R12)	**38.2**	10	ppbv	40		95.4	70-130		30	
1,1-Dichloroethane	**37.8**	2.0	ppbv	40		94.5	70-130		30	
1,2-Dichloroethane (EDC)	**36.4**	2.5	ppbv	40		91.0	70-130		30	
cis-1,2-Dichloroethylene	**37.3**	2.0	ppbv	40		93.4	70-130		30	
1,1-Dichloroethylene	**40.8**	2.0	ppbv	40		102	70-130		30	
trans-1,2-Dichloroethylene	**37.2**	2.0	ppbv	40		93.0	70-130		30	
1,2-Dichloropropane	**37.7**	2.2	ppbv	40		94.2	70-130		30	
trans-1,3-Dichloropropylene	**40.4**	2.2	ppbv	40		101	70-130		30	
cis-1,3-Dichloropropylene	**38.2**	2.2	ppbv	40		95.6	70-130		30	
Dichlorotetrafluoroethane	**39.5**	7.2	ppbv	40		98.8	70-130		30	
Ethylbenzene	**34.9**	2.3	ppbv	40		87.4	70-130		30	
4-Ethyltoluene	**33.7**	2.0	ppbv	40		84.2	70-130		30	
Hexachlorobutadiene	**35.3**	4.7	ppbv	40		88.2	70-130		30	
2-Hexanone (MBK)	**37.8**	12	ppbv	40		94.5	70-130		30	
Isopropanol (IPA)	**35.4**	41	ppbv	40		88.4	70-130		30	
Methylene Chloride	**36.4**	14	ppbv	40		91.0	70-130		30	
4-Methyl-2-pentanone (MIBK)	**36.3**	12	ppbv	40		90.6	70-130		30	
Styrene	**39.0**	2.3	ppbv	40		97.4	70-130		30	
1,1,2,2-Tetrachloroethane	**33.0**	7.3	ppbv	40		82.4	70-130		30	
Tetrachloroethylene (PCE)	**35.4**	2.0	ppbv	40		88.4	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS (B9F1924-BS1) Continued				Prepared & Analyzed: 06/13/19						
Toluene	**37.0**	13	ppbv	40		92.5	70-130		30	
1,2,4-Trichlorobenzene	**42.2**	2.7	ppbv	40		105	70-130		30	
1,1,2-Trichloroethane	**37.3**	3.7	ppbv	40		93.2	70-130		30	
1,1,1-Trichloroethane	**36.0**	3.7	ppbv	40		90.0	70-130		30	
Trichloroethylene (TCE)	**35.2**	2.0	ppbv	40		88.1	70-130		30	
Trichlorofluoromethane (R11)	**34.6**	8.9	ppbv	40		86.6	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**37.8**	6.5	ppbv	40		94.4	70-130		30	
1,3,5-Trimethylbenzene	**34.1**	2.0	ppbv	40		85.2	70-130		30	
1,2,4-Trimethylbenzene	**36.4**	2.0	ppbv	40		91.1	70-130		30	
Vinyl acetate	**34.7**	2.8	ppbv	40		86.8	70-130		30	
Vinyl chloride	**41.3**	3.9	ppbv	40		103	70-130		30	
o-Xylene	**33.9**	2.3	ppbv	40		84.8	70-130		30	
m,p-Xylenes	**67.7**	2.3	ppbv	80		84.6	70-130		30	
1,2,3-Trichloropropane	**38.7**	2.0	ppbv	40		96.8	70-130		30	
Surrogate: 4-Bromofluorobenzene	*19.8*		*ppbv*	*20*		*99.0*	*70-130*			
LCS Dup (B9F1924-BSD1)				Prepared & Analyzed: 06/14/19						
Acetone	**32.2**	21	ppbv	40		80.6	70-130	0.280	30	
Benzene	**39.2**	3.0	ppbv	40		97.9	70-130	5.81	30	
Benzyl chloride	**43.2**	9.7	ppbv	40		108	70-130	9.17	30	
Bromodichloromethane	**39.1**	7.5	ppbv	40		97.7	70-130	7.18	30	
Bromoform	**39.7**	4.8	ppbv	40		99.2	70-130	8.04	30	
Bromomethane	**43.6**	2.6	ppbv	40		109	70-130	4.36	30	
2-Butanone (MEK)	**38.0**	17	ppbv	40		94.9	70-130	1.51	30	
Carbon Disulfide	**37.0**	16	ppbv	40		92.4	70-130	1.94	30	
Carbon Tetrachloride	**38.7**	2.1	ppbv	40		96.8	70-130	5.82	30	
Chlorobenzene	**40.4**	2.2	ppbv	40		101	70-130	7.91	30	
Chloroethane	**43.8**	3.8	ppbv	40		110	70-130	0.940	30	
Chloroform	**38.6**	2.0	ppbv	40		96.4	70-130	4.70	30	
Chloromethane	**45.0**	4.8	ppbv	40		113	70-130	1.97	30	
Dibromochloromethane	**38.8**	2.3	ppbv	40		97.1	70-130	4.83	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS Dup (B9F1924-BSD1) Continued				Prepared & Analyzed: 06/14/19						
1,2-Dibromoethane (EDB)	**40.6**	2.6	ppbv	40		102	70-130	5.34	30	
1,2-Dichlorobenzene	**40.7**	3.3	ppbv	40		102	70-130	8.57	30	
1,3-Dichlorobenzene	**41.8**	3.3	ppbv	40		104	70-130	8.67	30	
1,4-Dichlorobenzene	**41.9**	3.3	ppbv	40		105	70-130	7.76	30	
Dichlorodifluoromethane (R12)	**40.2**	10	ppbv	40		101	70-130	5.33	30	
1,1-Dichloroethane	**39.3**	2.0	ppbv	40		98.3	70-130	3.94	30	
1,2-Dichloroethane (EDC)	**37.9**	2.5	ppbv	40		94.8	70-130	4.09	30	
cis-1,2-Dichloroethylene	**39.1**	2.0	ppbv	40		97.8	70-130	4.68	30	
1,1-Dichloroethylene	**33.4**	2.0	ppbv	40		83.6	70-130	19.9	30	
trans-1,2-Dichloroethylene	**39.0**	2.0	ppbv	40		97.5	70-130	4.75	30	
1,2-Dichloropropane	**39.7**	2.2	ppbv	40		99.2	70-130	5.12	30	
trans-1,3-Dichloropropylene	**41.2**	2.2	ppbv	40		103	70-130	1.96	30	
cis-1,3-Dichloropropylene	**41.0**	2.2	ppbv	40		103	70-130	7.07	30	
Dichlorotetrafluoroethane	**41.9**	7.2	ppbv	40		105	70-130	5.72	30	
Ethylbenzene	**37.8**	2.3	ppbv	40		94.5	70-130	7.84	30	
4-Ethyltoluene	**36.7**	2.0	ppbv	40		91.7	70-130	8.61	30	
Hexachlorobutadiene	**38.4**	4.7	ppbv	40		96.0	70-130	8.39	30	
2-Hexanone (MBK)	**39.8**	12	ppbv	40		99.5	70-130	5.13	30	
Isopropanol (IPA)	**36.8**	41	ppbv	40		92.0	70-130	3.91	30	
Methylene Chloride	**30.7**	14	ppbv	40		76.8	70-130	16.8	30	
4-Methyl-2-pentanone (MIBK)	**38.6**	12	ppbv	40		96.4	70-130	6.17	30	
Styrene	**41.8**	2.3	ppbv	40		104	70-130	6.94	30	
1,1,2,2-Tetrachloroethane	**35.4**	7.3	ppbv	40		88.6	70-130	7.20	30	
Tetrachloroethylene (PCE)	**37.4**	2.0	ppbv	40		93.6	70-130	5.68	30	
Toluene	**38.9**	13	ppbv	40		97.2	70-130	4.90	30	
1,2,4-Trichlorobenzene	**48.2**	2.7	ppbv	40		121	70-130	13.4	30	
1,1,2-Trichloroethane	**38.5**	3.7	ppbv	40		96.2	70-130	3.12	30	
1,1,1-Trichloroethane	**37.4**	3.7	ppbv	40		93.5	70-130	3.81	30	
Trichloroethylene (TCE)	**38.0**	2.0	ppbv	40		95.0	70-130	7.59	30	
Trichlorofluoromethane (R11)	**36.3**	8.9	ppbv	40		90.7	70-130	4.66	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**39.4**	6.5	ppbv	40		98.6	70-130	4.27	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS Dup (B9F1924-BSD1) Continued				Prepared & Analyzed: 06/14/19						
1,3,5-Trimethylbenzene	**37.1**	2.0	ppbv	40		92.8	70-130	8.59	30	
1,2,4-Trimethylbenzene	**39.8**	2.0	ppbv	40		99.4	70-130	8.69	30	
Vinyl acetate	**35.1**	2.8	ppbv	40		87.7	70-130	1.06	30	
Vinyl chloride	**42.3**	3.9	ppbv	40		106	70-130	2.34	30	
o-Xylene	**36.8**	2.3	ppbv	40		92.0	70-130	8.17	30	
m,p-Xylenes	**71.9**	2.3	ppbv	80		89.8	70-130	5.96	30	
1,2,3-Trichloropropane	**42.4**	2.0	ppbv	40		106	70-130	8.98	30	
Surrogate: 4-Bromofluorobenzene	*20.0*		*ppbv*	*20*		*100*	*70-130*			
Duplicate (B9F1924-DUP1)			**Source: 9F12016-01**	Prepared & Analyzed: 06/14/19						
Acetone	**<21**	21	ppbv		6.84				30	
Benzene	**<3.0**	3.0	ppbv						30	
Benzyl chloride	**<9.7**	9.7	ppbv						30	
Bromodichloromethane	**<7.5**	7.5	ppbv						30	
Bromoform	**<4.8**	4.8	ppbv						30	
Bromomethane	**<2.6**	2.6	ppbv						30	
2-Butanone (MEK)	**<17**	17	ppbv						30	
Carbon Disulfide	**<16**	16	ppbv		0.550			1.80	30	
Carbon Tetrachloride	**<2.1**	2.1	ppbv						30	
Chlorobenzene	**<2.2**	2.2	ppbv						30	
Chloroethane	**<3.8**	3.8	ppbv						30	
Chloroform	**<2.0**	2.0	ppbv						30	
Chloromethane	**<4.8**	4.8	ppbv						30	
Dibromochloromethane	**<2.3**	2.3	ppbv						30	
1,2-Dibromoethane (EDB)	**<2.6**	2.6	ppbv						30	
1,2-Dichlorobenzene	**<3.3**	3.3	ppbv						30	
1,3-Dichlorobenzene	**<3.3**	3.3	ppbv						30	
1,4-Dichlorobenzene	**<3.3**	3.3	ppbv						30	
Dichlorodifluoromethane (R12)	**<10**	10	ppbv						30	
1,1-Dichloroethane	**7.10**	2.0	ppbv		7.15			0.702	30	
1,2-Dichloroethane (EDC)	**<2.5**	2.5	ppbv						30	
cis-1,2-Dichloroethylene	**18.4**	2.0	ppbv		18.4			0.217	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Duplicate (B9F1924-DUP1) Continued	**Source: 9F12016-01**			Prepared & Analyzed: 06/14/19						
1,1-Dichloroethylene	**<2.0**	2.0	ppbv		0.990			21.2	30	
trans-1,2-Dichloroethylene	**2.48**	2.0	ppbv		2.46			0.810	30	
1,2-Dichloropropane	**<2.2**	2.2	ppbv						30	
trans-1,3-Dichloropropylene	**<2.2**	2.2	ppbv						30	
cis-1,3-Dichloropropylene	**<2.2**	2.2	ppbv						30	
Dichlorotetrafluoroethane	**<7.2**	7.2	ppbv						30	
1,4-Dioxane	**<2.8**	2.8	ppbv						30	
Ethylbenzene	**<2.3**	2.3	ppbv						30	
4-Ethyltoluene	**<2.0**	2.0	ppbv						30	
Hexachlorobutadiene	**<4.7**	4.7	ppbv						30	
2-Hexanone (MBK)	**<12**	12	ppbv						30	
Isopropanol (IPA)	**<41**	41	ppbv						30	
Methyl-tert-Butyl Ether (MTBE)	**<2.8**	2.8	ppbv						30	
Methylene Chloride	**<14**	14	ppbv		18.1			26.3	30	
4-Methyl-2-pentanone (MIBK)	**<12**	12	ppbv						30	
Styrene	**<2.3**	2.3	ppbv						30	
1,1,2,2-Tetrachloroethane	**<7.3**	7.3	ppbv						30	
Tetrachloroethylene (PCE)	**118**	4.0	ppbv		117			1.09	30	**b
Toluene	**<13**	13	ppbv						30	
1,2,4-Trichlorobenzene	**<2.7**	2.7	ppbv						30	
1,1,2-Trichloroethane	**<3.7**	3.7	ppbv						30	
1,1,1-Trichloroethane	**<3.7**	3.7	ppbv						30	
Trichloroethylene (TCE)	**41.0**	2.0	ppbv		41.1			0.171	30	
Trichlorofluoromethane (R11)	**<8.9**	8.9	ppbv						30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<6.5**	6.5	ppbv						30	
1,3,5-Trimethylbenzene	**<2.0**	2.0	ppbv						30	
1,2,4-Trimethylbenzene	**<2.0**	2.0	ppbv						30	
Vinyl acetate	**<2.8**	2.8	ppbv						30	
Vinyl chloride	**<3.9**	3.9	ppbv						30	
o-Xylene	**<2.3**	2.3	ppbv						30	
m,p-Xylenes	**<2.3**	2.3	ppbv						30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874356
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Duplicate (B9F1924-DUP1) Continued	**Source: 9F12016-01**		Prepared & Analyzed: 06/14/19							
1,2,3-Trichloropropane	**<2.0**	2.0	ppbv						30	
Surrogate: 4-Bromofluorobenzene	*21.2*		*ppbv*	*20*		*106*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874356
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19

Special Notes

[1] = ****** : Result obtained from DF=1

[2] = ****a** : Result obtained from DF=10

[3] = ****b** : Result obtained from DF=2

[4] = ****c** : Result obtained from DF=7.5

[5] = **E** : The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 Fax: 818-998-7258

A.A. JC No.: 18346

Client: Haley & Aldrich ; JHA Environmental, Inc.	Project Name / No.: Cooper Drum	Sampler's Name: Alex Felix
Project Manager: Chris Tsiatsios / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature:
Phone: 714-371-1820 / 714-392-5970	City: Southgate	P.O.No:
Fax: 949-453-1047	State & Zip: CA	Quote.:

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15	Special Instructions
VP-05A-061219-0001	9F12015-01	6/12/2019	1105	Vapor	1		X	
VP-07C-061219-0001	-02	6/12/2019	1120	Vapor	1		X	
VP-09D-061219-0001	-03	6/12/2019	1140	Vapor	1		X	
VP-10B-061219-0001	-04	6/12/2019	1030	Vapor	1		X	
VP-13B-061219-0001	-05	6/12/2019	1000	Vapor	1		X	
~~VP-14A-061219-0001~~		~~6/12/2019~~		~~Vapor~~	~~1~~		~~X~~	NOT collected
VP-14B-061219-0001	-06	6/12/2019	0910	Vapor	1		X	
VP-14C-061219-0001	-07	6/12/2019	0850	Vapor	1		X	
VP-14D-061219-0001	-08	6/12/2019	0830	Vapor	1		X	

Please enter the TAT Turnaround Codes ** below

For Laboratory Use	Relinquished by	Date	Time	Received by
PRIORITY Rush Hrs SH ✓ Date 6/12/19 Time 1715 Sign		6-12-19	1440	
		6-12-19	1617	
A.A. Project No.: A874356 / 9F12015		Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 24, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874357 / 9F12016

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/12/19 16:17 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACI-061219-0001	9F12016-01	Vapor	5	06/12/19 14:15	06/12/19 16:17

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874357
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	1	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

SVE-VGACI-061219-0001

9F12016-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.050	ug/L	0.050	<21	ppbv	21
Benzene	<0.0096	ug/L	0.0096	<3.0	ppbv	3.0
Benzyl chloride	<0.050	ug/L	0.050	<9.7	ppbv	9.7
Bromodichloromethane	<0.050	ug/L	0.050	<7.5	ppbv	7.5
Bromoform	<0.050	ug/L	0.050	<4.8	ppbv	4.8
Bromomethane	<0.010	ug/L	0.010	<2.6	ppbv	2.6
2-Butanone (MEK)	<0.050	ug/L	0.050	<17	ppbv	17
Carbon Disulfide	<0.050	ug/L	0.050	<16	ppbv	16
Carbon Tetrachloride	<0.013	ug/L	0.013	<2.1	ppbv	2.1
Chlorobenzene	<0.010	ug/L	0.010	<2.2	ppbv	2.2
Chloroethane	<0.010	ug/L	0.010	<3.8	ppbv	3.8
Chloroform	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Chloromethane	<0.0099	ug/L	0.0099	<4.8	ppbv	4.8
Dibromochloromethane	<0.020	ug/L	0.020	<2.3	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.020	ug/L	0.020	<2.6	ppbv	2.6
1,2-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,3-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
1,4-Dichlorobenzene	<0.020	ug/L	0.020	<3.3	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.049	ug/L	0.049	<10	ppbv	10
1,1-Dichloroethane	**0.029**	ug/L	0.0081	**7.2**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.010	ug/L	0.010	<2.5	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874357
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	1	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

SVE-VGACI-061219-0001

9F12016-01 (Vapor)

Analyte	Result		(ug/L)	MRL	Result		(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.073**		ug/L	0.0079	**18**		ppbv	2.0
1,1-Dichloroethylene	<0.0079		ug/L	0.0079	<2.0		ppbv	2.0
trans-1,2-Dichloroethylene	**0.0098**		ug/L	0.0079	**2.5**		ppbv	2.0
1,2-Dichloropropane	<0.010		ug/L	0.010	<2.2		ppbv	2.2
trans-1,3-Dichloropropylene	<0.01		ug/L	0.01	<2.2		ppbv	2.2
cis-1,3-Dichloropropylene	<0.01		ug/L	0.01	<2.2		ppbv	2.2
Dichlorotetrafluoroethane	<0.050		ug/L	0.050	<7.2		ppbv	7.2
1,4-Dioxane	<0.010		ug/L	0.010	<2.8		ppbv	2.8
Ethylbenzene	<0.01		ug/L	0.01	<2.3		ppbv	2.3
4-Ethyltoluene	<0.0098		ug/L	0.0098	<2.0		ppbv	2.0
Hexachlorobutadiene	<0.050		ug/L	0.050	<4.7		ppbv	4.7
2-Hexanone (MBK)	<0.049		ug/L	0.049	<12		ppbv	12
Isopropanol (IPA)	<0.10		ug/L	0.10	<41		ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.010		ug/L	0.010	<2.8		ppbv	2.8
Methylene Chloride	**0.063**		ug/L	0.049	**18**		ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.049		ug/L	0.049	<12		ppbv	12
Styrene	<0.0098		ug/L	0.0098	<2.3		ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.050		ug/L	0.050	<7.3		ppbv	7.3
Tetrachloroethylene (PCE)	**0.79**	**	ug/L	0.014	**120**	**	ppbv	2.0
Toluene	<0.049		ug/L	0.049	<13		ppbv	13
1,2,4-Trichlorobenzene	<0.020		ug/L	0.020	<2.7		ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874357
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19
Matrix:	Vapor	**Sampled:**	06/12/19
Dilution:	1	**Prepared:**	06/13/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/13/19

SVE-VGACI-061219-0001

9F12016-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
1,1,1-Trichloroethane	<0.020	ug/L	0.020	<3.7	ppbv	3.7
Trichloroethylene (TCE)	**0.22**	ug/L	0.011	**41**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.050	ug/L	0.050	<8.9	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.050	ug/L	0.050	<6.5	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0098	ug/L	0.0098	<2.0	ppbv	2.0
Vinyl acetate	<0.0099	ug/L	0.0099	<2.8	ppbv	2.8
Vinyl chloride	<0.01	ug/L	0.01	<3.9	ppbv	3.9
o-Xylene	<0.01	ug/L	0.01	<2.3	ppbv	2.3
m,p-Xylenes	<0.01	ug/L	0.01	<2.3	ppbv	2.3
1,2,3-Trichloropropane	<0.012	ug/L	0.012	<2.0	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	105 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Blank (B9F1924-BLK1)				Prepared & Analyzed: 06/13/19						
Acetone	<5.2	5.2	ppbv							
Benzene	<0.75	0.75	ppbv							
Benzyl chloride	<2.4	2.4	ppbv							
Bromodichloromethane	<1.9	1.9	ppbv							
Bromoform	<1.2	1.2	ppbv							
Bromomethane	<0.65	0.65	ppbv							
2-Butanone (MEK)	<4.2	4.2	ppbv							
Carbon Disulfide	<4.0	4.0	ppbv							
Carbon Tetrachloride	<0.52	0.52	ppbv							
Chlorobenzene	<0.55	0.55	ppbv							
Chloroethane	<0.95	0.95	ppbv							
Chloroform	<0.50	0.50	ppbv							
Chloromethane	<1.2	1.2	ppbv							
Dibromochloromethane	<0.58	0.58	ppbv							
1,2-Dibromoethane (EDB)	<0.65	0.65	ppbv							
1,2-Dichlorobenzene	<0.82	0.82	ppbv							
1,3-Dichlorobenzene	<0.82	0.82	ppbv							
1,4-Dichlorobenzene	<0.82	0.82	ppbv							
Dichlorodifluoromethane (R12)	<2.5	2.5	ppbv							
1,1-Dichloroethane	<0.50	0.50	ppbv							
1,2-Dichloroethane (EDC)	<0.62	0.62	ppbv							
cis-1,2-Dichloroethylene	<0.50	0.50	ppbv							
1,1-Dichloroethylene	<0.50	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.50	0.50	ppbv							
1,2-Dichloropropane	<0.55	0.55	ppbv							
trans-1,3-Dichloropropylene	<0.55	0.55	ppbv							
cis-1,3-Dichloropropylene	<0.55	0.55	ppbv							
Dichlorotetrafluoroethane	<1.8	1.8	ppbv							
1,4-Dioxane	<0.70	0.70	ppbv							
Ethylbenzene	<0.58	0.58	ppbv							
4-Ethyltoluene	<0.50	0.50	ppbv							
Hexachlorobutadiene	<1.2	1.2	ppbv							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Blank (B9F1924-BLK1) Continued				Prepared & Analyzed: 06/13/19						
2-Hexanone (MBK)	<3.0	3.0	ppbv							
Isopropanol (IPA)	<10	10	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<0.70	0.70	ppbv							
Methylene Chloride	<3.5	3.5	ppbv							
4-Methyl-2-pentanone (MIBK)	<3.0	3.0	ppbv							
Styrene	<0.58	0.58	ppbv							
1,1,2,2-Tetrachloroethane	<1.8	1.8	ppbv							
Tetrachloroethylene (PCE)	<0.50	0.50	ppbv							
Toluene	<3.2	3.2	ppbv							
1,2,4-Trichlorobenzene	<0.68	0.68	ppbv							
1,1,2-Trichloroethane	<0.92	0.92	ppbv							
1,1,1-Trichloroethane	<0.92	0.92	ppbv							
Trichloroethylene (TCE)	<0.50	0.50	ppbv							
Trichlorofluoromethane (R11)	<2.2	2.2	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<1.6	1.6	ppbv							
1,3,5-Trimethylbenzene	<0.50	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.50	0.50	ppbv							
Vinyl acetate	<0.70	0.70	ppbv							
Vinyl chloride	<0.98	0.98	ppbv							
o-Xylene	<0.58	0.58	ppbv							
m,p-Xylenes	<0.58	0.58	ppbv							
1,2,3-Trichloropropane	<0.50	0.50	ppbv							
Surrogate: 4-Bromofluorobenzene	*18.1*		*ppbv*	*20*		*90.3*	*70-130*			
LCS (B9F1924-BS1)				Prepared & Analyzed: 06/13/19						
Acetone	**32.2**	21	ppbv	40		80.4	70-130		30	
Benzene	**36.9**	3.0	ppbv	40		92.4	70-130		30	
Benzyl chloride	**39.4**	9.7	ppbv	40		98.6	70-130		30	
Bromodichloromethane	**36.4**	7.5	ppbv	40		91.0	70-130		30	
Bromoform	**36.6**	4.8	ppbv	40		91.6	70-130		30	
Bromomethane	**41.8**	2.6	ppbv	40		104	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS (B9F1924-BS1) Continued				Prepared & Analyzed: 06/13/19						
2-Butanone (MEK)	**37.4**	17	ppbv	40		93.4	70-130		30	
Carbon Disulfide	**36.3**	16	ppbv	40		90.7	70-130		30	
Carbon Tetrachloride	**36.6**	2.1	ppbv	40		91.4	70-130		30	
Chlorobenzene	**37.3**	2.2	ppbv	40		93.2	70-130		30	
Chloroethane	**43.4**	3.8	ppbv	40		108	70-130		30	
Chloroform	**36.8**	2.0	ppbv	40		92.0	70-130		30	
Chloromethane	**44.2**	4.8	ppbv	40		110	70-130		30	
Dibromochloromethane	**37.0**	2.3	ppbv	40		92.5	70-130		30	
1,2-Dibromoethane (EDB)	**38.5**	2.6	ppbv	40		96.2	70-130		30	
1,2-Dichlorobenzene	**37.3**	3.3	ppbv	40		93.3	70-130		30	
1,3-Dichlorobenzene	**38.3**	3.3	ppbv	40		95.7	70-130		30	
1,4-Dichlorobenzene	**38.8**	3.3	ppbv	40		96.9	70-130		30	
Dichlorodifluoromethane (R12)	**38.2**	10	ppbv	40		95.4	70-130		30	
1,1-Dichloroethane	**37.8**	2.0	ppbv	40		94.5	70-130		30	
1,2-Dichloroethane (EDC)	**36.4**	2.5	ppbv	40		91.0	70-130		30	
cis-1,2-Dichloroethylene	**37.3**	2.0	ppbv	40		93.4	70-130		30	
1,1-Dichloroethylene	**40.8**	2.0	ppbv	40		102	70-130		30	
trans-1,2-Dichloroethylene	**37.2**	2.0	ppbv	40		93.0	70-130		30	
1,2-Dichloropropane	**37.7**	2.2	ppbv	40		94.2	70-130		30	
trans-1,3-Dichloropropylene	**40.4**	2.2	ppbv	40		101	70-130		30	
cis-1,3-Dichloropropylene	**38.2**	2.2	ppbv	40		95.6	70-130		30	
Dichlorotetrafluoroethane	**39.5**	7.2	ppbv	40		98.8	70-130		30	
Ethylbenzene	**34.9**	2.3	ppbv	40		87.4	70-130		30	
4-Ethyltoluene	**33.7**	2.0	ppbv	40		84.2	70-130		30	
Hexachlorobutadiene	**35.3**	4.7	ppbv	40		88.2	70-130		30	
2-Hexanone (MBK)	**37.8**	12	ppbv	40		94.5	70-130		30	
Isopropanol (IPA)	**35.4**	41	ppbv	40		88.4	70-130		30	
Methylene Chloride	**36.4**	14	ppbv	40		91.0	70-130		30	
4-Methyl-2-pentanone (MIBK)	**36.3**	12	ppbv	40		90.6	70-130		30	
Styrene	**39.0**	2.3	ppbv	40		97.4	70-130		30	
1,1,2,2-Tetrachloroethane	**33.0**	7.3	ppbv	40		82.4	70-130		30	
Tetrachloroethylene (PCE)	**35.4**	2.0	ppbv	40		88.4	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS (B9F1924-BS1) Continued				Prepared & Analyzed: 06/13/19						
Toluene	**37.0**	13	ppbv	40		92.5	70-130		30	
1,2,4-Trichlorobenzene	**42.2**	2.7	ppbv	40		105	70-130		30	
1,1,2-Trichloroethane	**37.3**	3.7	ppbv	40		93.2	70-130		30	
1,1,1-Trichloroethane	**36.0**	3.7	ppbv	40		90.0	70-130		30	
Trichloroethylene (TCE)	**35.2**	2.0	ppbv	40		88.1	70-130		30	
Trichlorofluoromethane (R11)	**34.6**	8.9	ppbv	40		86.6	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**37.8**	6.5	ppbv	40		94.4	70-130		30	
1,3,5-Trimethylbenzene	**34.1**	2.0	ppbv	40		85.2	70-130		30	
1,2,4-Trimethylbenzene	**36.4**	2.0	ppbv	40		91.1	70-130		30	
Vinyl acetate	**34.7**	2.8	ppbv	40		86.8	70-130		30	
Vinyl chloride	**41.3**	3.9	ppbv	40		103	70-130		30	
o-Xylene	**33.9**	2.3	ppbv	40		84.8	70-130		30	
m,p-Xylenes	**67.7**	2.3	ppbv	80		84.6	70-130		30	
1,2,3-Trichloropropane	**38.7**	2.0	ppbv	40		96.8	70-130		30	
Surrogate: 4-Bromofluorobenzene	*19.8*		*ppbv*	*20*		*99.0*	*70-130*			
LCS Dup (B9F1924-BSD1)				Prepared & Analyzed: 06/14/19						
Acetone	**32.2**	21	ppbv	40		80.6	70-130	0.280	30	
Benzene	**39.2**	3.0	ppbv	40		97.9	70-130	5.81	30	
Benzyl chloride	**43.2**	9.7	ppbv	40		108	70-130	9.17	30	
Bromodichloromethane	**39.1**	7.5	ppbv	40		97.7	70-130	7.18	30	
Bromoform	**39.7**	4.8	ppbv	40		99.2	70-130	8.04	30	
Bromomethane	**43.6**	2.6	ppbv	40		109	70-130	4.36	30	
2-Butanone (MEK)	**38.0**	17	ppbv	40		94.9	70-130	1.51	30	
Carbon Disulfide	**37.0**	16	ppbv	40		92.4	70-130	1.94	30	
Carbon Tetrachloride	**38.7**	2.1	ppbv	40		96.8	70-130	5.82	30	
Chlorobenzene	**40.4**	2.2	ppbv	40		101	70-130	7.91	30	
Chloroethane	**43.8**	3.8	ppbv	40		110	70-130	0.940	30	
Chloroform	**38.6**	2.0	ppbv	40		96.4	70-130	4.70	30	
Chloromethane	**45.0**	4.8	ppbv	40		113	70-130	1.97	30	
Dibromochloromethane	**38.8**	2.3	ppbv	40		97.1	70-130	4.83	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS Dup (B9F1924-BSD1) Continued				Prepared & Analyzed: 06/14/19						
1,2-Dibromoethane (EDB)	**40.6**	2.6	ppbv	40		102	70-130	5.34	30	
1,2-Dichlorobenzene	**40.7**	3.3	ppbv	40		102	70-130	8.57	30	
1,3-Dichlorobenzene	**41.8**	3.3	ppbv	40		104	70-130	8.67	30	
1,4-Dichlorobenzene	**41.9**	3.3	ppbv	40		105	70-130	7.76	30	
Dichlorodifluoromethane (R12)	**40.2**	10	ppbv	40		101	70-130	5.33	30	
1,1-Dichloroethane	**39.3**	2.0	ppbv	40		98.3	70-130	3.94	30	
1,2-Dichloroethane (EDC)	**37.9**	2.5	ppbv	40		94.8	70-130	4.09	30	
cis-1,2-Dichloroethylene	**39.1**	2.0	ppbv	40		97.8	70-130	4.68	30	
1,1-Dichloroethylene	**33.4**	2.0	ppbv	40		83.6	70-130	19.9	30	
trans-1,2-Dichloroethylene	**39.0**	2.0	ppbv	40		97.5	70-130	4.75	30	
1,2-Dichloropropane	**39.7**	2.2	ppbv	40		99.2	70-130	5.12	30	
trans-1,3-Dichloropropylene	**41.2**	2.2	ppbv	40		103	70-130	1.96	30	
cis-1,3-Dichloropropylene	**41.0**	2.2	ppbv	40		103	70-130	7.07	30	
Dichlorotetrafluoroethane	**41.9**	7.2	ppbv	40		105	70-130	5.72	30	
Ethylbenzene	**37.8**	2.3	ppbv	40		94.5	70-130	7.84	30	
4-Ethyltoluene	**36.7**	2.0	ppbv	40		91.7	70-130	8.61	30	
Hexachlorobutadiene	**38.4**	4.7	ppbv	40		96.0	70-130	8.39	30	
2-Hexanone (MBK)	**39.8**	12	ppbv	40		99.5	70-130	5.13	30	
Isopropanol (IPA)	**36.8**	41	ppbv	40		92.0	70-130	3.91	30	
Methylene Chloride	**30.7**	14	ppbv	40		76.8	70-130	16.8	30	
4-Methyl-2-pentanone (MIBK)	**38.6**	12	ppbv	40		96.4	70-130	6.17	30	
Styrene	**41.8**	2.3	ppbv	40		104	70-130	6.94	30	
1,1,2,2-Tetrachloroethane	**35.4**	7.3	ppbv	40		88.6	70-130	7.20	30	
Tetrachloroethylene (PCE)	**37.4**	2.0	ppbv	40		93.6	70-130	5.68	30	
Toluene	**38.9**	13	ppbv	40		97.2	70-130	4.90	30	
1,2,4-Trichlorobenzene	**48.2**	2.7	ppbv	40		121	70-130	13.4	30	
1,1,2-Trichloroethane	**38.5**	3.7	ppbv	40		96.2	70-130	3.12	30	
1,1,1-Trichloroethane	**37.4**	3.7	ppbv	40		93.5	70-130	3.81	30	
Trichloroethylene (TCE)	**38.0**	2.0	ppbv	40		95.0	70-130	7.59	30	
Trichlorofluoromethane (R11)	**36.3**	8.9	ppbv	40		90.7	70-130	4.66	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**39.4**	6.5	ppbv	40		98.6	70-130	4.27	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
LCS Dup (B9F1924-BSD1) Continued				Prepared & Analyzed: 06/14/19						
1,3,5-Trimethylbenzene	**37.1**	2.0	ppbv	40		92.8	70-130	8.59	30	
1,2,4-Trimethylbenzene	**39.8**	2.0	ppbv	40		99.4	70-130	8.69	30	
Vinyl acetate	**35.1**	2.8	ppbv	40		87.7	70-130	1.06	30	
Vinyl chloride	**42.3**	3.9	ppbv	40		106	70-130	2.34	30	
o-Xylene	**36.8**	2.3	ppbv	40		92.0	70-130	8.17	30	
m,p-Xylenes	**71.9**	2.3	ppbv	80		89.8	70-130	5.96	30	
1,2,3-Trichloropropane	**42.4**	2.0	ppbv	40		106	70-130	8.98	30	
Surrogate: 4-Bromofluorobenzene	*20.0*		*ppbv*	*20*		*100*	*70-130*			
Duplicate (B9F1924-DUP1)			**Source: 9F12016-01**	Prepared & Analyzed: 06/14/19						
Acetone	**<21**	21	ppbv		6.84				30	
Benzene	**<3.0**	3.0	ppbv		<3.0				30	
Benzyl chloride	**<9.7**	9.7	ppbv		<9.7				30	
Bromodichloromethane	**<7.5**	7.5	ppbv		<7.5				30	
Bromoform	**<4.8**	4.8	ppbv		<4.8				30	
Bromomethane	**<2.6**	2.6	ppbv		<2.6				30	
2-Butanone (MEK)	**<17**	17	ppbv		<17				30	
Carbon Disulfide	**<16**	16	ppbv		0.550			1.80	30	
Carbon Tetrachloride	**<2.1**	2.1	ppbv		<2.1				30	
Chlorobenzene	**<2.2**	2.2	ppbv		<2.2				30	
Chloroethane	**<3.8**	3.8	ppbv		<3.8				30	
Chloroform	**<2.0**	2.0	ppbv		<2.0				30	
Chloromethane	**<4.8**	4.8	ppbv		<4.8				30	
Dibromochloromethane	**<2.3**	2.3	ppbv		<2.3				30	
1,2-Dibromoethane (EDB)	**<2.6**	2.6	ppbv		<2.6				30	
1,2-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
1,3-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
1,4-Dichlorobenzene	**<3.3**	3.3	ppbv		<3.3				30	
Dichlorodifluoromethane (R12)	**<10**	10	ppbv		<10				30	
1,1-Dichloroethane	**7.10**	2.0	ppbv		7.15			0.702	30	
1,2-Dichloroethane (EDC)	**<2.5**	2.5	ppbv		<2.5				30	
cis-1,2-Dichloroethylene	**18.4**	2.0	ppbv		18.4			0.217	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Duplicate (B9F1924-DUP1) Continued	**Source: 9F12016-01**		Prepared & Analyzed: 06/14/19							
1,1-Dichloroethylene	**<2.0**	2.0	ppbv		0.990			21.2	30	
trans-1,2-Dichloroethylene	**2.48**	2.0	ppbv		2.46			0.810	30	
1,2-Dichloropropane	**<2.2**	2.2	ppbv		<2.2				30	
trans-1,3-Dichloropropylene	**<2.2**	2.2	ppbv		<2.2				30	
cis-1,3-Dichloropropylene	**<2.2**	2.2	ppbv		<2.2				30	
Dichlorotetrafluoroethane	**<7.2**	7.2	ppbv		<7.2				30	
1,4-Dioxane	**<2.8**	2.8	ppbv		<2.8				30	
Ethylbenzene	**<2.3**	2.3	ppbv		<2.3				30	
4-Ethyltoluene	**<2.0**	2.0	ppbv		<2.0				30	
Hexachlorobutadiene	**<4.7**	4.7	ppbv		<4.7				30	
2-Hexanone (MBK)	**<12**	12	ppbv		<12				30	
Isopropanol (IPA)	**<41**	41	ppbv		<41				30	
Methyl-tert-Butyl Ether (MTBE)	**<2.8**	2.8	ppbv		<2.8				30	
Methylene Chloride	**<14**	14	ppbv		18.1			26.3	30	
4-Methyl-2-pentanone (MIBK)	**<12**	12	ppbv		<12				30	
Styrene	**<2.3**	2.3	ppbv		<2.3				30	
1,1,2,2-Tetrachloroethane	**<7.3**	7.3	ppbv		<7.3				30	
Tetrachloroethylene (PCE)	**118**	4.0	ppbv		117			1.09	30	**
Toluene	**<13**	13	ppbv		<13				30	
1,2,4-Trichlorobenzene	**<2.7**	2.7	ppbv		<2.7				30	
1,1,2-Trichloroethane	**<3.7**	3.7	ppbv		<3.7				30	
1,1,1-Trichloroethane	**<3.7**	3.7	ppbv		<3.7				30	
Trichloroethylene (TCE)	**41.0**	2.0	ppbv		41.1			0.171	30	
Trichlorofluoromethane (R11)	**<8.9**	8.9	ppbv		<8.9				30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<6.5**	6.5	ppbv		<6.5				30	
1,3,5-Trimethylbenzene	**<2.0**	2.0	ppbv		<2.0				30	
1,2,4-Trimethylbenzene	**<2.0**	2.0	ppbv		<2.0				30	
Vinyl acetate	**<2.8**	2.8	ppbv		<2.8				30	
Vinyl chloride	**<3.9**	3.9	ppbv		<3.9				30	
o-Xylene	**<2.3**	2.3	ppbv		<2.3				30	
m,p-Xylenes	**<2.3**	2.3	ppbv		<2.3				30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874357
Date Received: 06/12/19
Date Reported: 06/24/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F1924 - *** DEFAULT PREP ****										
Duplicate (B9F1924-DUP1) Continued	**Source: 9F12016-01**		Prepared & Analyzed: 06/14/19							
1,2,3-Trichloropropane	**<2.0**	2.0	ppbv		<2.0				30	
Surrogate: 4-Bromofluorobenzene	*21.2*		*ppbv*	*20*		*106*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874357
Project No:	130072-024	**Date Received:**	06/12/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	06/24/19

Special Notes

[1] = ****** : Result obtained from DF=2

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 Fax: 818-998-7258

A.A. COC No. 18347

Page 1 of 1

Client: Haley & Aldrich ; JHA Environmental, Inc.	Project Name / No.: Cooper Drum	Sampler's Name: Alex Felix
Project Manager: Chris Tsiatsios / Matt Hillman	Site Address: 9313 Rayo Ave	Sampler's Signature: Alex Felix
Phone: 714-371-1820 / 714-392-5970	City: Southgate	P.O.No:
Fax: 949-453-1047	State & Zip: CA	Quote.:

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15										Special Instructions
						Please enter the TAT Turnaround Codes ** below											
SVE-VGACI-061219-0001	9F12016-01	6/12/2019	1415	Vapor	1		X										

'19 JUN 12 4:17PM

For Laboratory Use	Relinquished by	Date	Time	Received by
PRIORITY Rush ___ Hrs SH ✓ Date 6/12/19 Time 1715 Sign [signature]	[signature]	6-12-19	1440	[signature]
	Relinquished by	Date	Time	Received by
	[signature]	6-12-19	16:17	[signature]
A.A. Project No.: A87 357/9F12016	Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

June 27, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874358 / 9F13001

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/13/19 11:25 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
QC01-061219	9F13001-01	Water	5	06/12/19 07:00	06/13/19 11:25
MW-60A-061219	9F13001-02	Water	5	06/12/19 08:43	06/13/19 11:25
MW-60B-061219	9F13001-03	Water	5	06/12/19 09:09	06/13/19 11:25
MW-62B(R)-061219	9F13001-04	Water	5	06/12/19 10:01	06/13/19 11:25
MW-62A-061219	9F13001-05	Water	5	06/12/19 10:29	06/13/19 11:25
PZ-7B-061219	9F13001-06	Water	5	06/12/19 11:16	06/13/19 11:25
QC10-061219	9F13001-07	Water	5	06/12/19 11:26	06/13/19 11:25
PZ-7A-061219	9F13001-08	Water	5	06/12/19 11:56	06/13/19 11:25
MW-19-061219	9F13001-09	Water	5	06/12/19 13:46	06/13/19 11:25
QC07-061219	9F13001-10	Water	5	06/12/19 14:15	06/13/19 11:25
MW-57B-061219	9F13001-11	Water	5	06/12/19 14:14	06/13/19 11:25
QC08-061219	9F13001-12	Water	5	06/12/19 14:30	06/13/19 11:25
MW-57A-061219	9F13001-13	Water	5	06/12/19 13:32	06/13/19 11:25
MW-58-061219	9F13001-14	Water	5	06/12/19 12:39	06/13/19 11:25
MW-59C-061219	9F13001-15	Water	5	06/12/19 11:25	06/13/19 11:25
EW-07B-061219	9F13001-16	Water	5	06/12/19 10:15	06/13/19 11:25
EW-07A-061219	9F13001-17	Water	5	06/12/19 09:50	06/13/19 11:25
EW-05-061219	9F13001-18	Water	5	06/12/19 09:15	06/13/19 11:25
MW-22-061219	9F13001-19	Water	5	06/12/19 08:29	06/13/19 11:25

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
QC09-061219	9F13001-20	Water	5	06/12/19 08:00	06/13/19 11:25
8270CM 1,4-Dioxane Only					
MW-60A-061219	9F13001-02	Water	5	06/12/19 08:43	06/13/19 11:25
MW-60B-061219	9F13001-03	Water	5	06/12/19 09:09	06/13/19 11:25
MW-62B(R)-061219	9F13001-04	Water	5	06/12/19 10:01	06/13/19 11:25
MW-62A-061219	9F13001-05	Water	5	06/12/19 10:29	06/13/19 11:25
PZ-7B-061219	9F13001-06	Water	5	06/12/19 11:16	06/13/19 11:25
QC10-061219	9F13001-07	Water	5	06/12/19 11:26	06/13/19 11:25
PZ-7A-061219	9F13001-08	Water	5	06/12/19 11:56	06/13/19 11:25
MW-19-061219	9F13001-09	Water	5	06/12/19 13:46	06/13/19 11:25
QC07-061219	9F13001-10	Water	5	06/12/19 14:15	06/13/19 11:25
MW-57B-061219	9F13001-11	Water	5	06/12/19 14:14	06/13/19 11:25
QC08-061219	9F13001-12	Water	5	06/12/19 14:30	06/13/19 11:25
MW-57A-061219	9F13001-13	Water	5	06/12/19 13:32	06/13/19 11:25
MW-58-061219	9F13001-14	Water	5	06/12/19 12:39	06/13/19 11:25
MW-59C-061219	9F13001-15	Water	5	06/12/19 11:25	06/13/19 11:25
EW-07B-061219	9F13001-16	Water	5	06/12/19 10:15	06/13/19 11:25
EW-07A-061219	9F13001-17	Water	5	06/12/19 09:50	06/13/19 11:25
EW-05-061219	9F13001-18	Water	5	06/12/19 09:15	06/13/19 11:25
MW-22-061219	9F13001-19	Water	5	06/12/19 08:29	06/13/19 11:25

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
QC09-061219	9F13001-20	Water	5	06/12/19 08:00	06/13/19 11:25

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

8270CM 1,4-Dioxane Only (EPA 8270CM)

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
9F13001-02	MW-60A-061219	06/12/19	06/18/19	06/19/19	1	**9.5**	ug/L	1	2
9F13001-03	MW-60B-061219	06/12/19	06/18/19	06/19/19	1	**6.6**	ug/L	1	2
9F13001-04	MW-62B(R)-061219	06/12/19	06/18/19	06/19/19	1	<1.0	ug/L	1	2
9F13001-05	MW-62A-061219	06/12/19	06/18/19	06/19/19	1	**2.8**	ug/L	1	2
9F13001-06	PZ-7B-061219	06/12/19	06/18/19	06/19/19	1	**3.8**	ug/L	1	2
9F13001-07	QC10-061219	06/12/19	06/18/19	06/19/19	1	**4.0**	ug/L	1	2
9F13001-08	PZ-7A-061219	06/12/19	06/18/19	06/19/19	1	**3.0**	ug/L	1	2
9F13001-09	MW-19-061219	06/12/19	06/18/19	06/19/19	1	**2.2**	ug/L	1	2
9F13001-10	QC07-061219	06/12/19	06/18/19	06/19/19	1	<1.0	ug/L	1	2
9F13001-11	MW-57B-061219	06/12/19	06/18/19	06/19/19	1	<1.0	ug/L	1	2
9F13001-12	QC08-061219	06/12/19	06/18/19	06/19/19	1	<1.0	ug/L	1	2
9F13001-13	MW-57A-061219	06/12/19	06/18/19	06/19/19	1	**9.1**	ug/L	1	2
9F13001-14	MW-58-061219	06/12/19	06/18/19	06/19/19	1	**1.7**J	ug/L	1	2
9F13001-15	MW-59C-061219	06/12/19	06/18/19	06/19/19	1	<1.0	ug/L	1	2
9F13001-16	EW-07B-061219	06/12/19	06/18/19	06/19/19	1	**5.2**	ug/L	1	2
9F13001-17	EW-07A-061219	06/12/19	06/18/19	06/20/19	1	**3.8**	ug/L	1	2
9F13001-18	EW-05-061219	06/12/19	06/18/19	06/21/19	5	**32**	ug/L	1	2
9F13001-19	MW-22-061219	06/12/19	06/18/19	06/20/19	1	**12**	ug/L	1	2
9F13001-20	QC09-061219	06/12/19	06/18/19	06/20/19	1	<1.0	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-01	9F13001-02	9F13001-03	9F13001-04		
Client ID No:	QC01-061219	MW-60A-061219	MW-60B-061219	MW-62B(R)-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	**9.1 J**	**11 J**	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-01	9F13001-02	9F13001-03	9F13001-04		
Client ID No:	QC01-061219	MW-60A-061219	MW-60B-061219	MW-62B(R)-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,1-Dichloroethane	<0.20	<0.20	**1.2**	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	<0.20	**1.9**	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**1.9**	**18**	**7.7**	0.30	0.50
1,1-Dichloroethylene	<0.40	**3.7**	**1.7**	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	**2.5**	**1.1**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-01	9F13001-02	9F13001-03	9F13001-04		
Client ID No:	QC01-061219	MW-60A-061219	MW-60B-061219	MW-62B(R)-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**0.66**	**0.60**	**1.7**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	**1.6**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	97%	98%	97%	98%		80-129
Dibromofluoromethane	102%	91%	104%	106%		68-137
Toluene-d8	96%	101%	96%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-05	9F13001-06	9F13001-07	9F13001-08		
Client ID No:	MW-62A-061219	PZ-7B-061219	QC10-061219	PZ-7A-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**11 J**	**8.8 J**	**7.9 J**	**11 J**	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	**0.87**	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-05	9F13001-06	9F13001-07	9F13001-08		
Client ID No:	MW-62A-061219	PZ-7B-061219	QC10-061219	PZ-7A-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	**0.88**	**1.2**	**1.0**	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**1.6**	<0.20	<0.20	**1.3**	0.20	0.50
cis-1,2-Dichloroethylene	**19**	**20**	**19**	**26**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	**8.1**	**4.8**	**4.5**	**5.8**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-05	9F13001-06	9F13001-07	9F13001-08		
Client ID No:	MW-62A-061219	PZ-7B-061219	QC10-061219	PZ-7A-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**0.34 J**	**0.37 J**	**1.1**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**1.2**	**0.46 J**	<0.40	**0.69**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	99%	98%	98%	96%		80-129
Dibromofluoromethane	100%	102%	98%	102%		68-137
Toluene-d8	97%	96%	98%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-09	9F13001-10	9F13001-11	9F13001-12		
Client ID No:	MW-19-061219	QC07-061219	MW-57B-061219	QC08-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**14 J**	**22 J**	**12 J**	<7.7	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-09	9F13001-10	9F13001-11	9F13001-12		
Client ID No:	MW-19-061219	QC07-061219	MW-57B-061219	QC08-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	**2.6**	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**9.1**	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloroethylene	**1.2**	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	**0.90**	<0.30	<0.30	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874358
Project No:	130072-025	**Date Received:**	06/13/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/27/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/20/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/20/19		
AA ID No:	9F13001-09	9F13001-10	9F13001-11	9F13001-12		
Client ID No:	MW-19-061219	QC07-061219	MW-57B-061219	QC08-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**2.3**	<0.30	<0.30	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	97%	98%	99%	99%		80-129
Dibromofluoromethane	101%	106%	102%	104%		68-137
Toluene-d8	97%	96%	94%	92%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/21/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/21/19		
AA ID No:	9F13001-13	9F13001-14	9F13001-15	9F13001-16		
Client ID No:	MW-57A-061219	MW-58-061219	MW-59C-061219	EW-07B-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**11 J**	<7.7	**15 J**	**8.2 J**	7.7	50
Benzene	**48**	**5.7**	<0.40	**0.57**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.30	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.50	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.20	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.50	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.50	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<2.0	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.30	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	**0.45 J**	<0.40	<0.40	<0.30	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.50	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.30	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<2.0	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.30	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.30	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.10	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.50	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874358
Project No:	130072-025	**Date Received:**	06/13/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/27/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/21/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/21/19		
AA ID No:	9F13001-13	9F13001-14	9F13001-15	9F13001-16		
Client ID No:	MW-57A-061219	MW-58-061219	MW-59C-061219	EW-07B-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	**1.1**	0.20	0.50
1,2-Dichloroethane (EDC)	**3.6**	<0.20	**1.7**	**1.3**	0.20	0.50
cis-1,2-Dichloroethylene	**2.5**	**3.4**	<0.30	**35**	0.30	0.50
1,1-Dichloroethylene	<0.40	**0.40 J**	<0.40	**0.52**	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	<0.30	**4.6**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.10	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.50	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.40	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.20	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.20	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.20	0.40	0.50
Ethylbenzene	**9.5**	<0.30	<0.30	<0.20	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.40	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<2.0	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.20	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.20	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.7	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<5.0	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<0.70	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.20	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.40	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.30	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	**0.27 J**	<0.20	<0.20	<0.30	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.20	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874358
Project No:	130072-025	**Date Received:**	06/13/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/27/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/20/19	06/20/19	06/20/19	06/21/19		
Date Analyzed:	06/20/19	06/20/19	06/20/19	06/21/19		
AA ID No:	9F13001-13	9F13001-14	9F13001-15	9F13001-16		
Client ID No:	MW-57A-061219	MW-58-061219	MW-59C-061219	EW-07B-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.20	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	<0.30	<0.30	**1.6**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.20	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.30	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**1.1**	<0.40	<0.40	<0.50	0.40	0.50
o-Xylene	**5.3**	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	**0.72 J**	<0.60	<0.60	<0.40	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	98%	101%	98%	97%		80-129
Dibromofluoromethane	102%	101%	102%	101%		68-137
Toluene-d8	96%	98%	98%	98%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/21/19	06/20/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/20/19	06/21/19	06/21/19		
AA ID No:	9F13001-17	9F13001-18	9F13001-19	9F13001-20		
Client ID No:	EW-07A-061219	EW-05-061219	MW-22-061219	QC09-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**4.0 J**	**10 J**	**8.3 J**	**9.1 J**	7.7	50
Benzene	**0.60**	<0.40	<0.20	<0.20	0.40	0.50
Bromobenzene	<0.30	<0.40	<0.30	<0.30	0.40	0.50
Bromochloromethane	<0.50	<0.20	<0.50	<0.50	0.20	0.50
Bromodichloromethane	<0.20	<0.40	<0.20	<0.20	0.40	0.50
Bromoform	<0.50	<0.40	<0.50	<0.50	0.40	0.50
Bromomethane	<0.50	<0.30	<0.50	<0.50	0.30	0.50
2-Butanone (MEK)	<2.0	<8.6	<2.0	<2.0	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.30	<0.20	<0.30	<0.30	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.30	<0.40	<0.30	<0.30	0.40	0.50
Chloroethane	<0.50	<0.40	<0.50	<0.50	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.30	<0.20	<0.30	<0.30	0.20	0.50
1,2-Dibromo-3-chloropropane	<2.0	<0.40	<2.0	<2.0	0.40	1.0
Dibromochloromethane	<0.30	<0.40	<0.30	<0.30	0.40	0.50
1,2-Dibromoethane (EDB)	<0.30	<0.40	<0.30	<0.30	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.10	<0.40	<0.10	<0.10	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.50	<0.40	<0.50	<0.50	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/21/19	06/20/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/20/19	06/21/19	06/21/19		
AA ID No:	9F13001-17	9F13001-18	9F13001-19	9F13001-20		
Client ID No:	EW-07A-061219	EW-05-061219	MW-22-061219	QC09-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	**7.5**	**5.6**	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	<0.20	<0.30	<0.30	0.20	0.50
cis-1,2-Dichloroethylene	**23**	**43**	**16**	<0.20	0.30	0.50
1,1-Dichloroethylene	<0.30	**3.4**	<0.30	<0.30	0.40	0.50
trans-1,2-Dichloroethylene	**5.2**	**1.9**	**0.63**	<0.40	0.30	0.50
1,3-Dichloropropane	<0.10	<0.40	<0.10	<0.10	0.40	0.50
1,2-Dichloropropane	<0.50	<0.30	<0.50	<0.50	0.30	0.50
2,2-Dichloropropane	<0.40	<0.30	<0.40	<0.40	0.30	0.50
trans-1,3-Dichloropropylene	<0.20	<0.30	<0.20	<0.20	0.30	0.50
1,1-Dichloropropylene	<0.20	<0.30	<0.20	<0.20	0.30	0.50
cis-1,3-Dichloropropylene	<0.20	<0.40	<0.20	<0.20	0.40	0.50
Ethylbenzene	<0.20	<0.30	<0.20	<0.20	0.30	0.50
Hexachlorobutadiene	<0.40	<0.50	<0.40	<0.40	0.50	1.0
2-Hexanone (MBK)	<2.0	<8.4	<2.0	<2.0	8.4	20
Isopropylbenzene	<0.20	<0.30	<0.20	<0.20	0.30	0.50
4-Isopropyltoluene	<0.20	<0.30	<0.20	<0.20	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.7	<1.4	<1.7	<1.7	1.4	2.0
Methylene Chloride	<5.0	<4.4	<5.0	<5.0	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<0.70	<9.8	<0.70	<0.70	9.8	20
Naphthalene	<0.20	<0.40	<0.20	<0.20	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.40	<0.30	<0.40	<0.40	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.30	<0.40	<0.30	<0.30	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.30	<0.20	<0.30	<0.30	0.20	0.50
1,2,4-Trichlorobenzene	<0.20	<0.30	<0.20	<0.20	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19
Units: ug/L

Date Sampled:	06/12/19	06/12/19	06/12/19	06/12/19		
Date Prepared:	06/21/19	06/20/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/20/19	06/21/19	06/21/19		
AA ID No:	9F13001-17	9F13001-18	9F13001-19	9F13001-20		
Client ID No:	EW-07A-061219	EW-05-061219	MW-22-061219	QC09-061219		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.20	<0.50	<0.20	<0.20	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.57**	**8.8**	**3.3**	<0.20	0.30	0.50
Trichlorofluoromethane (R11)	<0.20	<0.40	<0.20	<0.20	0.40	0.50
1,2,3-Trichloropropane	<0.30	<0.20	<0.30	<0.30	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.50	<0.40	<0.50	<0.50	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.40	<0.60	<0.40	<0.40	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	96%	98%	97%	98%		80-129
Dibromofluoromethane	98%	103%	102%	104%		68-137
Toluene-d8	96%	98%	97%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F1833 - EPA 3510C_MS										
Blank (B9F1833-BLK1)				Prepared: 06/18/19	Analyzed: 06/19/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F1833-BS1)				Prepared: 06/18/19	Analyzed: 06/19/19					
1,4-Dioxane	**10.2**	1.0	ug/L	10		102	75-125			
LCS Dup (B9F1833-BSD1)				Prepared: 06/18/19	Analyzed: 06/19/19					
1,4-Dioxane	**9.37**	1.0	ug/L	10		93.7	75-125	8.78	30	
Matrix Spike (B9F1833-MS1)		**Source: 9F13001-18**		Prepared: 06/18/19	Analyzed: 06/19/19					
1,4-Dioxane	**40.7**	1.0	ug/L	10	32.0	85.3	70-130			
Matrix Spike Dup (B9F1833-MSD1)		**Source: 9F13001-18**		Prepared: 06/18/19	Analyzed: 06/19/19					
1,4-Dioxane	**41.9**	1.0	ug/L	10	32.0	96.6	70-130	2.79	30	
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1)				Prepared & Analyzed: 06/20/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.20	0.20	ug/L							
Bromobenzene	<0.30	0.30	ug/L							
Bromochloromethane	<0.50	0.50	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
2-Butanone (MEK)	<2.0	2.0	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.30	0.30	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1) Continued				Prepared & Analyzed: 06/20/19						
2-Chlorotoluene	<0.30	0.30	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dibromoethane (EDB)	<0.30	0.30	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.50	0.50	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
cis-1,2-Dichloroethylene	<0.20	0.20	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,3-Dichloropropane	<0.10	0.10	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
2,2-Dichloropropane	<0.40	0.40	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
1,1-Dichloropropylene	<0.20	0.20	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Hexachlorobutadiene	<0.40	0.40	ug/L							
2-Hexanone (MBK)	<2.0	2.0	ug/L							
Isopropylbenzene	<0.20	0.20	ug/L							
4-Isopropyltoluene	<0.20	0.20	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.7	1.7	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<0.70	0.70	ug/L							
Naphthalene	<0.20	0.20	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Blank (B9F2004-BLK1) Continued				Prepared & Analyzed: 06/20/19						
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,2,4-Trichlorobenzene	<0.20	0.20	ug/L							
1,2,3-Trichlorobenzene	<0.20	0.20	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Trichlorofluoromethane (R11)	<0.20	0.20	ug/L							
1,2,3-Trichloropropane	<0.30	0.30	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.40	0.40	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.0*	*80-129*			
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.7*	*68-137*			
Surrogate: Toluene-d8	*48.5*		*ug/L*	*50*		*97.0*	*83-134*			
LCS (B9F2004-BS1)				Prepared & Analyzed: 06/20/19						
Acetone	**17.9**	7.7	ug/L	20		89.3	27-123			J
Benzene	**18.8**	0.20	ug/L	20		93.8	60-134			
Bromobenzene	**20.3**	0.30	ug/L	20		102	70-130			
Bromochloromethane	**20.8**	0.50	ug/L	20		104	78-121			
Bromodichloromethane	**22.4**	0.20	ug/L	20		112	74-135			
Bromoform	**19.2**	0.50	ug/L	20		96.0	68-132			
Bromomethane	**19.9**	0.50	ug/L	20		99.3	58-142			
2-Butanone (MEK)	**18.0**	2.0	ug/L	20		90.0	62-138			J
tert-Butylbenzene	**21.0**	0.20	ug/L	20		105	70-130			
n-Butylbenzene	**21.8**	0.20	ug/L	20		109	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS (B9F2004-BS1) Continued				Prepared & Analyzed: 06/20/19						
sec-Butylbenzene	**21.3**	0.20	ug/L	20		107	84-142			
Carbon Disulfide	**21.6**	0.30	ug/L	20		108	17-177			
Carbon Tetrachloride	**22.2**	0.30	ug/L	20		111	66-155			
Chlorobenzene	**20.6**	0.30	ug/L	20		103	70-130			
Chloroethane	**22.7**	0.50	ug/L	20		113	45-166			
Chloroform	**21.5**	0.30	ug/L	20		107	71-131			
Chloromethane	**22.5**	0.40	ug/L	20		112	48-152			
4-Chlorotoluene	**21.3**	0.20	ug/L	20		106	70-130			
2-Chlorotoluene	**21.1**	0.30	ug/L	20		106	70-130			
1,2-Dibromo-3-chloropropane	**21.3**	0.40	ug/L	20		106	53-145			
Dibromochloromethane	**21.1**	0.30	ug/L	20		105	72-133			
1,2-Dibromoethane (EDB)	**21.2**	0.30	ug/L	20		106	79-120			
Dibromomethane	**21.0**	0.40	ug/L	20		105	68-124			
1,3-Dichlorobenzene	**20.4**	0.10	ug/L	20		102	70-130			
1,4-Dichlorobenzene	**19.9**	0.30	ug/L	20		99.4	70-130			
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		105	70-130			
Dichlorodifluoromethane (R12)	**21.1**	0.50	ug/L	20		106	16-148			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		107	67-120			
1,2-Dichloroethane (EDC)	**23.1**	0.30	ug/L	20		115	57-156			
cis-1,2-Dichloroethylene	**21.0**	0.20	ug/L	20		105	70-124			
1,1-Dichloroethylene	**21.2**	0.30	ug/L	20		106	50-149			
trans-1,2-Dichloroethylene	**21.4**	0.40	ug/L	20		107	66-126			
1,3-Dichloropropane	**21.0**	0.10	ug/L	20		105	79-113			
1,2-Dichloropropane	**21.6**	0.50	ug/L	20		108	53-139			
2,2-Dichloropropane	**21.2**	0.40	ug/L	20		106	44-162			
trans-1,3-Dichloropropylene	**21.8**	0.20	ug/L	20		109	76-121			
1,1-Dichloropropylene	**21.9**	0.20	ug/L	20		109	84-124			
cis-1,3-Dichloropropylene	**21.8**	0.20	ug/L	20		109	67-127			
Ethylbenzene	**21.4**	0.20	ug/L	20		107	86-124			
Hexachlorobutadiene	**19.6**	0.40	ug/L	20		97.8	76-140			
2-Hexanone (MBK)	**20.3**	2.0	ug/L	20		102	52-123			
Isopropylbenzene	**21.6**	0.20	ug/L	20		108	70-130			

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LABORATORY ANALYSIS RESULTS

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Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS (B9F2004-BS1) Continued				Prepared & Analyzed: 06/20/19						
4-Isopropyltoluene	**21.3**	0.20	ug/L	20		107	70-130			
Methyl-tert-Butyl Ether (MTBE)	**41.7**	1.7	ug/L	40		104	58-144			
Methylene Chloride	**20.4**	5.0	ug/L	20		102	50-135			
4-Methyl-2-pentanone (MIBK)	**19.2**	0.70	ug/L	20		96.1	49-139			J
Naphthalene	**21.0**	0.20	ug/L	20		105	74-128			
n-Propylbenzene	**21.8**	0.20	ug/L	20		109	70-130			
Styrene	**21.1**	0.20	ug/L	20		106	84-123			
1,1,1,2-Tetrachloroethane	**20.6**	0.40	ug/L	20		103	70-130			
1,1,2,2-Tetrachloroethane	**22.4**	0.30	ug/L	20		112	58-126			
Tetrachloroethylene (PCE)	**20.1**	0.50	ug/L	20		100	70-130			
Toluene	**20.8**	0.30	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.1**	0.20	ug/L	20		101	84-128			
1,2,3-Trichlorobenzene	**19.5**	0.20	ug/L	20		97.6	77-134			
1,1,2-Trichloroethane	**21.4**	0.30	ug/L	20		107	75-115			
1,1,1-Trichloroethane	**22.2**	0.30	ug/L	20		111	66-158			
Trichloroethylene (TCE)	**21.1**	0.20	ug/L	20		105	82-128			
Trichlorofluoromethane (R11)	**18.9**	0.20	ug/L	20		94.4	65-137			
1,2,3-Trichloropropane	**22.0**	0.30	ug/L	20		110	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20		80.0	62-130			
1,2,4-Trimethylbenzene	**21.3**	0.30	ug/L	20		106	70-130			
1,3,5-Trimethylbenzene	**21.5**	0.20	ug/L	20		108	70-130			
Vinyl chloride	**23.2**	0.50	ug/L	20		116	51-151			
o-Xylene	**21.5**	0.30	ug/L	20		108	70-130			
m,p-Xylenes	**42.9**	0.40	ug/L	40		107	70-130			
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.1*	*80-129*			
Surrogate: Dibromofluoromethane	*48.9*		*ug/L*	*50*		*97.8*	*68-137*			
Surrogate: Toluene-d8	*48.3*		*ug/L*	*50*		*96.7*	*83-134*			
LCS Dup (B9F2004-BSD1)				Prepared & Analyzed: 06/20/19						
Acetone	**19.1**	7.7	ug/L	20		95.6	27-123	6.76	30	J
Benzene	**19.4**	0.20	ug/L	20		96.8	60-134	3.15	30	

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LABORATORY ANALYSIS RESULTS

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Project No: 130072-025
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Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
Bromobenzene	**19.5**	0.30	ug/L	20		97.6	70-130	4.02	30	
Bromochloromethane	**22.3**	0.50	ug/L	20		112	78-121	6.90	30	
Bromodichloromethane	**23.1**	0.20	ug/L	20		115	74-135	3.12	30	
Bromoform	**19.5**	0.50	ug/L	20		97.4	68-132	1.55	30	
Bromomethane	**17.0**	0.50	ug/L	20		84.8	58-142	15.7	30	
2-Butanone (MEK)	**20.4**	2.0	ug/L	20		102	62-138	12.6	30	
tert-Butylbenzene	**20.8**	0.20	ug/L	20		104	70-130	1.24	30	
n-Butylbenzene	**20.7**	0.20	ug/L	20		104	70-130	5.26	30	
sec-Butylbenzene	**20.8**	0.20	ug/L	20		104	84-142	2.51	30	
Carbon Disulfide	**21.5**	0.30	ug/L	20		108	17-177	0.279	30	
Carbon Tetrachloride	**23.1**	0.30	ug/L	20		116	66-155	4.24	30	
Chlorobenzene	**20.2**	0.30	ug/L	20		101	70-130	2.01	30	
Chloroethane	**47.9**	0.50	ug/L	20		239	45-166	71.4	30	**, AA-C1
Chloroform	**22.6**	0.30	ug/L	20		113	71-131	5.17	30	
Chloromethane	**22.4**	0.40	ug/L	20		112	48-152	0.401	30	
4-Chlorotoluene	**20.5**	0.20	ug/L	20		103	70-130	3.78	30	
2-Chlorotoluene	**20.3**	0.30	ug/L	20		102	70-130	3.91	30	
1,2-Dibromo-3-chloropropane	**21.1**	0.40	ug/L	20		105	53-145	0.850	30	
Dibromochloromethane	**21.2**	0.30	ug/L	20		106	72-133	0.615	30	
1,2-Dibromoethane (EDB)	**21.3**	0.30	ug/L	20		106	79-120	0.329	30	
Dibromomethane	**21.9**	0.40	ug/L	20		110	68-124	4.33	30	
1,3-Dichlorobenzene	**19.4**	0.10	ug/L	20		97.2	70-130	4.52	30	
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		98.2	70-130	1.27	30	
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	70-130	3.31	30	
Dichlorodifluoromethane (R12)	**22.5**	0.50	ug/L	20		112	16-148	6.28	30	
1,1-Dichloroethane	**22.2**	0.20	ug/L	20		111	67-120	4.04	30	
1,2-Dichloroethane (EDC)	**25.8**	0.30	ug/L	20		129	57-156	11.0	30	
cis-1,2-Dichloroethylene	**21.8**	0.20	ug/L	20		109	70-124	3.65	30	
1,1-Dichloroethylene	**21.4**	0.30	ug/L	20		107	50-149	0.563	30	
trans-1,2-Dichloroethylene	**21.3**	0.40	ug/L	20		106	66-126	0.609	30	
1,3-Dichloropropane	**22.1**	0.10	ug/L	20		110	79-113	5.16	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
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AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
1,2-Dichloropropane	**23.0**	0.50	ug/L	20		115	53-139	6.23	30	
2,2-Dichloropropane	**18.1**	0.40	ug/L	20		90.5	44-162	16.0	30	
trans-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20		109	76-121	0.551	30	
1,1-Dichloropropylene	**22.4**	0.20	ug/L	20		112	84-124	2.35	30	
cis-1,3-Dichloropropylene	**22.1**	0.20	ug/L	20		110	67-127	1.14	30	
Ethylbenzene	**21.1**	0.20	ug/L	20		106	86-124	1.46	30	
Hexachlorobutadiene	**19.3**	0.40	ug/L	20		96.4	76-140	1.49	30	
2-Hexanone (MBK)	**21.3**	2.0	ug/L	20		107	52-123	4.85	30	
Isopropylbenzene	**21.1**	0.20	ug/L	20		105	70-130	2.67	30	
4-Isopropyltoluene	**20.4**	0.20	ug/L	20		102	70-130	4.46	30	
Methyl-tert-Butyl Ether (MTBE)	**44.3**	1.7	ug/L	40		111	58-144	6.14	30	
Methylene Chloride	**21.0**	5.0	ug/L	20		105	50-135	2.90	30	
4-Methyl-2-pentanone (MIBK)	**18.6**	0.70	ug/L	20		92.9	49-139	3.39	30	J
Naphthalene	**20.1**	0.20	ug/L	20		101	74-128	4.09	30	
n-Propylbenzene	**20.7**	0.20	ug/L	20		103	70-130	5.23	30	
Styrene	**20.8**	0.20	ug/L	20		104	84-123	1.53	30	
1,1,1,2-Tetrachloroethane	**20.4**	0.40	ug/L	20		102	70-130	1.07	30	
1,1,2,2-Tetrachloroethane	**23.3**	0.30	ug/L	20		116	58-126	4.03	30	
Tetrachloroethylene (PCE)	**19.4**	0.50	ug/L	20		97.2	70-130	3.34	30	
Toluene	**20.8**	0.30	ug/L	20		104	83-118	0.0961	30	
1,2,4-Trichlorobenzene	**19.0**	0.20	ug/L	20		95.0	84-128	5.67	30	
1,2,3-Trichlorobenzene	**19.0**	0.20	ug/L	20		94.8	77-134	2.91	30	
1,1,2-Trichloroethane	**21.6**	0.30	ug/L	20		108	75-115	0.744	30	
1,1,1-Trichloroethane	**23.5**	0.30	ug/L	20		117	66-158	5.42	30	
Trichloroethylene (TCE)	**22.2**	0.20	ug/L	20		111	82-128	5.08	30	
Trichlorofluoromethane (R11)	**19.6**	0.20	ug/L	20		98.0	65-137	3.69	30	
1,2,3-Trichloropropane	**22.7**	0.30	ug/L	20		114	68-123	3.17	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.2**	0.30	ug/L	20		76.2	62-130	4.74	30	
1,2,4-Trimethylbenzene	**20.7**	0.30	ug/L	20		103	70-130	3.00	30	
1,3,5-Trimethylbenzene	**20.9**	0.20	ug/L	20		105	70-130	2.78	30	
Vinyl chloride	**24.2**	0.50	ug/L	20		121	51-151	4.21	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
LCS Dup (B9F2004-BSD1) Continued				Prepared & Analyzed: 06/20/19						
o-Xylene	**21.3**	0.30	ug/L	20		106	70-130	1.12	30	
m,p-Xylenes	**42.2**	0.40	ug/L	40		106	70-130	1.69	30	
Surrogate: 4-Bromofluorobenzene	*48.2*		*ug/L*	*50*		*96.4*	*80-129*			
Surrogate: Dibromofluoromethane	*51.6*		*ug/L*	*50*		*103*	*68-137*			
Surrogate: Toluene-d8	*49.1*		*ug/L*	*50*		*98.1*	*83-134*			
Matrix Spike (B9F2004-MS1)		**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19						
Acetone	**31.1**	7.7	ug/L	20	10.5	103	11-169			J
Benzene	**18.8**	0.20	ug/L	20	<0.50	94.1	56-135			
Bromobenzene	**19.7**	0.30	ug/L	20	<0.50	98.4	70-130			
Bromochloromethane	**20.7**	0.50	ug/L	20	<0.50	104	74-125			
Bromodichloromethane	**22.6**	0.20	ug/L	20	<0.50	113	68-144			
Bromoform	**19.5**	0.50	ug/L	20	<0.50	97.4	68-151			
Bromomethane	**16.5**	0.50	ug/L	20	<0.50	82.5	54-142			
2-Butanone (MEK)	**18.7**	2.0	ug/L	20	<20	93.6	62-145			J
tert-Butylbenzene	**20.3**	0.20	ug/L	20	<0.50	102	70-130			
n-Butylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	70-130			
sec-Butylbenzene	**20.4**	0.20	ug/L	20	<0.50	102	84-145			
Carbon Disulfide	**22.1**	0.30	ug/L	20	<0.50	110	28-151			
Carbon Tetrachloride	**22.6**	0.30	ug/L	20	<0.50	113	58-164			
Chlorobenzene	**20.5**	0.30	ug/L	20	<0.50	102	70-130			
Chloroethane	**32.2**	0.50	ug/L	20	<0.50	161	42-164			
Chloroform	**21.3**	0.30	ug/L	20	<0.50	107	65-138			
Chloromethane	**21.4**	0.40	ug/L	20	<0.50	107	50-152			
4-Chlorotoluene	**20.6**	0.20	ug/L	20	<0.50	103	70-130			
2-Chlorotoluene	**20.5**	0.30	ug/L	20	<0.50	103	70-130			
1,2-Dibromo-3-chloropropane	**21.0**	0.40	ug/L	20	<1.0	105	53-161			
Dibromochloromethane	**21.3**	0.30	ug/L	20	<0.50	107	70-130			
1,2-Dibromoethane (EDB)	**21.7**	0.30	ug/L	20	<0.50	108	76-130			
Dibromomethane	**21.3**	0.40	ug/L	20	<0.50	106	62-135			
1,3-Dichlorobenzene	**19.8**	0.10	ug/L	20	<0.50	99.2	70-130			
1,4-Dichlorobenzene	**19.4**	0.30	ug/L	20	<0.50	96.8	70-130			

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LABORATORY ANALYSIS RESULTS

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Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike (B9F2004-MS1) Continued	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
1,2-Dichlorobenzene	**20.2**	0.30	ug/L	20	<0.50	101	70-130			
Dichlorodifluoromethane (R12)	**20.8**	0.50	ug/L	20	<0.50	104	17-153			
1,1-Dichloroethane	**30.1**	0.20	ug/L	20	7.50	113	55-131			
1,2-Dichloroethane (EDC)	**25.5**	0.30	ug/L	20	<0.50	128	52-168			
cis-1,2-Dichloroethylene	**67.1**	0.20	ug/L	20	43.3	119	70-130			
1,1-Dichloroethylene	**25.4**	0.30	ug/L	20	3.39	110	51-140			
trans-1,2-Dichloroethylene	**23.6**	0.40	ug/L	20	1.89	109	59-127			
1,3-Dichloropropane	**21.6**	0.10	ug/L	20	<0.50	108	80-121			
1,2-Dichloropropane	**22.6**	0.50	ug/L	20	<0.50	113	52-142			
2,2-Dichloropropane	**19.2**	0.40	ug/L	20	<0.50	95.8	36-168			
trans-1,3-Dichloropropylene	**21.4**	0.20	ug/L	20	<0.50	107	78-130			
1,1-Dichloropropylene	**22.3**	0.20	ug/L	20	<0.50	112	76-132			
cis-1,3-Dichloropropylene	**22.2**	0.20	ug/L	20	<0.50	111	66-130			
Ethylbenzene	**21.1**	0.20	ug/L	20	<0.50	105	86-128			
Hexachlorobutadiene	**18.8**	0.40	ug/L	20	<1.0	94.0	70-130			
2-Hexanone (MBK)	**22.1**	2.0	ug/L	20	<20	110	52-141			
Isopropylbenzene	**20.7**	0.20	ug/L	20	<0.50	104	70-130			
4-Isopropyltoluene	**20.6**	0.20	ug/L	20	<1.0	103	83-149			
Methyl-tert-Butyl Ether (MTBE)	**43.6**	1.7	ug/L	40	<2.0	109	56-150			
Methylene Chloride	**19.8**	5.0	ug/L	20	<5.0	99.0	70-130			
4-Methyl-2-pentanone (MIBK)	**19.7**	0.70	ug/L	20	<20	98.6	60-148			J
Naphthalene	**20.3**	0.20	ug/L	20	<2.0	102	70-130			
n-Propylbenzene	**20.7**	0.20	ug/L	20	<0.50	104	70-130			
Styrene	**20.9**	0.20	ug/L	20	<0.50	104	65-141			
1,1,1,2-Tetrachloroethane	**20.2**	0.40	ug/L	20	<0.50	101	70-130			
1,1,2,2-Tetrachloroethane	**22.9**	0.30	ug/L	20	<0.50	114	62-134			
Tetrachloroethylene (PCE)	**19.5**	0.50	ug/L	20	<0.50	97.4	70-130			
Toluene	**20.9**	0.30	ug/L	20	<0.50	104	81-123			
1,2,4-Trichlorobenzene	**19.2**	0.20	ug/L	20	<0.50	95.8	80-137			
1,2,3-Trichlorobenzene	**18.7**	0.20	ug/L	20	<0.50	93.6	73-144			
1,1,2-Trichloroethane	**21.9**	0.30	ug/L	20	<0.50	110	76-122			
1,1,1-Trichloroethane	**22.0**	0.30	ug/L	20	<0.50	110	62-164			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike (B9F2004-MS1) Continued	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
Trichloroethylene (TCE)	**31.8**	0.20	ug/L	20	8.80	115	72-136			
Trichlorofluoromethane (R11)	**19.7**	0.20	ug/L	20	<0.50	98.4	59-144			
1,2,3-Trichloropropane	**22.7**	0.30	ug/L	20	<0.50	113	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.3**	0.30	ug/L	20	<0.50	76.3	62-126			
1,2,4-Trimethylbenzene	**20.5**	0.30	ug/L	20	<0.50	103	89-134			
1,3,5-Trimethylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130			
Vinyl chloride	**23.5**	0.50	ug/L	20	<0.50	117	54-150			
o-Xylene	**21.2**	0.30	ug/L	20	<0.50	106	70-130			
m,p-Xylenes	**42.3**	0.40	ug/L	40	<1.0	106	70-130			
Surrogate: 4-Bromofluorobenzene	*48.0*		*ug/L*	*50*		*96.1*	*80-129*			
Surrogate: Dibromofluoromethane	*50.4*		*ug/L*	*50*		*101*	*68-137*			
Surrogate: Toluene-d8	*48.2*		*ug/L*	*50*		*96.4*	*83-134*			
Matrix Spike Dup (B9F2004-MSD1)	**Source: 9F13001-18**		Prepared & Analyzed: 06/20/19							
Acetone	**28.5**	7.7	ug/L	20	10.5	90.0	11-169	8.80	30	J
Benzene	**18.5**	0.20	ug/L	20	<0.50	92.3	56-135	1.93	30	
Bromobenzene	**20.0**	0.30	ug/L	20	<0.50	100	70-130	1.81	30	
Bromochloromethane	**20.0**	0.50	ug/L	20	<0.50	99.8	74-125	3.69	30	
Bromodichloromethane	**22.2**	0.20	ug/L	20	<0.50	111	68-144	1.88	30	
Bromoform	**19.5**	0.50	ug/L	20	<0.50	97.6	68-151	0.205	30	
Bromomethane	**20.9**	0.50	ug/L	20	<0.50	105	54-142	23.7	30	
2-Butanone (MEK)	**19.6**	2.0	ug/L	20	<20	97.8	62-145	4.44	30	J
tert-Butylbenzene	**20.5**	0.20	ug/L	20	<0.50	103	70-130	1.03	30	
n-Butylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130	1.29	30	
sec-Butylbenzene	**20.5**	0.20	ug/L	20	<0.50	102	84-145	0.245	30	
Carbon Disulfide	**21.1**	0.30	ug/L	20	<0.50	105	28-151	4.59	30	
Carbon Tetrachloride	**21.5**	0.30	ug/L	20	<0.50	107	58-164	4.91	30	
Chlorobenzene	**20.0**	0.30	ug/L	20	<0.50	100	70-130	2.27	30	
Chloroethane	**45.6**	0.50	ug/L	20	<0.50	228	42-164	34.6	30	**, AA-C1
Chloroform	**20.4**	0.30	ug/L	20	<0.50	102	65-138	4.66	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike Dup (B9F2004-MSD1) Continued		**Source: 9F13001-18**			Prepared & Analyzed: 06/20/19					
Chloromethane	**21.0**	0.40	ug/L	20	<0.50	105	50-152	2.31	30	
4-Chlorotoluene	**20.6**	0.20	ug/L	20	<0.50	103	70-130	0.146	30	
2-Chlorotoluene	**20.4**	0.30	ug/L	20	<0.50	102	70-130	0.587	30	
1,2-Dibromo-3-chloropropane	**22.1**	0.40	ug/L	20	<1.0	110	53-161	4.87	30	
Dibromochloromethane	**20.9**	0.30	ug/L	20	<0.50	104	70-130	2.18	30	
1,2-Dibromoethane (EDB)	**21.4**	0.30	ug/L	20	<0.50	107	76-130	1.21	30	
Dibromomethane	**20.5**	0.40	ug/L	20	<0.50	102	62-135	3.69	30	
1,3-Dichlorobenzene	**19.7**	0.10	ug/L	20	<0.50	98.4	70-130	0.861	30	
1,4-Dichlorobenzene	**19.7**	0.30	ug/L	20	<0.50	98.3	70-130	1.59	30	
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20	<0.50	102	70-130	0.789	30	
Dichlorodifluoromethane (R12)	**19.1**	0.50	ug/L	20	<0.50	95.4	17-153	8.63	30	
1,1-Dichloroethane	**28.2**	0.20	ug/L	20	7.50	104	55-131	6.48	30	
1,2-Dichloroethane (EDC)	**24.5**	0.30	ug/L	20	<0.50	123	52-168	3.92	30	
cis-1,2-Dichloroethylene	**63.1**	0.20	ug/L	20	43.3	99.2	70-130	6.14	30	
1,1-Dichloroethylene	**24.5**	0.30	ug/L	20	3.39	106	51-140	3.49	30	
trans-1,2-Dichloroethylene	**22.8**	0.40	ug/L	20	1.89	105	59-127	3.40	30	
1,3-Dichloropropane	**21.2**	0.10	ug/L	20	<0.50	106	80-121	1.86	30	
1,2-Dichloropropane	**22.1**	0.50	ug/L	20	<0.50	111	52-142	1.93	30	
2,2-Dichloropropane	**17.6**	0.40	ug/L	20	<0.50	87.9	36-168	8.55	30	
trans-1,3-Dichloropropylene	**21.2**	0.20	ug/L	20	<0.50	106	78-130	0.799	30	
1,1-Dichloropropylene	**21.3**	0.20	ug/L	20	<0.50	106	76-132	4.82	30	
cis-1,3-Dichloropropylene	**21.7**	0.20	ug/L	20	<0.50	108	66-130	2.33	30	
Ethylbenzene	**20.7**	0.20	ug/L	20	<0.50	104	86-128	1.68	30	
Hexachlorobutadiene	**19.5**	0.40	ug/L	20	<1.0	97.4	70-130	3.55	30	
2-Hexanone (MBK)	**20.9**	2.0	ug/L	20	<20	105	52-141	5.35	30	
Isopropylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	70-130	0.678	30	
4-Isopropyltoluene	**20.2**	0.20	ug/L	20	<1.0	101	83-149	2.06	30	
Methyl-tert-Butyl Ether (MTBE)	**44.0**	1.7	ug/L	40	<2.0	110	56-150	0.913	30	
Methylene Chloride	**19.3**	5.0	ug/L	20	<5.0	96.6	70-130	2.35	30	
4-Methyl-2-pentanone (MIBK)	**20.2**	0.70	ug/L	20	<20	101	60-148	2.16	30	
Naphthalene	**21.4**	0.20	ug/L	20	<2.0	107	70-130	5.03	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2004 - EPA 5030B										
Matrix Spike Dup (B9F2004-MSD1) Continued		**Source: 9F13001-18**			Prepared & Analyzed: 06/20/19					
n-Propylbenzene	**20.8**	0.20	ug/L	20	<0.50	104	70-130	0.289	30	
Styrene	**20.6**	0.20	ug/L	20	<0.50	103	65-141	1.20	30	
1,1,1,2-Tetrachloroethane	**20.0**	0.40	ug/L	20	<0.50	100	70-130	0.944	30	
1,1,2,2-Tetrachloroethane	**23.2**	0.30	ug/L	20	<0.50	116	62-134	1.30	30	
Tetrachloroethylene (PCE)	**19.4**	0.50	ug/L	20	<0.50	96.8	70-130	0.567	30	
Toluene	**20.0**	0.30	ug/L	20	<0.50	100	81-123	4.16	30	
1,2,4-Trichlorobenzene	**19.8**	0.20	ug/L	20	<0.50	98.9	80-137	3.24	30	
1,2,3-Trichlorobenzene	**19.5**	0.20	ug/L	20	<0.50	97.3	73-144	3.93	30	
1,1,2-Trichloroethane	**21.5**	0.30	ug/L	20	<0.50	108	76-122	1.75	30	
1,1,1-Trichloroethane	**21.2**	0.30	ug/L	20	<0.50	106	62-164	3.52	30	
Trichloroethylene (TCE)	**30.5**	0.20	ug/L	20	8.80	108	72-136	4.20	30	
Trichlorofluoromethane (R11)	**18.1**	0.20	ug/L	20	<0.50	90.6	59-144	8.31	30	
1,2,3-Trichloropropane	**23.3**	0.30	ug/L	20	<0.50	116	69-135	2.66	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**14.8**	0.30	ug/L	20	<0.50	74.2	62-126	2.72	30	
1,2,4-Trimethylbenzene	**20.7**	0.30	ug/L	20	<0.50	103	89-134	0.728	30	
1,3,5-Trimethylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	70-130	0.869	30	
Vinyl chloride	**22.6**	0.50	ug/L	20	<0.50	113	54-150	3.64	30	
o-Xylene	**20.8**	0.30	ug/L	20	<0.50	104	70-130	2.00	30	
m,p-Xylenes	**41.4**	0.40	ug/L	40	<1.0	103	70-130	2.10	30	
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.3*	*80-129*			
Surrogate: Dibromofluoromethane	*49.1*		*ug/L*	*50*		*98.3*	*68-137*			
Surrogate: Toluene-d8	*47.4*		*ug/L*	*50*		*94.7*	*83-134*			
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1)					Prepared & Analyzed: 06/21/19					
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.9*		*ug/L*	*50*		*97.9*	*80-129*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.8*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			
LCS (B9F2101-BS1)				Prepared & Analyzed: 06/21/19						
Acetone	**16.7**	7.7	ug/L	20		83.3	27-123			J
Benzene	**18.6**	0.40	ug/L	20		93.2	60-134			
Bromobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
Bromochloromethane	**21.5**	0.20	ug/L	20		107	78-121			
Bromodichloromethane	**22.5**	0.40	ug/L	20		112	74-135			
Bromoform	**20.0**	0.40	ug/L	20		99.8	68-132			
Bromomethane	**18.2**	0.30	ug/L	20		90.8	58-142			
2-Butanone (MEK)	**18.7**	8.6	ug/L	20		93.4	62-138			J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**21.5**	0.20	ug/L	20		107	70-130			
sec-Butylbenzene	**20.9**	0.20	ug/L	20		105	84-142			
Carbon Disulfide	**21.2**	0.20	ug/L	20		106	17-177			
Carbon Tetrachloride	**22.3**	0.30	ug/L	20		112	66-155			
Chlorobenzene	**20.6**	0.40	ug/L	20		103	70-130			
Chloroethane	**42.8**	0.40	ug/L	20		214	45-166			**
Chloroform	**21.5**	0.30	ug/L	20		108	71-131			
Chloromethane	**21.4**	0.40	ug/L	20		107	48-152			
4-Chlorotoluene	**20.9**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.7**	0.20	ug/L	20		103	70-130			
1,2-Dibromo-3-chloropropane	**21.7**	0.40	ug/L	20		108	53-145			
Dibromochloromethane	**21.6**	0.40	ug/L	20		108	72-133			
1,2-Dibromoethane (EDB)	**21.7**	0.40	ug/L	20		109	79-120			
Dibromomethane	**20.9**	0.40	ug/L	20		104	68-124			
1,3-Dichlorobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		97.8	70-130			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		102	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20		101	16-148			
1,1-Dichloroethane	**21.4**	0.20	ug/L	20		107	67-120			
1,2-Dichloroethane (EDC)	**24.0**	0.20	ug/L	20		120	57-156			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
cis-1,2-Dichloroethylene	**21.0**	0.30	ug/L	20		105	70-124			
1,1-Dichloroethylene	**21.3**	0.40	ug/L	20		106	50-149			
trans-1,2-Dichloroethylene	**21.5**	0.30	ug/L	20		108	66-126			
1,3-Dichloropropane	**22.3**	0.40	ug/L	20		111	79-113			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		110	53-139			
2,2-Dichloropropane	**20.2**	0.30	ug/L	20		101	44-162			
trans-1,3-Dichloropropylene	**22.2**	0.30	ug/L	20		111	76-121			
1,1-Dichloropropylene	**21.9**	0.30	ug/L	20		110	84-124			
cis-1,3-Dichloropropylene	**22.4**	0.40	ug/L	20		112	67-127			
Ethylbenzene	**21.9**	0.30	ug/L	20		109	86-124			
Hexachlorobutadiene	**19.4**	0.50	ug/L	20		96.9	76-140			
2-Hexanone (MBK)	**21.0**	8.4	ug/L	20		105	52-123			
Isopropylbenzene	**21.1**	0.30	ug/L	20		105	70-130			
4-Isopropyltoluene	**20.5**	0.30	ug/L	20		102	70-130			
Methyl-tert-Butyl Ether (MTBE)	**43.4**	1.4	ug/L	40		108	58-144			
Methylene Chloride	**20.7**	4.4	ug/L	20		103	50-135			
4-Methyl-2-pentanone (MIBK)	**19.7**	9.8	ug/L	20		98.7	49-139			J
Naphthalene	**20.8**	0.40	ug/L	20		104	74-128			
n-Propylbenzene	**21.3**	0.20	ug/L	20		106	70-130			
Styrene	**21.5**	0.20	ug/L	20		108	84-123			
1,1,1,2-Tetrachloroethane	**20.7**	0.30	ug/L	20		103	70-130			
1,1,2,2-Tetrachloroethane	**23.1**	0.40	ug/L	20		115	58-126			
Tetrachloroethylene (PCE)	**20.4**	0.50	ug/L	20		102	70-130			
Toluene	**20.8**	0.20	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.0**	0.30	ug/L	20		100	84-128			
1,2,3-Trichlorobenzene	**19.5**	0.50	ug/L	20		97.4	77-134			
1,1,2-Trichloroethane	**22.0**	0.30	ug/L	20		110	75-115			
1,1,1-Trichloroethane	**23.0**	0.30	ug/L	20		115	66-158			
Trichloroethylene (TCE)	**22.0**	0.30	ug/L	20		110	82-128			
Trichlorofluoromethane (R11)	**18.3**	0.40	ug/L	20		91.4	65-137			
1,2,3-Trichloropropane	**22.9**	0.20	ug/L	20		114	68-123			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.2**	0.30	ug/L	20		75.8	62-130			
1,2,4-Trimethylbenzene	**20.9**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**20.7**	0.20	ug/L	20		104	70-130			
Vinyl chloride	**22.8**	0.40	ug/L	20		114	51-151			
o-Xylene	**21.5**	0.30	ug/L	20		108	70-130			
m,p-Xylenes	**43.2**	0.60	ug/L	40		108	70-130			
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.5*	*80-129*			
Surrogate: Dibromofluoromethane	*48.6*		*ug/L*	*50*		*97.3*	*68-137*			
Surrogate: Toluene-d8	*48.5*		*ug/L*	*50*		*96.9*	*83-134*			
Matrix Spike (B9F2101-MS1)		**Source: 9F14005-11**		Prepared & Analyzed: 06/21/19						
Acetone	**22.4**	7.7	ug/L	20		112	11-169			J
Benzene	**18.3**	0.40	ug/L	20		91.5	56-135			
Bromobenzene	**19.3**	0.40	ug/L	20		96.3	70-130			
Bromochloromethane	**21.0**	0.20	ug/L	20		105	74-125			
Bromodichloromethane	**22.7**	0.40	ug/L	20		113	68-144			
Bromoform	**19.1**	0.40	ug/L	20		95.3	68-151			
Bromomethane	**15.4**	0.30	ug/L	20		76.8	54-142			
2-Butanone (MEK)	**20.6**	8.6	ug/L	20		103	62-145			
tert-Butylbenzene	**19.4**	0.20	ug/L	20		96.8	70-130			
n-Butylbenzene	**20.3**	0.20	ug/L	20		101	70-130			
sec-Butylbenzene	**19.5**	0.20	ug/L	20		97.7	84-145			
Carbon Disulfide	**20.5**	0.20	ug/L	20		103	28-151			
Carbon Tetrachloride	**22.0**	0.30	ug/L	20		110	58-164			
Chlorobenzene	**19.5**	0.40	ug/L	20		97.3	70-130			
Chloroethane	**42.6**	0.40	ug/L	20		213	42-164			**
Chloroform	**21.3**	0.30	ug/L	20		106	65-138			
Chloromethane	**20.8**	0.40	ug/L	20		104	50-152			
4-Chlorotoluene	**19.8**	0.20	ug/L	20		98.9	70-130			
2-Chlorotoluene	**19.6**	0.20	ug/L	20		98.2	70-130			
1,2-Dibromo-3-chloropropane	**22.2**	0.40	ug/L	20		111	53-161			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued Source: 9F14005-11 Prepared & Analyzed: 06/21/19										
Dibromochloromethane	**20.8**	0.40	ug/L	20		104	70-130			
1,2-Dibromoethane (EDB)	**21.1**	0.40	ug/L	20		106	76-130			
Dibromomethane	**21.7**	0.40	ug/L	20		108	62-135			
1,3-Dichlorobenzene	**19.0**	0.40	ug/L	20		95.2	70-130			
1,4-Dichlorobenzene	**18.8**	0.30	ug/L	20		94.1	70-130			
1,2-Dichlorobenzene	**19.8**	0.30	ug/L	20		98.8	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20		101	17-153			
1,1-Dichloroethane	**22.6**	0.20	ug/L	20	1.21	107	55-131			
1,2-Dichloroethane (EDC)	**25.4**	0.20	ug/L	20	1.75	118	52-168			
cis-1,2-Dichloroethylene	**30.6**	0.30	ug/L	20	10.1	103	70-130			
1,1-Dichloroethylene	**20.3**	0.40	ug/L	20		102	51-140			
trans-1,2-Dichloroethylene	**21.3**	0.30	ug/L	20	0.900	102	59-127			
1,3-Dichloropropane	**21.3**	0.40	ug/L	20		107	80-121			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		109	52-142			
2,2-Dichloropropane	**18.5**	0.30	ug/L	20		92.7	36-168			
trans-1,3-Dichloropropylene	**21.5**	0.30	ug/L	20		107	78-130			
1,1-Dichloropropylene	**21.5**	0.30	ug/L	20		107	76-132			
cis-1,3-Dichloropropylene	**21.8**	0.40	ug/L	20		109	66-130			
Ethylbenzene	**20.4**	0.30	ug/L	20		102	86-128			
Hexachlorobutadiene	**18.4**	0.50	ug/L	20		91.8	70-130			
2-Hexanone (MBK)	**22.4**	8.4	ug/L	20		112	52-141			
Isopropylbenzene	**19.6**	0.30	ug/L	20		97.8	70-130			
4-Isopropyltoluene	**19.8**	0.30	ug/L	20		98.9	83-149			
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40		112	56-150			
Methylene Chloride	**24.7**	4.4	ug/L	20		123	70-130			
4-Methyl-2-pentanone (MIBK)	**21.0**	9.8	ug/L	20		105	60-148			
Naphthalene	**20.6**	0.40	ug/L	20		103	70-130			
n-Propylbenzene	**19.9**	0.20	ug/L	20		99.4	70-130			
Styrene	**20.3**	0.20	ug/L	20		102	65-141			
1,1,1,2-Tetrachloroethane	**19.6**	0.30	ug/L	20		97.8	70-130			
1,1,2,2-Tetrachloroethane	**23.4**	0.40	ug/L	20		117	62-134			
Tetrachloroethylene (PCE)	**18.9**	0.50	ug/L	20		94.6	70-130			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
Toluene	**19.5**	0.20	ug/L	20		97.4	81-123			
1,2,4-Trichlorobenzene	**19.1**	0.30	ug/L	20		95.4	80-137			
1,2,3-Trichlorobenzene	**19.0**	0.50	ug/L	20		95.0	73-144			
1,1,2-Trichloroethane	**21.4**	0.30	ug/L	20		107	76-122			
1,1,1-Trichloroethane	**22.2**	0.30	ug/L	20		111	62-164			
Trichloroethylene (TCE)	**22.6**	0.30	ug/L	20	1.05	108	72-136			
Trichlorofluoromethane (R11)	**18.7**	0.40	ug/L	20		93.4	59-144			
1,2,3-Trichloropropane	**23.2**	0.20	ug/L	20		116	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.5**	0.30	ug/L	20		77.6	62-126			
1,2,4-Trimethylbenzene	**19.9**	0.30	ug/L	20		99.5	89-134			
1,3,5-Trimethylbenzene	**19.8**	0.20	ug/L	20		98.8	70-130			
Vinyl chloride	**22.0**	0.40	ug/L	20		110	54-150			
o-Xylene	**20.6**	0.30	ug/L	20		103	70-130			
m,p-Xylenes	**40.8**	0.60	ug/L	40		102	70-130			
Surrogate: 4-Bromofluorobenzene	*47.5*		*ug/L*	*50*		*95.1*	*80-129*			
Surrogate: Dibromofluoromethane	*49.1*		*ug/L*	*50*		*98.2*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.9*	*83-134*			
Matrix Spike Dup (B9F2101-MSD1)	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
Acetone	**24.3**	7.7	ug/L	20		122	11-169	8.30	30	J
Benzene	**18.6**	0.40	ug/L	20		92.8	56-135	1.46	30	
Bromobenzene	**19.5**	0.40	ug/L	20		97.6	70-130	1.39	30	
Bromochloromethane	**20.6**	0.20	ug/L	20		103	74-125	1.83	30	
Bromodichloromethane	**22.2**	0.40	ug/L	20		111	68-144	2.19	30	
Bromoform	**19.7**	0.40	ug/L	20		98.6	68-151	3.35	30	
Bromomethane	**25.2**	0.30	ug/L	20		126	54-142	48.3	30	AA-C1
2-Butanone (MEK)	**20.3**	8.6	ug/L	20		102	62-145	1.22	30	
tert-Butylbenzene	**19.8**	0.20	ug/L	20		99.1	70-130	2.30	30	
n-Butylbenzene	**20.6**	0.20	ug/L	20		103	70-130	1.71	30	
sec-Butylbenzene	**19.8**	0.20	ug/L	20		99.0	84-145	1.37	30	
Carbon Disulfide	**20.2**	0.20	ug/L	20		101	28-151	1.62	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued	**Source: 9F14005-11** Prepared & Analyzed: 06/21/19									
Carbon Tetrachloride	**21.9**	0.30	ug/L	20		110	58-164	0.455	30	
Chlorobenzene	**20.1**	0.40	ug/L	20		101	70-130	3.43	30	
Chloroethane	**46.5**	0.40	ug/L	20		232	42-164	8.71	30	**
Chloroform	**20.6**	0.30	ug/L	20		103	65-138	3.39	30	
Chloromethane	**20.4**	0.40	ug/L	20		102	50-152	1.70	30	
4-Chlorotoluene	**20.1**	0.20	ug/L	20		101	70-130	1.75	30	
2-Chlorotoluene	**19.8**	0.20	ug/L	20		99.2	70-130	1.06	30	
1,2-Dibromo-3-chloropropane	**22.6**	0.40	ug/L	20		113	53-161	1.61	30	
Dibromochloromethane	**21.5**	0.40	ug/L	20		108	70-130	3.26	30	
1,2-Dibromoethane (EDB)	**22.0**	0.40	ug/L	20		110	76-130	3.90	30	
Dibromomethane	**21.1**	0.40	ug/L	20		106	62-135	2.43	30	
1,3-Dichlorobenzene	**19.1**	0.40	ug/L	20		95.4	70-130	0.262	30	
1,4-Dichlorobenzene	**19.0**	0.30	ug/L	20		95.0	70-130	0.899	30	
1,2-Dichlorobenzene	**20.3**	0.30	ug/L	20		102	70-130	2.75	30	
Dichlorodifluoromethane (R12)	**18.6**	0.40	ug/L	20		93.0	17-153	8.30	30	
1,1-Dichloroethane	**22.5**	0.20	ug/L	20	1.21	107	55-131	0.133	30	
1,2-Dichloroethane (EDC)	**23.8**	0.20	ug/L	20	1.75	110	52-168	6.46	30	
cis-1,2-Dichloroethylene	**30.3**	0.30	ug/L	20	10.1	101	70-130	1.05	30	
1,1-Dichloroethylene	**20.5**	0.40	ug/L	20		102	51-140	0.735	30	
trans-1,2-Dichloroethylene	**21.2**	0.30	ug/L	20	0.900	102	59-127	0.564	30	
1,3-Dichloropropane	**22.2**	0.40	ug/L	20		111	80-121	4.18	30	
1,2-Dichloropropane	**21.8**	0.30	ug/L	20		109	52-142	0.412	30	
2,2-Dichloropropane	**17.0**	0.30	ug/L	20		85.2	36-168	8.49	30	
trans-1,3-Dichloropropylene	**21.8**	0.30	ug/L	20		109	78-130	1.48	30	
1,1-Dichloropropylene	**21.4**	0.30	ug/L	20		107	76-132	0.233	30	
cis-1,3-Dichloropropylene	**22.0**	0.40	ug/L	20		110	66-130	0.960	30	
Ethylbenzene	**20.8**	0.30	ug/L	20		104	86-128	2.04	30	
Hexachlorobutadiene	**19.3**	0.50	ug/L	20		96.5	70-130	4.94	30	
2-Hexanone (MBK)	**23.3**	8.4	ug/L	20		116	52-141	3.99	30	
Isopropylbenzene	**20.3**	0.30	ug/L	20		102	70-130	3.76	30	
4-Isopropyltoluene	**19.8**	0.30	ug/L	20		98.9	83-149	0.00	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874358
Date Received: 06/13/19
Date Reported: 06/27/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued	**Source: 9F14005-11**					Prepared & Analyzed: 06/21/19				
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40		112	56-150	0.0223	30	
Methylene Chloride	**24.0**	4.4	ug/L	20		120	70-130	2.79	30	
4-Methyl-2-pentanone (MIBK)	**21.8**	9.8	ug/L	20		109	60-148	3.79	30	
Naphthalene	**21.3**	0.40	ug/L	20		107	70-130	3.29	30	
n-Propylbenzene	**20.3**	0.20	ug/L	20		101	70-130	1.89	30	
Styrene	**20.7**	0.20	ug/L	20		104	65-141	2.14	30	
1,1,1,2-Tetrachloroethane	**20.2**	0.30	ug/L	20		101	70-130	3.02	30	
1,1,2,2-Tetrachloroethane	**24.0**	0.40	ug/L	20		120	62-134	2.70	30	
Tetrachloroethylene (PCE)	**19.7**	0.50	ug/L	20		98.6	70-130	4.19	30	
Toluene	**20.0**	0.20	ug/L	20		100	81-123	2.68	30	
1,2,4-Trichlorobenzene	**19.7**	0.30	ug/L	20		98.5	80-137	3.25	30	
1,2,3-Trichlorobenzene	**19.4**	0.50	ug/L	20		97.2	73-144	2.34	30	
1,1,2-Trichloroethane	**22.2**	0.30	ug/L	20		111	76-122	3.71	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20		107	62-164	3.62	30	
Trichloroethylene (TCE)	**22.3**	0.30	ug/L	20	1.05	106	72-136	1.34	30	
Trichlorofluoromethane (R11)	**17.7**	0.40	ug/L	20		88.6	59-144	5.27	30	
1,2,3-Trichloropropane	**23.9**	0.20	ug/L	20		119	69-135	2.84	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**14.7**	0.30	ug/L	20		73.6	62-126	5.29	30	
1,2,4-Trimethylbenzene	**20.1**	0.30	ug/L	20		100	89-134	1.00	30	
1,3,5-Trimethylbenzene	**20.0**	0.20	ug/L	20		99.8	70-130	0.956	30	
Vinyl chloride	**22.2**	0.40	ug/L	20		111	54-150	0.906	30	
o-Xylene	**21.0**	0.30	ug/L	20		105	70-130	2.12	30	
m,p-Xylenes	**41.5**	0.60	ug/L	40		104	70-130	1.60	30	
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.6*	*80-129*			
Surrogate: Dibromofluoromethane	*49.0*		*ug/L*	*50*		*98.1*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874358
Project No:	130072-025	**Date Received:**	06/13/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/27/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

18348

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

LAB: American Analytics

COC 1 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874358 / 9F13001

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D.	DATE	TIME	MATRIX (AQ= Water)	CONTAINERS #	Preservative	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
QCOG-061219	6/17/19	0700	AQ	2	HCL	VOA	X									9F13001-01
MW-60A-061219		0843	AQ	4	HCL/NP	VOA/Amber	X	X								-02
MW-60B-061219		0909	AQ	4	HCL/NP	VOA/Amber	X	X								-03
MW-62BLR)-061219		1001	AQ	4	HCL/NP	VOA/Amber	X	X								-04
MW-62A-061219		1029	AQ	4	HCL/NP	VOA/Amber	X	X								-05
PZ-7B-061219		1116	AQ	4	HCL/NP	VOA/Amber	X	X								-06
QCID-061219		1126	AQ	4	HCL/NP	VOA/Amber	X	X								-07
PZ-7A-061219		1156	AQ	4	HCL/NP	VOA/Amber	X	X								-08
MW-19-061219		1346	AQ	4	HCL/NP	VOA/Amber	X	X								-09
QC07-061219		1415	AQ	4	HCL/NP	VOA/Amber	X	X								-10

REVIEWED Date 6/13/19 Time 1500 TAT N Days Sign:

SAMPLE INTEGRITY INTACT (Y) N TEMP 4.4

19 JUN 18 11:25AM

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
			Phil Alonzo	Standard

RELEASED BY	TIME 1530	RECEIVED BY Nicole	DATE 6/12/19	TIME 1530
RELEASED BY	TIME 1005	RECEIVED BY	DATE 6-13-19	TIME 10:05
RELEASED BY	TIME 11:25	RECEIVED BY	DATE 6/13/19	TIME 1125
SHIPPED VIA	TIME SENT	COOLER #		

18349

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 2 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874358/9F13001

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

SAMPLE I.D.	DATE	TIME	MATRIX AQ= Water	CONTAINERS #	Preservatio	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-57B-061219	6/12/19	1414	AQ	4	HCl/none	voa/amb	X	X								9F13001-11
QC08-061219		1430		4			X	X								-12
MW-57A-061219		1332		4			X	X								-13
MW-58-061219		1239		4			X	X								-14
MW-59C-061219		1125		4			X	X								-15
EW-07B-061219		1015		4			X	X								-16
EW-07A-061219		0950		4			X	X								'19 JUN 13 11:25
EW-05-061219		0915		6			X	X					MS/MSD			-18
MW-22-061219		0829		4			X	X								-19
QC09-061219		0800		4			X	X								-20

REVIEWED Date 6/13/19 Time 1530 TAT N Days Sign:

SAMPLE INTEGRITY
INTACT Y N TEMP 4.4

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	6/12/19	1440	Jordan Terrance	Standard

RELEASED BY	TIME	RECEIVED BY	DATE	TIME
	1530	Nicole	6/12/19	1530
	1005		6.13.19	10:05
	11:25		6/13/19	1125

SHIPPED VIA	TIME SENT	COOLER #

AMERICAN ANALYTICS
LEVEL "IV" DELIVERABLES PACKAGE

PREPARED FOR

HALEY & ALDRICH

Project Name: Cooper Drum GW – South Gate

AA Project No.: A874359/9F14004

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel:(818)998-5547 • • Fax:(818)998-7258

Table of Contents for A874359 /9F14004

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Raw Data for VOCs by EPA 8260B	Pg. 32
Raw Data for 1,4-Dioxane by EPA 8270CM – Isotope Dilution	Pg. 162

CASE NARRATIVE

AMERICAN ANALYTICS

Client: Haley & Aldrich **AA Project No.:** A874359

Project No.: 130072-025 **Laboratory ID.:** 9F14004

Project Name: Cooper Drum GW – South Gate

Date Received: 06/14/19

Sample Matrix: Water **Date Reported:** 07/01/19

Case Narrative

American Analytics is certified by the California State Water Resources Control Board, Certificate number 1471.

On the date indicated above, American Analytics, Inc. received from Haley & Aldrich's Cooper Drum - South Gate site groundwater samples in 40 mL VOA vials and 1 L amber glass bottles. The containers were in good condition, appropriately preserved, and at 4 to 6°C.

The samples were analyzed for VOCs by EPA 8260B and for 1,4-Dioxane by EPA 8270CM – Isotope Dilution.

No difficulties were encountered during analysis of these samples.

American Analytics • 9765 Eton Avenue, Chatsworth, California 91311
Tel:(818)998-5547 • • Fax:(818)998-7258

CHAIN OF CUSTODY

18358

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 1 of 1

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874359 / 9F14004

SAMPLE I.D.	DATE	TIME	MATRIX AQ= Water	#	CONTAINERS Preservatio	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
EW-A-061319	6/13/19	1040	AQ	4	HCL/none	VOC/Amber	X	X				X				9F14004-01
MW-33B-061319		0946		4			X	X				X				-02
MW-17-061319		0907		4			X	X				X				-03
MW-59B-061319		1128		4			X	X				X				-04
MW-4B-061319		1349		4			X	X				X				-05
QC15-061319		1359		4			X	X				X				-06
EW-2-061319		1250		4			X	X				X				-07

REVIEWED
Date 6/17/19 Time 0750
TAT N Days Sign:

SAMPLE INTEGRITY
INTACT Y N TEMP 4.0

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	6/13/19		Jordan Trame	Standard

RELEASED BY	TIME	RECEIVED BY	DATE	TIME
[signature]	1525	[signature]	6/13/19	1525
[signature]	1153	[signature]	6/14/19	1153
[signature]	6/14/19 16:00	[signature]	6/14/19	1600

SHIPPED VIA	TIME SENT	COOLER #

WORK ORDER / COOLER RECEIPT FORM

9F14004

American Analytics, Inc.

Client: Haley & Aldrich (Oakland)
Project: Cooper Drum GW - South Gate

Project Manager: Viorel Vasile
Project Number: 130072-025

Report To:
Haley & Aldrich (Oakland)
Peter Bennett
1956 Webster St., Suite 450
Oakland, CA 94612
Phone: (510) 879-4544
Fax: (510) 879-4544

Invoice To:
Haley & Aldrich, Inc. (MA)
Accounts Payable
70 Blanchard Rd., Ste 430
Burlington, MA 01803-5100
Phone :(617) 886-7400
Fax: (617) 886-7900

Date Due: 06/21/19 17:00 (5 day TAT)

Received By: Viorel Vasile
Date Received: 06/14/19 16:00

Logged In By: Viorel Vasile
Date Logged In: 06/14/19 13:03

Samples Received at: **4°C**

Unacceptable	No	Containers broken	No
Custody seals prese	No	Containers damagec	No
Custody seals broke	No	Not preserved appr	No
Ice not present	No	PM notified of exce	No

Analysis	Due	TAT	Expires	Comments
9F14004-01 EW-A-061319 [Water] Sampled 06/13/19 10:40 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 10:40	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 10:40	THIS IS LEVEL IV
9F14004-02 MW-33B-061319 [Water] Sampled 06/13/19 09:46 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 09:46	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 09:46	THIS IS LEVEL IV
9F14004-03 MW-17-061319 [Water] Sampled 06/13/19 09:07 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 09:07	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 09:07	THIS IS LEVEL IV
9F14004-04 MW-59B-061319 [Water] Sampled 06/13/19 11:28 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 11:28	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 11:28	THIS IS LEVEL IV
9F14004-05 MW-4B-061319 [Water] Sampled 06/13/19 13:49 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 13:49	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 13:49	THIS IS LEVEL IV

9F14004

American Analytics, Inc.

Client: Haley & Aldrich (Oakland)
Project: Cooper Drum GW - South Gate

Project Manager: Viorel Vasile
Project Number: 130072-025

Analysis	Due	TAT	Expires	Comments
9F14004-06 QC15-061319 [Water] Sampled 06/13/19 13:59 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 13:59	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 13:59	THIS IS LEVEL IV
9F14004-07 EW-2-061319 [Water] Sampled 06/13/19 12:50 (GMT-08:00) Pacific Time (US &				
8270CM 1,4-Dioxane Only	06/21/19 17:00	5	06/20/19 12:50	THIS IS LEVEL IV
8260B	06/21/19 17:00	5	06/27/19 12:50	THIS IS LEVEL IV

Reviewed By

9

Date

Update Status - Work Orders **ALL** [2065]

Printed By Stuart Sigman on 07/01/19

Sample	Name	Matrix	Analysis	Status	WrkStatus	Batch	Due	Sampled	Expires	Comment
9F14004-01	EW-A-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 10:40	06/27/19 10:40	THIS IS LEVEL IV
9F14004-01	EW-A-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 10:40	06/20/19 10:40	THIS IS LEVEL IV
9F14004-02	MW-33B-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 09:46	06/27/19 09:46	THIS IS LEVEL IV
9F14004-02	MW-33B-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 09:46	06/20/19 09:46	THIS IS LEVEL IV
9F14004-03	MW-17-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 09:07	06/27/19 09:07	THIS IS LEVEL IV
9F14004-03	MW-17-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 09:07	06/20/19 09:07	THIS IS LEVEL IV
9F14004-04	MW-59B-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 11:28	06/27/19 11:28	THIS IS LEVEL IV
9F14004-04	MW-59B-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 11:28	06/20/19 11:28	THIS IS LEVEL IV
9F14004-05	MW-4B-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 13:49	06/27/19 13:49	THIS IS LEVEL IV
9F14004-05	MW-4B-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 13:49	06/20/19 13:49	THIS IS LEVEL IV
9F14004-06	QC15-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 13:59	06/27/19 13:59	THIS IS LEVEL IV
9F14004-06	QC15-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 13:59	06/20/19 13:59	THIS IS LEVEL IV
9F14004-07	EW-2-061319	Water	8260B	Reviewed	Reportable	B9F2101	06/21/19 17:00	06/13/19 12:50	06/27/19 12:50	THIS IS LEVEL IV
9F14004-07	EW-2-061319	Water	8270CM 1,4-Dioxane Only	Reviewed	Reportable	B9F2002	06/21/19 17:00	06/13/19 12:50	06/20/19 12:50	THIS IS LEVEL IV

ANALYTICAL REPORT

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

July 01, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874359 / 9F14004

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/14/19 16:00 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
EW-A-061319	9F14004-01	Water	5	06/13/19 10:40	06/14/19 16:00
MW-33B-061319	9F14004-02	Water	5	06/13/19 09:46	06/14/19 16:00
MW-17-061319	9F14004-03	Water	5	06/13/19 09:07	06/14/19 16:00
MW-59B-061319	9F14004-04	Water	5	06/13/19 11:28	06/14/19 16:00
MW-4B-061319	9F14004-05	Water	5	06/13/19 13:49	06/14/19 16:00
QC15-061319	9F14004-06	Water	5	06/13/19 13:59	06/14/19 16:00
EW-2-061319	9F14004-07	Water	5	06/13/19 12:50	06/14/19 16:00
8270CM 1,4-Dioxane Only					
EW-A-061319	9F14004-01	Water	5	06/13/19 10:40	06/14/19 16:00
MW-33B-061319	9F14004-02	Water	5	06/13/19 09:46	06/14/19 16:00
MW-17-061319	9F14004-03	Water	5	06/13/19 09:07	06/14/19 16:00
MW-59B-061319	9F14004-04	Water	5	06/13/19 11:28	06/14/19 16:00
MW-4B-061319	9F14004-05	Water	5	06/13/19 13:49	06/14/19 16:00
QC15-061319	9F14004-06	Water	5	06/13/19 13:59	06/14/19 16:00
EW-2-061319	9F14004-07	Water	5	06/13/19 12:50	06/14/19 16:00

Viorel Vasile
Operations Manager

American Analytics ÿ 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998-5547 ÿ Fax: (818) 998-7258

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F14004-01	EW-A-061319	06/13/19	06/20/19	06/21/19	1	**13**	ug/L	1	2
9F14004-02	MW-33B-061319	06/13/19	06/20/19	06/21/19	1	**11**	ug/L	1	2
9F14004-03	MW-17-061319	06/13/19	06/20/19	06/21/19	1	**7.8**	ug/L	1	2
9F14004-04	MW-59B-061319	06/13/19	06/20/19	06/21/19	1	**6.9**	ug/L	1	2
9F14004-05	MW-4B-061319	06/13/19	06/20/19	06/21/19	1	<1.0	ug/L	1	2
9F14004-06	QC15-061319	06/13/19	06/20/19	06/21/19	1	<1.0	ug/L	1	2
9F14004-07	EW-2-061319	06/13/19	06/20/19	06/21/19	1	**7.0**	ug/L	1	2

Viorel Vasile
Operations Manager

American Analytics ÿ 9765 Eton Avenue, Chatsworth, California 91311
Tel: (818) 998-5547 ÿ Fax: (818) 998-7258

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-01	9F14004-02	9F14004-03	9F14004-04		
Client ID No:	EW-A-061319	MW-33B-061319	MW-17-061319	MW-59B-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	**10 J**	**10 J**	**14 J**	<7.7	7.7	50
Benzene	**2.3**	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-01	9F14004-02	9F14004-03	9F14004-04		
Client ID No:	EW-A-061319	MW-33B-061319	MW-17-061319	MW-59B-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	**3.7**	**1.2**	**1.1**	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**3.2**	<0.20	<0.20	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**50**	**34**	**6.7**	**0.99**	0.30	0.50
1,1-Dichloroethylene	**1.2**	**2.8**	**2.1**	**2.2**	0.40	0.50
trans-1,2-Dichloroethylene	**6.4**	**1.4**	<0.30	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-01	9F14004-02	9F14004-03	9F14004-04		
Client ID No:	EW-A-061319	MW-33B-061319	MW-17-061319	MW-59B-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.61**	**1.6**	**16**	**1.0**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**2.8**	<0.40	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	97%	97%	98%	97%		80-129
Dibromofluoromethane	100%	107%	103%	104%		68-137
Toluene-d8	97%	96%	96%	98%		83-134

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-05	9F14004-06	9F14004-07		
Client ID No:	MW-4B-061319	QC15-061319	EW-2-061319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B)					
Acetone	**14 J**	<7.7	<7.7	7.7	50
Benzene	**6.6**	**6.6**	**2.4**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	0.40	0.50

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-05	9F14004-06	9F14004-07		
Client ID No:	MW-4B-061319	QC15-061319	EW-2-061319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,1-Dichloroethane	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**4.6**	**4.7**	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**55**	**55**	**7.3**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	**1.4**	0.40	0.50
trans-1,2-Dichloroethylene	**24**	**25**	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	0.30	0.50

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874359
Project No:	130072-025	**Date Received:**	06/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	07/01/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14004-05	9F14004-06	9F14004-07		
Client ID No:	MW-4B-061319	QC15-061319	EW-2-061319		
Matrix:	Water	Water	Water		
Dilution Factor:	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)					
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.1**	**1.0**	**0.48 J**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**8.0**	**7.8**	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	0.60	1.0
Surrogates					**%REC Limits**
4-Bromofluorobenzene	99%	98%	96%		80-129
Dibromofluoromethane	98%	99%	102%		68-137
Toluene-d8	98%	96%	95%		83-134

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F2002 - EPA 3510C_MS										
Blank (B9F2002-BLK1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F2002-BS1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**9.80**	1.0	ug/L	10		98.0	75-125			
LCS Dup (B9F2002-BSD1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**10.4**	1.0	ug/L	10		104	75-125	5.46	30	
Matrix Spike (B9F2002-MS1)		**Source: 9F14005-11**		Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**12.6**	1.0	ug/L	10	3.25	93.2	70-130			
Matrix Spike Dup (B9F2002-MSD1)		**Source: 9F14005-11**		Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**13.9**	1.0	ug/L	10	3.25	106	70-130	9.91	30	
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1)				Prepared & Analyzed: 06/21/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.9*		*ug/L*	*50*		*97.9*	*80-129*			
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.8*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			
LCS (B9F2101-BS1)				Prepared & Analyzed: 06/21/19						
Acetone	**16.7**	7.7	ug/L	20		83.3	27-123			J
Benzene	**18.6**	0.40	ug/L	20		93.2	60-134			
Bromobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
Bromochloromethane	**21.5**	0.20	ug/L	20		107	78-121			
Bromodichloromethane	**22.5**	0.40	ug/L	20		112	74-135			
Bromoform	**20.0**	0.40	ug/L	20		99.8	68-132			
Bromomethane	**18.2**	0.30	ug/L	20		90.8	58-142			
2-Butanone (MEK)	**18.7**	8.6	ug/L	20		93.4	62-138			J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**21.5**	0.20	ug/L	20		107	70-130			

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Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
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Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
sec-Butylbenzene	**20.9**	0.20	ug/L	20		105	84-142			
Carbon Disulfide	**21.2**	0.20	ug/L	20		106	17-177			
Carbon Tetrachloride	**22.3**	0.30	ug/L	20		112	66-155			
Chlorobenzene	**20.6**	0.40	ug/L	20		103	70-130			
Chloroethane	**42.8**	0.40	ug/L	20		214	45-166			**
Chloroform	**21.5**	0.30	ug/L	20		108	71-131			
Chloromethane	**21.4**	0.40	ug/L	20		107	48-152			
4-Chlorotoluene	**20.9**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.7**	0.20	ug/L	20		103	70-130			
1,2-Dibromo-3-chloropropane	**21.7**	0.40	ug/L	20		108	53-145			
Dibromochloromethane	**21.6**	0.40	ug/L	20		108	72-133			
1,2-Dibromoethane (EDB)	**21.7**	0.40	ug/L	20		109	79-120			
Dibromomethane	**20.9**	0.40	ug/L	20		104	68-124			
1,3-Dichlorobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		97.8	70-130			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		102	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20		101	16-148			
1,1-Dichloroethane	**21.4**	0.20	ug/L	20		107	67-120			
1,2-Dichloroethane (EDC)	**24.0**	0.20	ug/L	20		120	57-156			
cis-1,2-Dichloroethylene	**21.0**	0.30	ug/L	20		105	70-124			
1,1-Dichloroethylene	**21.3**	0.40	ug/L	20		106	50-149			
trans-1,2-Dichloroethylene	**21.5**	0.30	ug/L	20		108	66-126			
1,3-Dichloropropane	**22.3**	0.40	ug/L	20		111	79-113			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		110	53-139			
2,2-Dichloropropane	**20.2**	0.30	ug/L	20		101	44-162			
trans-1,3-Dichloropropylene	**22.2**	0.30	ug/L	20		111	76-121			
1,1-Dichloropropylene	**21.9**	0.30	ug/L	20		110	84-124			
cis-1,3-Dichloropropylene	**22.4**	0.40	ug/L	20		112	67-127			
Ethylbenzene	**21.9**	0.30	ug/L	20		109	86-124			
Hexachlorobutadiene	**19.4**	0.50	ug/L	20		96.9	76-140			
2-Hexanone (MBK)	**21.0**	8.4	ug/L	20		105	52-123			
Isopropylbenzene	**21.1**	0.30	ug/L	20		105	70-130			

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Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
4-Isopropyltoluene	**20.5**	0.30	ug/L	20		102	70-130			
Methyl-tert-Butyl Ether (MTBE)	**43.4**	1.4	ug/L	40		108	58-144			
Methylene Chloride	**20.7**	4.4	ug/L	20		103	50-135			
4-Methyl-2-pentanone (MIBK)	**19.7**	9.8	ug/L	20		98.7	49-139			J
Naphthalene	**20.8**	0.40	ug/L	20		104	74-128			
n-Propylbenzene	**21.3**	0.20	ug/L	20		106	70-130			
Styrene	**21.5**	0.20	ug/L	20		108	84-123			
1,1,1,2-Tetrachloroethane	**20.7**	0.30	ug/L	20		103	70-130			
1,1,2,2-Tetrachloroethane	**23.1**	0.40	ug/L	20		115	58-126			
Tetrachloroethylene (PCE)	**20.4**	0.50	ug/L	20		102	70-130			
Toluene	**20.8**	0.20	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.0**	0.30	ug/L	20		100	84-128			
1,2,3-Trichlorobenzene	**19.5**	0.50	ug/L	20		97.4	77-134			
1,1,2-Trichloroethane	**22.0**	0.30	ug/L	20		110	75-115			
1,1,1-Trichloroethane	**23.0**	0.30	ug/L	20		115	66-158			
Trichloroethylene (TCE)	**22.0**	0.30	ug/L	20		110	82-128			
Trichlorofluoromethane (R11)	**18.3**	0.40	ug/L	20		91.4	65-137			
1,2,3-Trichloropropane	**22.9**	0.20	ug/L	20		114	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.2**	0.30	ug/L	20		75.8	62-130			
1,2,4-Trimethylbenzene	**20.9**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**20.7**	0.20	ug/L	20		104	70-130			
Vinyl chloride	**22.8**	0.40	ug/L	20		114	51-151			
o-Xylene	**21.5**	0.30	ug/L	20		108	70-130			
m,p-Xylenes	**43.2**	0.60	ug/L	40		108	70-130			
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.5*	*80-129*			
Surrogate: Dibromofluoromethane	*48.6*		*ug/L*	*50*		*97.3*	*68-137*			
Surrogate: Toluene-d8	*48.5*		*ug/L*	*50*		*96.9*	*83-134*			
Matrix Spike (B9F2101-MS1)			**Source: 9F14005-11**	Prepared & Analyzed: 06/21/19						
Acetone	**22.4**	7.7	ug/L	20		112	11-169			J
Benzene	**18.3**	0.40	ug/L	20		91.5	56-135			

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Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued	**Source: 9F14005-11**		Prepared & Analyzed: 06/21/19							
Bromobenzene	**19.3**	0.40	ug/L	20		96.3	70-130			
Bromochloromethane	**21.0**	0.20	ug/L	20		105	74-125			
Bromodichloromethane	**22.7**	0.40	ug/L	20		113	68-144			
Bromoform	**19.1**	0.40	ug/L	20		95.3	68-151			
Bromomethane	**15.4**	0.30	ug/L	20		76.8	54-142			
2-Butanone (MEK)	**20.6**	8.6	ug/L	20		103	62-145			
tert-Butylbenzene	**19.4**	0.20	ug/L	20		96.8	70-130			
n-Butylbenzene	**20.3**	0.20	ug/L	20		101	70-130			
sec-Butylbenzene	**19.5**	0.20	ug/L	20		97.7	84-145			
Carbon Disulfide	**20.5**	0.20	ug/L	20		103	28-151			
Carbon Tetrachloride	**22.0**	0.30	ug/L	20		110	58-164			
Chlorobenzene	**19.5**	0.40	ug/L	20		97.3	70-130			
Chloroethane	**42.6**	0.40	ug/L	20		213	42-164			**
Chloroform	**21.3**	0.30	ug/L	20		106	65-138			
Chloromethane	**20.8**	0.40	ug/L	20		104	50-152			
4-Chlorotoluene	**19.8**	0.20	ug/L	20		98.9	70-130			
2-Chlorotoluene	**19.6**	0.20	ug/L	20		98.2	70-130			
1,2-Dibromo-3-chloropropane	**22.2**	0.40	ug/L	20		111	53-161			
Dibromochloromethane	**20.8**	0.40	ug/L	20		104	70-130			
1,2-Dibromoethane (EDB)	**21.1**	0.40	ug/L	20		106	76-130			
Dibromomethane	**21.7**	0.40	ug/L	20		108	62-135			
1,3-Dichlorobenzene	**19.0**	0.40	ug/L	20		95.2	70-130			
1,4-Dichlorobenzene	**18.8**	0.30	ug/L	20		94.1	70-130			
1,2-Dichlorobenzene	**19.8**	0.30	ug/L	20		98.8	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20		101	17-153			
1,1-Dichloroethane	**22.6**	0.20	ug/L	20	1.21	107	55-131			
1,2-Dichloroethane (EDC)	**25.4**	0.20	ug/L	20	1.75	118	52-168			
cis-1,2-Dichloroethylene	**30.6**	0.30	ug/L	20	10.1	103	70-130			
1,1-Dichloroethylene	**20.3**	0.40	ug/L	20		102	51-140			
trans-1,2-Dichloroethylene	**21.3**	0.30	ug/L	20	0.900	102	59-127			
1,3-Dichloropropane	**21.3**	0.40	ug/L	20		107	80-121			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		109	52-142			

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Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
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Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued **Source: 9F14005-11** Prepared & Analyzed: 06/21/19										
2,2-Dichloropropane	**18.5**	0.30	ug/L	20		92.7	36-168			
trans-1,3-Dichloropropylene	**21.5**	0.30	ug/L	20		107	78-130			
1,1-Dichloropropylene	**21.5**	0.30	ug/L	20		107	76-132			
cis-1,3-Dichloropropylene	**21.8**	0.40	ug/L	20		109	66-130			
Ethylbenzene	**20.4**	0.30	ug/L	20		102	86-128			
Hexachlorobutadiene	**18.4**	0.50	ug/L	20		91.8	70-130			
2-Hexanone (MBK)	**22.4**	8.4	ug/L	20		112	52-141			
Isopropylbenzene	**19.6**	0.30	ug/L	20		97.8	70-130			
4-Isopropyltoluene	**19.8**	0.30	ug/L	20		98.9	83-149			
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40		112	56-150			
Methylene Chloride	**24.7**	4.4	ug/L	20		123	70-130			
4-Methyl-2-pentanone (MIBK)	**21.0**	9.8	ug/L	20		105	60-148			
Naphthalene	**20.6**	0.40	ug/L	20		103	70-130			
n-Propylbenzene	**19.9**	0.20	ug/L	20		99.4	70-130			
Styrene	**20.3**	0.20	ug/L	20		102	65-141			
1,1,1,2-Tetrachloroethane	**19.6**	0.30	ug/L	20		97.8	70-130			
1,1,2,2-Tetrachloroethane	**23.4**	0.40	ug/L	20		117	62-134			
Tetrachloroethylene (PCE)	**18.9**	0.50	ug/L	20		94.6	70-130			
Toluene	**19.5**	0.20	ug/L	20		97.4	81-123			
1,2,4-Trichlorobenzene	**19.1**	0.30	ug/L	20		95.4	80-137			
1,2,3-Trichlorobenzene	**19.0**	0.50	ug/L	20		95.0	73-144			
1,1,2-Trichloroethane	**21.4**	0.30	ug/L	20		107	76-122			
1,1,1-Trichloroethane	**22.2**	0.30	ug/L	20		111	62-164			
Trichloroethylene (TCE)	**22.6**	0.30	ug/L	20	1.05	108	72-136			
Trichlorofluoromethane (R11)	**18.7**	0.40	ug/L	20		93.4	59-144			
1,2,3-Trichloropropane	**23.2**	0.20	ug/L	20		116	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.5**	0.30	ug/L	20		77.6	62-126			
1,2,4-Trimethylbenzene	**19.9**	0.30	ug/L	20		99.5	89-134			
1,3,5-Trimethylbenzene	**19.8**	0.20	ug/L	20		98.8	70-130			
Vinyl chloride	**22.0**	0.40	ug/L	20		110	54-150			
o-Xylene	**20.6**	0.30	ug/L	20		103	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
m,p-Xylenes	**40.8**	0.60	ug/L	40		102	70-130			
Surrogate: 4-Bromofluorobenzene	*47.5*		*ug/L*	*50*		*95.1*	*80-129*			
Surrogate: Dibromofluoromethane	*49.1*		*ug/L*	*50*		*98.2*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.9*	*83-134*			
Matrix Spike Dup (B9F2101-MSD1)	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
Acetone	**24.3**	7.7	ug/L	20		122	11-169	8.30	30	J
Benzene	**18.6**	0.40	ug/L	20		92.8	56-135	1.46	30	
Bromobenzene	**19.5**	0.40	ug/L	20		97.6	70-130	1.39	30	
Bromochloromethane	**20.6**	0.20	ug/L	20		103	74-125	1.83	30	
Bromodichloromethane	**22.2**	0.40	ug/L	20		111	68-144	2.19	30	
Bromoform	**19.7**	0.40	ug/L	20		98.6	68-151	3.35	30	
Bromomethane	**25.2**	0.30	ug/L	20		126	54-142	48.3	30	AA-C1
2-Butanone (MEK)	**20.3**	8.6	ug/L	20		102	62-145	1.22	30	
tert-Butylbenzene	**19.8**	0.20	ug/L	20		99.1	70-130	2.30	30	
n-Butylbenzene	**20.6**	0.20	ug/L	20		103	70-130	1.71	30	
sec-Butylbenzene	**19.8**	0.20	ug/L	20		99.0	84-145	1.37	30	
Carbon Disulfide	**20.2**	0.20	ug/L	20		101	28-151	1.62	30	
Carbon Tetrachloride	**21.9**	0.30	ug/L	20		110	58-164	0.455	30	
Chlorobenzene	**20.1**	0.40	ug/L	20		101	70-130	3.43	30	
Chloroethane	**46.5**	0.40	ug/L	20		232	42-164	8.71	30	**
Chloroform	**20.6**	0.30	ug/L	20		103	65-138	3.39	30	
Chloromethane	**20.4**	0.40	ug/L	20		102	50-152	1.70	30	
4-Chlorotoluene	**20.1**	0.20	ug/L	20		101	70-130	1.75	30	
2-Chlorotoluene	**19.8**	0.20	ug/L	20		99.2	70-130	1.06	30	
1,2-Dibromo-3-chloropropane	**22.6**	0.40	ug/L	20		113	53-161	1.61	30	
Dibromochloromethane	**21.5**	0.40	ug/L	20		108	70-130	3.26	30	
1,2-Dibromoethane (EDB)	**22.0**	0.40	ug/L	20		110	76-130	3.90	30	
Dibromomethane	**21.1**	0.40	ug/L	20		106	62-135	2.43	30	
1,3-Dichlorobenzene	**19.1**	0.40	ug/L	20		95.4	70-130	0.262	30	
1,4-Dichlorobenzene	**19.0**	0.30	ug/L	20		95.0	70-130	0.899	30	
1,2-Dichlorobenzene	**20.3**	0.30	ug/L	20		102	70-130	2.75	30	

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AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued	**Source: 9F14005-11**				Prepared & Analyzed: 06/21/19					
Dichlorodifluoromethane (R12)	**18.6**	0.40	ug/L	20		93.0	17-153	8.30	30	
1,1-Dichloroethane	**22.5**	0.20	ug/L	20	1.21	107	55-131	0.133	30	
1,2-Dichloroethane (EDC)	**23.8**	0.20	ug/L	20	1.75	110	52-168	6.46	30	
cis-1,2-Dichloroethylene	**30.3**	0.30	ug/L	20	10.1	101	70-130	1.05	30	
1,1-Dichloroethylene	**20.5**	0.40	ug/L	20		102	51-140	0.735	30	
trans-1,2-Dichloroethylene	**21.2**	0.30	ug/L	20	0.900	102	59-127	0.564	30	
1,3-Dichloropropane	**22.2**	0.40	ug/L	20		111	80-121	4.18	30	
1,2-Dichloropropane	**21.8**	0.30	ug/L	20		109	52-142	0.412	30	
2,2-Dichloropropane	**17.0**	0.30	ug/L	20		85.2	36-168	8.49	30	
trans-1,3-Dichloropropylene	**21.8**	0.30	ug/L	20		109	78-130	1.48	30	
1,1-Dichloropropylene	**21.4**	0.30	ug/L	20		107	76-132	0.233	30	
cis-1,3-Dichloropropylene	**22.0**	0.40	ug/L	20		110	66-130	0.960	30	
Ethylbenzene	**20.8**	0.30	ug/L	20		104	86-128	2.04	30	
Hexachlorobutadiene	**19.3**	0.50	ug/L	20		96.5	70-130	4.94	30	
2-Hexanone (MBK)	**23.3**	8.4	ug/L	20		116	52-141	3.99	30	
Isopropylbenzene	**20.3**	0.30	ug/L	20		102	70-130	3.76	30	
4-Isopropyltoluene	**19.8**	0.30	ug/L	20		98.9	83-149	0.00	30	
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40		112	56-150	0.0223	30	
Methylene Chloride	**24.0**	4.4	ug/L	20		120	70-130	2.79	30	
4-Methyl-2-pentanone (MIBK)	**21.8**	9.8	ug/L	20		109	60-148	3.79	30	
Naphthalene	**21.3**	0.40	ug/L	20		107	70-130	3.29	30	
n-Propylbenzene	**20.3**	0.20	ug/L	20		101	70-130	1.89	30	
Styrene	**20.7**	0.20	ug/L	20		104	65-141	2.14	30	
1,1,1,2-Tetrachloroethane	**20.2**	0.30	ug/L	20		101	70-130	3.02	30	
1,1,2,2-Tetrachloroethane	**24.0**	0.40	ug/L	20		120	62-134	2.70	30	
Tetrachloroethylene (PCE)	**19.7**	0.50	ug/L	20		98.6	70-130	4.19	30	
Toluene	**20.0**	0.20	ug/L	20		100	81-123	2.68	30	
1,2,4-Trichlorobenzene	**19.7**	0.30	ug/L	20		98.5	80-137	3.25	30	
1,2,3-Trichlorobenzene	**19.4**	0.50	ug/L	20		97.2	73-144	2.34	30	
1,1,2-Trichloroethane	**22.2**	0.30	ug/L	20		111	76-122	3.71	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20		107	62-164	3.62	30	

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Operations Manager

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Tel: (818) 998-5547 ÿ Fax: (818) 998-7258

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874359
Date Received: 06/14/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued	**Source: 9F14005-11** Prepared & Analyzed: 06/21/19									
Trichloroethylene (TCE)	**22.3**	0.30	ug/L	20	1.05	106	72-136	1.34	30	
Trichlorofluoromethane (R11)	**17.7**	0.40	ug/L	20		88.6	59-144	5.27	30	
1,2,3-Trichloropropane	**23.9**	0.20	ug/L	20		119	69-135	2.84	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**14.7**	0.30	ug/L	20		73.6	62-126	5.29	30	
1,2,4-Trimethylbenzene	**20.1**	0.30	ug/L	20		100	89-134	1.00	30	
1,3,5-Trimethylbenzene	**20.0**	0.20	ug/L	20		99.8	70-130	0.956	30	
Vinyl chloride	**22.2**	0.40	ug/L	20		111	54-150	0.906	30	
o-Xylene	**21.0**	0.30	ug/L	20		105	70-130	2.12	30	
m,p-Xylenes	**41.5**	0.60	ug/L	40		104	70-130	1.60	30	
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.6*	*80-129*			
Surrogate: Dibromofluoromethane	*49.0*		*ug/L*	*50*		*98.1*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874359
Project No:	130072-025	**Date Received:**	06/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	07/01/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

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RAW DATA FOR VOCs

EPA METHOD 8260B

Analyst: Lindsey Michel
ICAL Date: 6-17-19
Instrument: GCMS-9
New Method Name: 061719.M

EPA 8260B (VOCs by GC/MS) Initial Calibration Checklist

- ☑ Is the required documentation in the ICAL folder?
  - ☑ Sequence report
  - ☑ BFB Tune report
  - ☑ Blank quant report (include "Not Reviewed" report, use new calibration method to requant)
  - ☑ Calibration Status report
  - ☑ Response Factor report
  - ☑ Print of the calibration curve for compounds using the curve
  - ☑ Compound List report
  - ☑ Internal Standard Midpoint Area/Retention Time report
  - ☑ Quant report for each calibration standard
  - ☑ ICV quantitation report
- ☑ Was the ICAL performed continuously? (no samples analyzed between ICAL levels)
- ☑ Have all the calibration standards been analyzed within 48 hours of each other?
- ☑ Does the sequence show the LIMS IDs of the standards used for IS/SS, ICAL, and ICV?
- ☑ Are all standards used before their expiration date?
- ☑ Does the BFB tune meet criteria?
- ☑ Is the area count for mass 95 in the BFB tune at least 20,000 area counts? (recommended)
- ☑ Are all the analytes in the blank < MRL?
- ☑ Does each analyte's ICAL include a minimum of 5 concentrations?
- ☑ Does each analyte's ICAL using a second-order equation include a minimum of 6 points?
- ☑ Does each calibration level have its own concentration value? (no two levels using the same concentration)
- ☑ For each analyte, are there no levels skipped? (highest or lowest may be dropped for 6 or more levels)
- ☑ For each analyte, is the average RRF ≥ 0.01? (recommended)
- ☑ Is the average RRF for each of the SPCCs ≥ 0.10 (0.30 for Chlorobenzene & 1,1,2,2-TCA)?
- ☑ For analytes using the average RRF, is the RSD ≤ 15% (all CCC compounds ≤ 30%)?
- ☑ For analytes using linear regression, is the correlation coefficient ≥ 0.990?
- ☑ For each analyte, does the lowest level meet the MRL criteria?
- ☑ For each analyte, is the relative retention time (RRT) for every calibration level within 0.06 RRT units of each other?
- ☑ For the ICV, is the percent recovery for each analyte within 70–130%?
- ☑ Are all the Q-Values in the ICV above 80?
- ☑ Was the ICV performed after all ICAL standards and before any samples were analyzed?
- ☑ Are the front pages of all the quant reports initialed and dated by the analyst?

COMMENTS:

Avg. response factor used for:
- Bromochloromethane (20.7%)
- Benzene (19.7%) detecting

(linear regression not showing 0.5ppb level)

CCCs:	SPCCs:
Vinyl Chloride	Chloromethane
1,1-Dichloroethene	1,1-Dichloroethane
Chloroform	Bromoform
1,2-Dichloropropane	Chlorobenzene
Toluene	1,1,2,2-Tetrachloroethane
Ethylbenzene	

Reviewed By: _____ Date: 7/1/19

Injection Log

Directory: C:\HPCHEM\1\DATA\061719

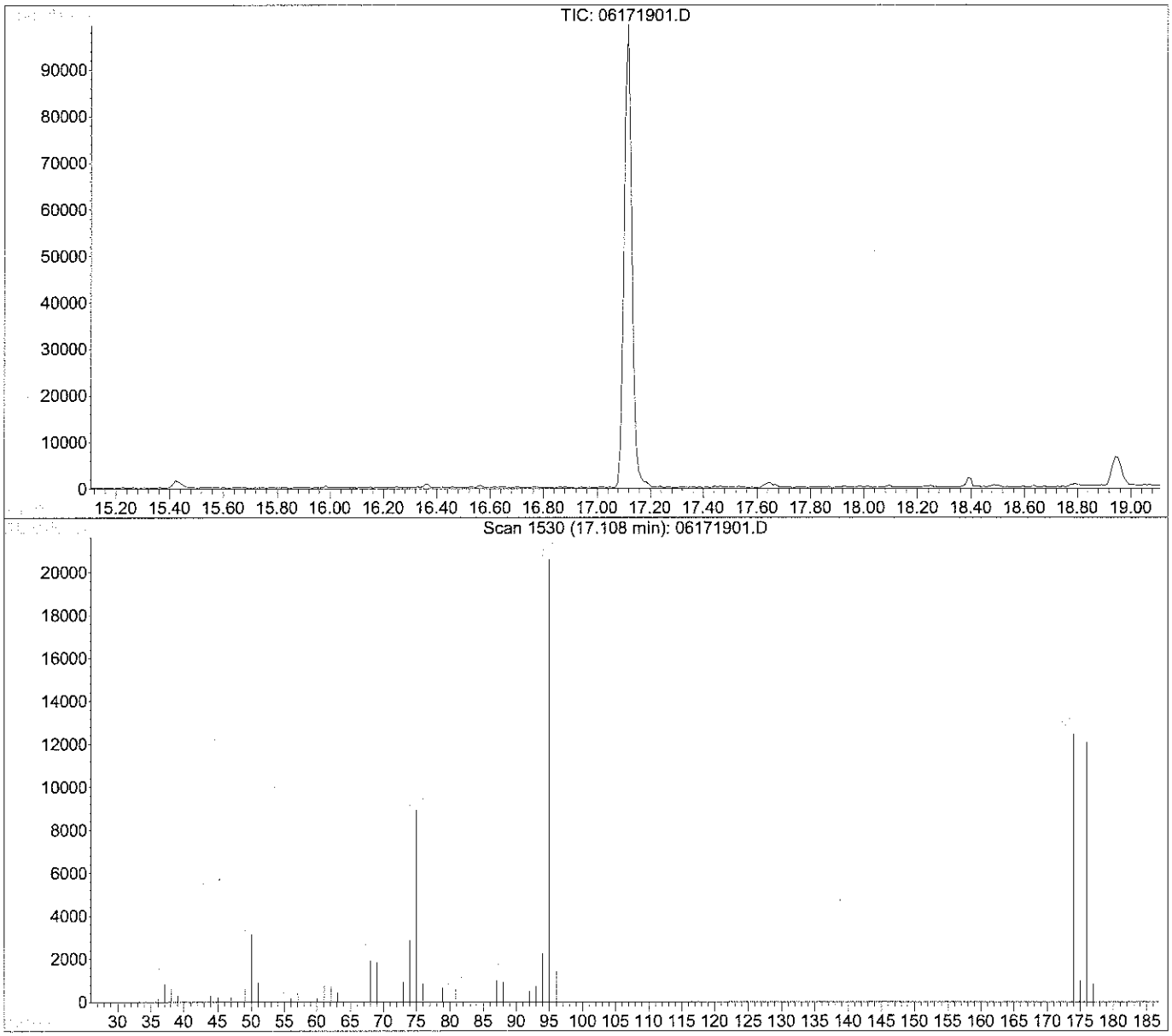
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	6	06171901.d	1.	BFB tune 50ng/GCMS9	BFB 9040205	17 Jun 2019 08:52
2	8	06171902.d	1.	BROMOFORM 20PPB		17 Jun 2019 10:10
3	9	06171903.d	1.	BLK1@SW060619A1	IS 9061301, SS 90...	17 Jun 2019 10:42
4	15	06171904.d	1.	ICAL 8260 0.5PPB	STDS.9040401,9060...	17 Jun 2019 11:14
5	15	06171905.d	1.	ICAL 8260 2.0PPB	STDS.9040401,9060...	17 Jun 2019 11:50
6	15	06171906.d	1.	ICAL 8260 10PPB	STDS.9040401,9060...	17 Jun 2019 12:27
7	15	06171907.d	1.	ICAL 8260 20PPB	STDS.9040401,9060...	17 Jun 2019 13:00
8	15	06171908.d	1.	ICAL 8260 40PPB	STDS.9040401,9060...	17 Jun 2019 13:46
9	15	06171909.d	1.	ICAL 8260 80PPB	STDS.9040401,9060...	17 Jun 2019 14:32
10	1	06171910.d	1.	WASH/AIR BLANK		17 Jun 2019 15:05
11	7	06171911.d	1.	WASH/AIR BLANK		17 Jun 2019 15:37
12	15	06171912.d	1.	ICAL 8260 0.5PPB/RR1	STDS.9040401,9060...	17 Jun 2019 16:09
13	16	06171913.d	1.	ICAL 8260 0.5PPB/RR2	STDS.9040401,9060...	17 Jun 2019 16:50
14	15	06171914.d	1.	ICAL 8260 100PPB	STDS.9040401,9060...	17 Jun 2019 17:22
15	7	06171915.d	1.	WASH/AIR BLANK		17 Jun 2019 17:54
16	8	06171916.d	1.	WASH/AIR BLANK		17 Jun 2019 18:26
17	9	06171917.d	1.	WASH/AIR BLANK		17 Jun 2019 18:58
18	10	06171918.d	1.	WASH/AIR BLANK		17 Jun 2019 19:31

7/1/19

6/18/19

BFB

Data File : C:\HPCHEM\1\DATA\061719\06171901.D Vial: 6
Acq On : 17 Jun 2019 8:52 am Operator: CZ/MS9
Sample : BFB tune 50ng/GCMS9 Inst : GC/MS Ins
Misc : BFB 9040205 Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :



Spectrum Information: Scan 1530

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	3136	PASS
75	95	30	60	43.4	8934	PASS
95	95	100	100	100.0	20576	PASS
96	95	5	9	7.0	1441	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	60.4	12438	PASS
175	174	5	9	7.8	975	PASS
176	174	95	101	97.1	12078	PASS
177	176	5	9	7.1	859	PASS

6/18/19

06171901.D 061719.M Tue Jun 18 09:24:08 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:25 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.77	168	2692744	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	4117211	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1933632	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.17	113	1746201	51.30	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.60%		
34) Diflurobenzene	10.95	114	4808283	49.48	ug/L	0.00
Spiked Amount 50.000			Recovery =	98.96%		
45) Toluene-d8	13.43	98	5162318	48.92	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.84%		
63) 4-Bromofluorobenzene	17.12	95	2024577	50.16	ug/L	0.00
Spiked Amount 50.000			Recovery =	100.32%		
Target Compounds						Qvalue
14) Methylene Chloride	6.53	84	88001	Below Cal		99
32) Benzene	10.60	78	25760	Below Cal		100

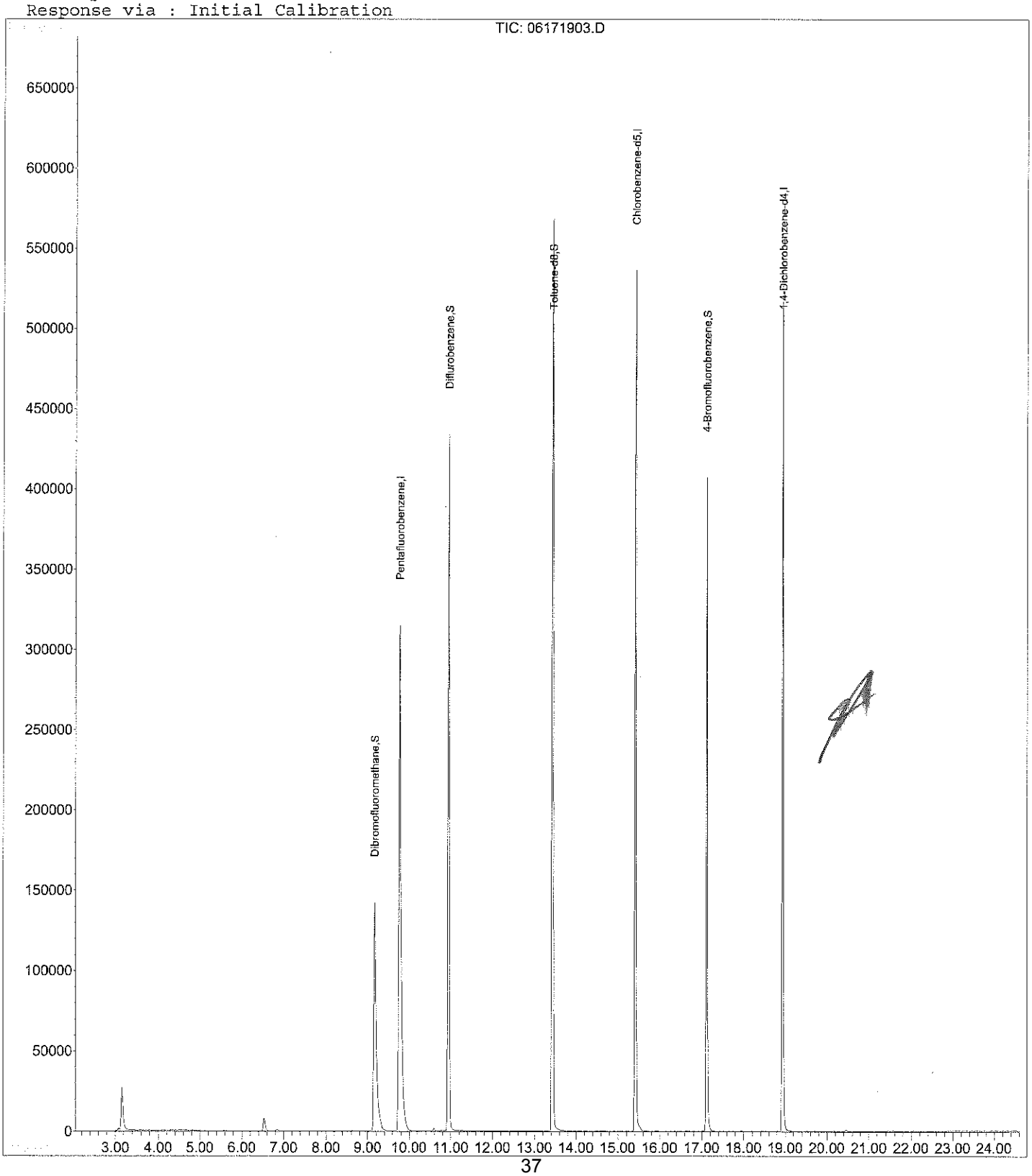
6/18/19

(#) = qualifier out of range (m) = manual integration
06171903.D 061719.M Tue Jun 18 09:25:47 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:25 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Calibration Status Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	1	50	C:\HPCHEM\1\DATA\061719\06171913.D
2	2	2	50	C:\HPCHEM\1\DATA\061719\06171905.D
3	3	10	50	C:\HPCHEM\1\DATA\061719\06171906.D
4	4	20	50	C:\HPCHEM\1\DATA\061719\06171907.D
5	5	40	50	C:\HPCHEM\1\DATA\061719\06171908.D
6	6	80	50	C:\HPCHEM\1\DATA\061719\06171909.D
7	7	100	50	C:\HPCHEM\1\DATA\061719\06171914.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jun 18 09:06 2019	Jun 18 09:06 2019	17 Jun 2019 4:50 pm
2	2	Jun 18 09:12 2019	Jun 18 09:12 2019	17 Jun 2019 11:50 am
3	3	Jun 18 08:55 2019	Jun 17 14:39 2019	17 Jun 2019 12:27 pm
4	4	Jun 18 08:56 2019	Jun 17 14:41 2019	17 Jun 2019 1:00 pm
5	5	Jun 18 08:56 2019	Jun 17 14:44 2019	17 Jun 2019 1:46 pm
6	6	Jun 18 08:57 2019	Jun 17 16:08 2019	17 Jun 2019 2:32 pm
7	7	Jun 18 08:57 2019	Jun 18 08:52 2019	17 Jun 2019 5:22 pm

061719.M Tue Jun 18 09:25:56 2019

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration

Calibration Files
1 =06171913.D 2 =06171905.D 3 =06171906.D
4 =06171907.D 5 =06171908.D 6 =06171909.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Pentafluorobenzene	----------	ISTD	----------					
2)		Dichlorodifluoromet	0.676	0.673	0.697	0.721	0.708	0.801	0.726	7.63
3)	P	Chloromethane	0.209	0.263	0.290	0.295	0.286	0.311	0.276	11.94
4)	C	Vinyl Chloride	0.351	0.336	0.368	0.347	0.283		0.337	9.65#
5)		Bromomethane	0.225	0.111	0.235	0.328	0.360	0.454	0.308	40.76
6)		Chloroethane	0.167	0.209	0.211	0.218	0.207	0.221	0.205	9.50
7)		ethanol		0.001	0.001	0.001	0.001	0.001	0.001	8.58
8)		Trichlorofluorometh	1.214	1.130	1.115	1.099	0.999	1.202	1.123	6.39
9)		Iodomethane	0.082	0.103	0.430	0.455	0.586	0.655	0.396	56.15
10)		tert-Butyl alcohol		0.019	0.023	0.026	0.026	0.025	0.024	10.45
11)		1,1,2-Trichloro-1,2	0.852	0.905	0.905	0.860	0.757	0.761	0.840	7.93
12)	C	1,1-Dichloroethylen	0.381	0.511	0.570	0.538	0.527	0.512	0.499	12.51#
13)		Acetone			0.024	0.023	0.024	0.020	0.022	8.13
14)		Methylene Chloride		1.003	1.174	0.728	0.670	0.629	0.799	29.53
15)		Carbon Disulfide	1.270	1.512	1.660	1.544	1.505	1.328	1.450	9.83
16)		trans-1,2-Dichloroe	0.476	0.637	0.688	0.647	0.634	0.631	0.610	11.65
17)		Methyl-tert-Butyl-E	1.211	1.119	1.184	1.114	1.081	1.034	1.109	6.39
18)	P	1,1-Dichloroethane	0.753	0.995	0.965	0.896	0.869	0.869	0.876	10.11
19)		Vinyl Acetate	0.525	0.561	0.657	0.615	0.622	0.633	0.608	7.78
20)		2-Butanone (MEK)			0.029	0.030	0.030	0.031	0.030	2.19
21)		Diisopropyl ether (	1.219	1.457	1.557	1.471	1.396	1.340	1.391	8.29
22)		cis-1,2-Dichloroeth	0.584	0.708	0.751	0.724	0.691	0.680	0.680	8.58
23)		Bromochloromethane	0.145	0.274	0.308	0.284	0.283	0.282	0.261	20.68
24)	C	Chloroform	0.946	1.166	1.215	1.108	1.129	1.031	1.076	9.95#
25)		2,2-Dichloropropane	0.702	0.840	0.919	0.785	0.832	0.787	0.784	12.40
26)	S	Dibromofluoromethan		0.732	0.667	0.607	0.618	0.586	0.632	9.13
27)		Ethyl-tert-Butyl Et	1.128	1.249	1.351	1.239	1.176	1.095	1.187	8.42
28)		1,2-Dichloroethane	0.486	0.549	0.695	0.645	0.625	0.608	0.600	11.28
29)		1,1,1-Trichloroetha	0.746	0.989	1.058	1.011	0.975	0.942	0.931	12.40
30)		1,1-Dichloropropyle	0.823	0.899	0.947	0.913	0.875	0.830	0.863	7.51
31)		Carbon Tetrachlorid	0.648	0.804	0.934	0.880	0.847	0.825	0.811	11.58
32)		Benzene	3.474	2.571	2.552	2.387	2.226	2.037	2.541	19.65
33)		tert-Amyl Metyl Eth	1.180	1.085	1.171	1.113	1.087	1.068	1.108	4.53
34)	S	Diflurobenzene	1.805	1.812	1.818	1.834	1.788	1.791	1.805	1.01
35)		Dibromomethane	0.237	0.307	0.331	0.292	0.288	0.335	0.292	12.37
36)	C	1,2-Dichloropropane	0.477	0.527	0.565	0.546	0.518	0.486	0.511	7.60#
37)		Trichloroethylene (	0.590	0.701	0.770	0.732	0.682	0.636	0.670	10.63
38)		Bromodichloromethan	0.702	0.801	0.867	0.831	0.803	0.773	0.782	8.12
39)		2-cleve		0.074	0.122	0.124	0.158	0.184	0.138	28.78
40)		cis-1,3-Dichloropro	0.721	0.893	1.023	0.990	0.963	0.940	0.916	10.86
41)		4-methyl-2-Pentanon			0.035	0.037	0.038	0.039	0.038	6.39
42)	I	Chlorobenzene-d5	----------	ISTD	----------					
43)		trans-1,3-Dichlorop	0.346	0.416	0.502	0.471	0.487	0.478	0.450	11.95
44)		1,1,2-Trichloroetha	0.217	0.233	0.262	0.243	0.238	0.229	0.235	6.35
45)	S	Toluene-d8		1.476	1.381	1.257	1.242	1.168	1.281	9.64
46)	C	Toluene	0.879	0.959	1.029	0.970	0.914	0.847	0.909	9.68#
47)		1,3-Dichloropropane	0.452	0.470	0.503	0.463	0.448	0.421	0.453	6.73
48)		2-Hexanone			0.098	0.091	0.098	0.100	0.098	4.81
49)		Dibromochloromethan	0.298	0.322	0.389	0.378	0.366	0.373	0.355	9.26
50)		1,2-Dibromoethane(E	0.228	0.275	0.313	0.298	0.298	0.294	0.285	9.66
51)		Tetrachloroethylene	0.271	0.320	0.354	0.338	0.327	0.321	0.316	9.39
52)		1,1,1,2-Tetrachloro	0.341	0.364	0.413	0.390	0.390	0.382	0.376	6.68
53)	P	Chlorobenzene	0.928	1.020	1.105	1.023	0.992	0.950	0.982	8.09
54)	C	Ethylbenzene	1.604	1.785	1.938	1.815	1.738	1.591	1.701	9.93#
55)		m,p-Xylenes	0.602	0.670	0.730	0.698	0.646	0.572	0.634	11.55
56)	P	Bromoform	0.104	0.142	0.169	0.165	0.170	0.176	0.157	16.62
57)		Styrene	0.866	0.998	1.146	1.110	1.065	1.005	1.015	9.95
58)		o-Xylene	0.552	0.625	0.717	0.681	0.632	0.580	0.616	11.11

6/18/19

(#) = Out of Range ### Number of calibration leve39 exceeded format ###

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration

Calibration Files
1 =06171913.D 2 =06171905.D 3 =06171906.D
4 =06171907.D 5 =06171908.D 6 =06171909.D

		Compound	1	2	3	4	5	6	Avg	%RSD
59)	P	1,1,2,2-Tetrachloro	0.287	0.303	0.328	0.310	0.286	0.257	0.289	9.20
60)		1,2,3-Trichloroprop	0.371	0.195	0.224	0.208	0.203	0.202	0.229	27.60
61)	I	1,4-Dichlorobenzene-d	----------	----------	----------	ISTD	----------	----------	----------	
62)		Isopropylbenzene	3.049	3.534	3.978	3.787	3.603	3.267	3.441	11.60
63)	S	4-Bromofluorobenzen		1.212	1.105	1.020	1.025	0.957	1.044	9.61
64)		Bromobenzene	0.782	0.803	0.926	0.891	0.885	0.862	0.845	7.31
65)		n-Propylbenzene	4.297	4.732	5.193	4.890	4.592	4.113	4.483	12.08
66)		2-Chlorotoluene	2.492	2.686	2.843	2.678	2.517	2.307	2.503	11.22
67)		4-Chlorotoluene	2.564	2.774	2.934	2.805	2.642	2.387	2.607	10.41
68)		1,3,5-Trimethylbenz	2.566	3.015	3.361	3.130	2.960	2.699	2.876	11.71
69)		tert-Butylbenzene	2.341	2.493	2.916	2.706	2.584	2.399	2.503	10.71
70)		1,2,4-Trimethylbenz	2.772	3.006	3.366	3.141	2.975	2.709	2.911	10.74
71)		sec-Butylbenzene	3.859	4.197	4.799	4.376	4.046	3.675	4.022	12.73
72)		1,3-Dichlorobenzene	1.653	1.733	1.844	1.716	1.664	1.560	1.653	8.49
73)		1,4-Dichlorobenzene	1.704	1.733	1.816	1.696	1.620	1.547	1.643	8.60
74)		4-Isopropyltoluene	2.975	3.220	3.752	3.396	3.183	2.939	3.147	11.93
75)		1,2-Dichlorobenzene	1.423	1.437	1.659	1.542	1.512	1.451	1.477	7.36
76)		n-Butylbenzene	3.102	3.443	4.095	3.672	3.439	3.080	3.358	13.66
77)		1,2-Dibromo-3-chlor		0.050	0.096	0.085	0.088	0.091	0.084	20.10
78)		1,2,4-Trichlorobenz	0.907	0.871	1.077	0.997	0.991	0.961	0.953	8.05
79)		Naphthalene		1.646	1.984	1.786	1.796	1.737	1.758	7.69
80)		Hexachlorobutadiene	0.318	0.383	0.483	0.434	0.423	0.409	0.401	13.44
81)		1,2,3-Trichlorobenz	0.919	0.747	0.869	0.799	0.774	0.751	0.791	10.16

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
Total Cpnds : 81

PK#		Compound Name	QIon	Exp RT	Rel RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene	168	9.76	1.000	A	0	A	B
2		Dichlorodifluoromethane	85	3.53	0.361	A	1	A	B
3	P	Chloromethane	50	3.77	0.386	A	1	A	B
4	C	Vinyl Chloride	62	3.97	0.407	A	1	A	B
5		Bromomethane	94	4.50	0.461	L	1	A	B
6		Chloroethane	64	4.70	0.481	A	1	A	B
7		ethanol	45	4.76	0.487	A	1	A	B
8		Trichlorofluoromethane(R11)	101	5.52	0.565	A	2	A	B
9		Iodomethane	142	6.34	0.649	A	2	A	B
10		tert-Butyl alcohol	59	6.38	0.653	A	0	A	B
11		1,1,2-Trichloro-1,2,2-trifluor	101	6.59	0.675	A	2	A	B
12	C	1,1-Dichloroethylene	96	6.30	0.646	A	2	A	B
13		Acetone	58	5.75	0.589	A	1	A	B
14		Methylene Chloride	84	6.52	0.668	L	2	A	B
15		Carbon Disulfide	76	6.82	0.699	A	1	A	B
16		trans-1,2-Dichloroethylene	96	7.51	0.769	A	2	A	B
17		Methyl-tert-Butyl-Ether (MTBE)	73	7.68	0.787	A	1	A	B
18	P	1,1-Dichloroethane	63	7.87	0.806	A	2	A	B
19		Vinyl Acetate	43	8.09	0.829	A	1	A	B
20		2-Butanone (MEK)	72	8.53	0.874	A	1	A	B
21		Diisopropyl ether (DIPE)	45	8.53	0.873	A	1	A	B
22		cis-1,2-Dichloroethylene	96	8.69	0.890	A	2	A	B
23		Bromochloromethane	128	8.91	0.913	L	2	A	B
24	C	Chloroform	83	8.99	0.921	A	1	A	B
25		2,2-Dichloropropane	77	9.09	0.931	A	1	A	B
26	S	Dibromofluoromethane	113	9.16	0.938	A	0	A	B
27		Ethyl-tert-Butyl Ether (ETBE)	59	9.09	0.931	A	1	A	B
28		1,2-Dichloroethane (EDC)	62	9.91	1.015	A	1	A	B
29		1,1,1-Trichloroethane	97	10.03	1.027	A	2	A	B
30		1,1-Dichloropropylene	75	10.29	1.054	A	2	A	B
31		Carbon Tetrachloride	117	10.53	1.079	A	1	A	B
32		Benzene	78	10.60	1.085	A	0	A	B
33		tert-Amyl Metyl Ether (TAME)	73	10.84	1.111	A	1	A	B
34	S	Diflurobenzene	114	10.95	1.121	A	0	A	B
35		Dibromomethane	93	11.38	1.166	A	2	A	B
36	C	1,2-Dichloropropane	63	11.43	1.171	A	1	A	B
37		Trichloroethylene (TCE)	95	11.49	1.177	A	3	A	B
38		Bromodichloromethane	83	11.56	1.184	A	2	A	B
39		2-cleve	63	12.17	1.247	L	2	A	B
40		cis-1,3-Dichloropropylene	75	12.46	1.276	A	2	A	B
41		4-methyl-2-Pentanone(MIBK)	100	12.65	1.295	A	3	A	B
42	I	Chlorobenzene-d5	117	15.42	1.000	A	0	A	B
43		trans-1,3-Dichloropropylene	75	13.07	0.847	A	2	A	B
44		1,1,2-Trichloroethane	83	13.27	0.861	A	2	A	B
45	S	Toluene-d8	98	13.43	0.871	A	0	A	B
46	C	Toluene	92	13.53	0.877	A	1	A	B
47		1,3-Dichloropropane	76	13.61	0.882	A	1	A	B
48		2-Hexanone	43	13.85	0.898	A	3	A	B
49		Dibromochloromethane	129	13.96	0.905	A	1	A	B
50		1,2-Dibromoethane(EDB)	107	14.30	0.927	A	1	A	B
51		Tetrachloroethylene (PCE)	164	14.53	0.942	A	3	A	B
52		1,1,1,2-Tetrachloroethane	131	15.36	0.996	A	2	A	B
53	P	Chlorobenzene	112	15.46	1.003	A	2	A	B
54	C	Ethylbenzene	91	15.74	1.021	A	1	A	B
55		m,p-Xylenes	106	16.01	1.039	A	1	A	B
56	P	Bromoform	173	16.15	1.047	L	1	A	B
57		Styrene	104	16.47	1.068	A	1	A	B
58		o-Xylene	106	16.56	1.074	A	1	A	B
59	P	1,1,2,2-Tetrachloroethane	83	16.56	1.074	A	2	A	B
60		1,2,3-Trichloropropane	75	16.76	1.087	L	1	A	B
61	I	1,4-Dichlorobenzene-d4	152	18.94	1.000	A	0	A	B
62		Isopropylbenzene	105	17.07	0.901	A	1	A	B
63	S	4-Bromofluorobenzene	95	17.12	0.904	A	2	A	B
64		Bromobenzene	156	17.40	0.919	A	2	A	B
65		n-Propylbenzene	91	17.68	0.934	A	1	A	B
66		2-Chlorotoluene	91	17.81	0.940	A	1	A	B
67		4-Chlorotoluene	91	17.92	0.946	A	1	A	B

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68	1,3,5-Trimethylbenzene	105	18.10	0.956	A	1	A	B
69	tert-Butylbenzene	119	18.48	0.976	A	2	A	B
70	1,2,4-Trimethylbenzene	105	18.64	0.984	A	1	A	B
71	sec-Butylbenzene	105	18.79	0.992	A	1	A	B
72	1,3-Dichlorobenzene	146	18.88	0.997	A	2	A	B
73	1,4-Dichlorobenzene	146	18.98	1.002	A	2	A	B
74	4-Isopropyltoluene	119	19.05	1.006	A	2	A	B
75	1,2-Dichlorobenzene	146	19.47	1.028	A	2	A	B
76	n-Butylbenzene	91	19.62	1.036	A	2	A	B
77	1,2-Dibromo-3-chloropropan	75	20.13	1.063	L	2	A	B
78	1,2,4-Trichlorobenzene	180	22.04	1.164	A	2	A	B
79	Naphthalene	128	22.39	1.182	A	0	A	B
80	Hexachlorobutadiene	225	22.47	1.186	A	2	A	B
81	1,2,3-Trichlorobenzene	180	22.67	1.197	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

061719.M Tue Jun 18 09:32:33 2019

Internal Standard Calculations 8260

ICAL Date: 6/17/2019
Instrument ID: GCMS-9
ICAL Method: 061719.M

Area Limit = 50–200% of ICAL midpoint
Retention Time Limit = ± 30 seconds of ICAL midpoint

Pentafluorobenzene

	Lower Limit	Midpoint	Upper Limit
Area	**1226064**	2452128	**4904256**
Retention Time	**9.26**	9.76	**10.26**

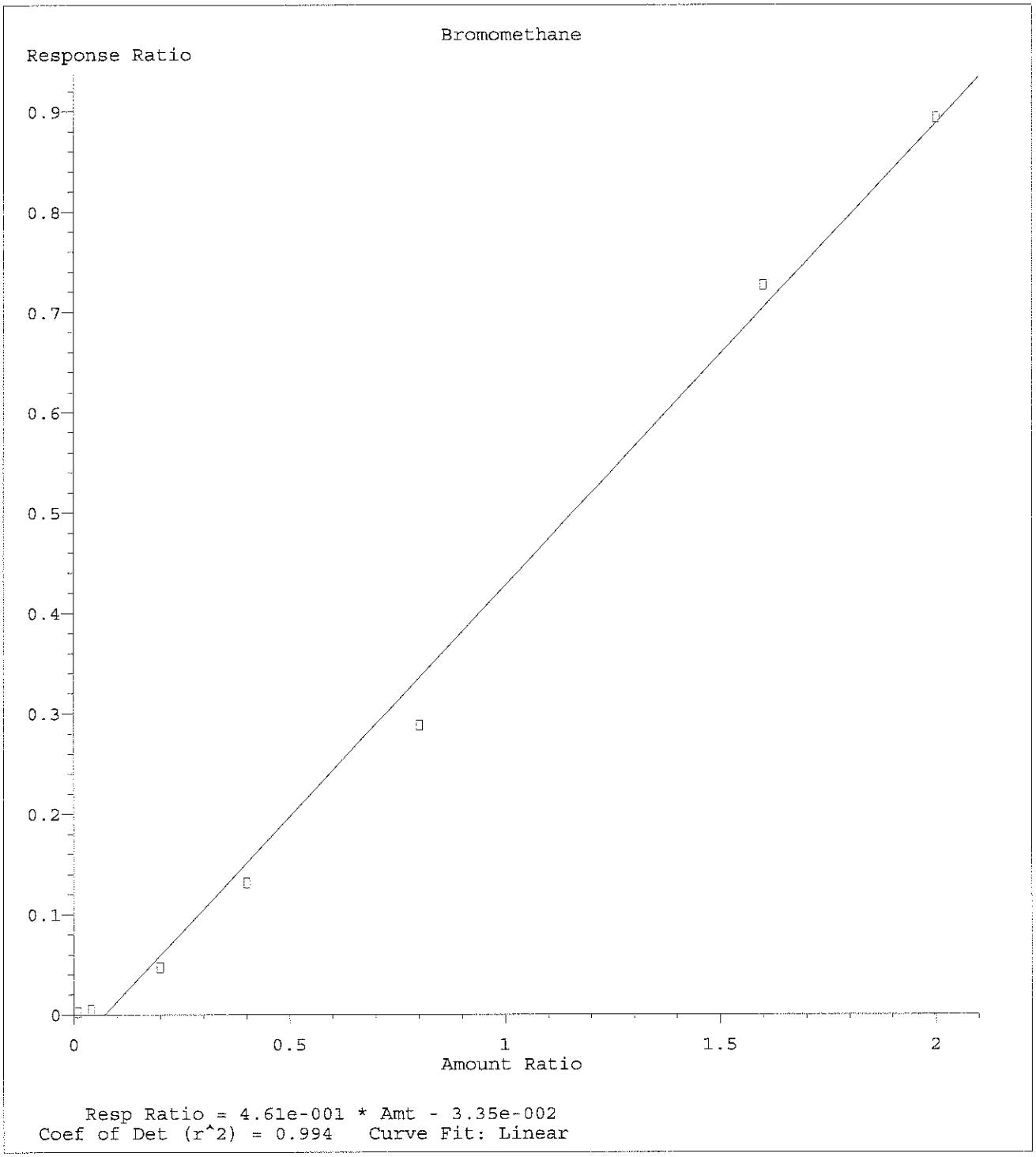
Chlorobenzene-d5

Lower Limit	Midpoint	Upper Limit
1886421	3772842	**7545684**
14.92	15.42	**15.92**

1,4-Dichlorobenzene-d4

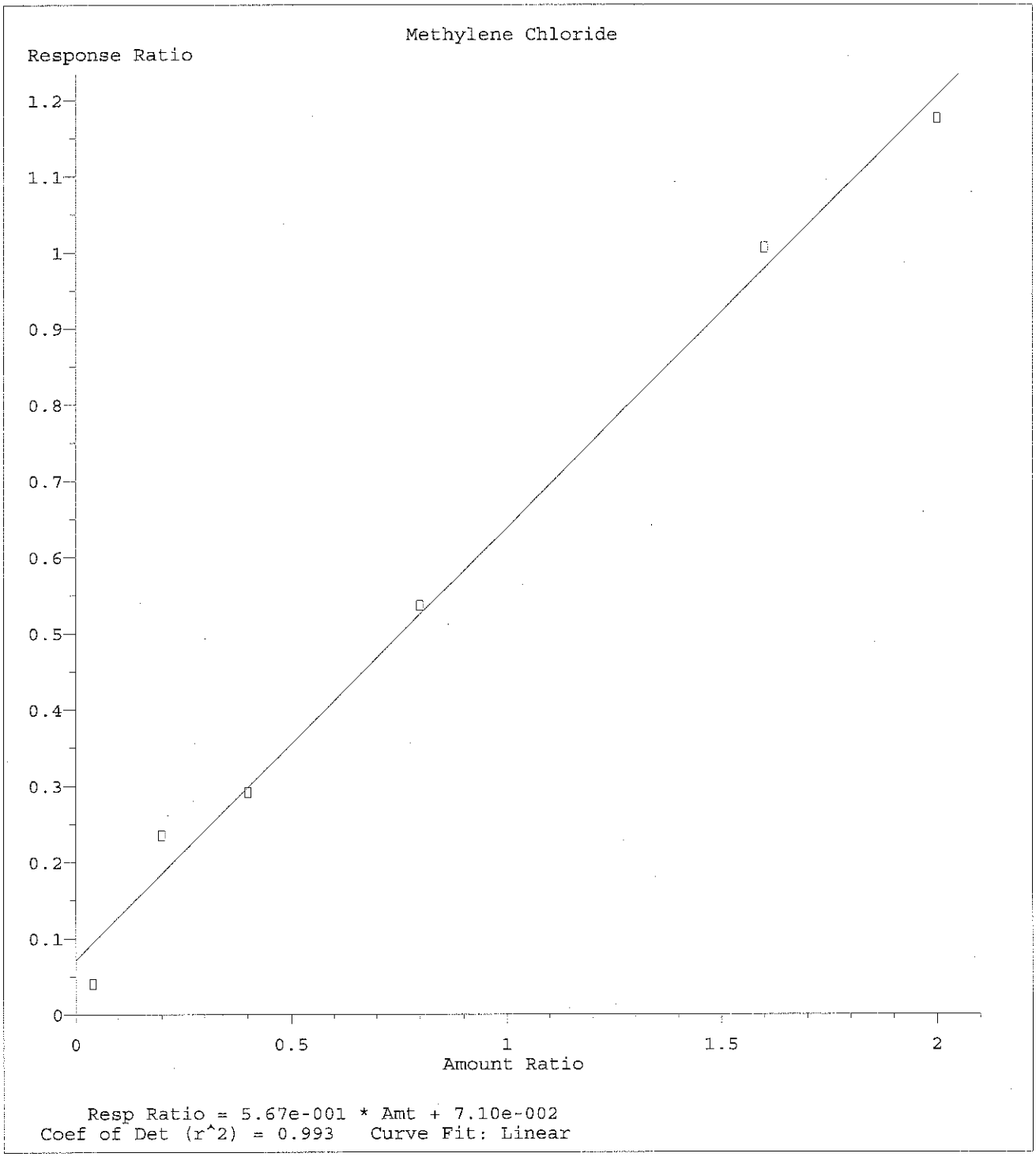
	Lower Limit	Midpoint	Upper Limit
Area	**883214**	1766427	**3532854**
Retention Time	**18.44**	18.94	**19.44**

6/18/19



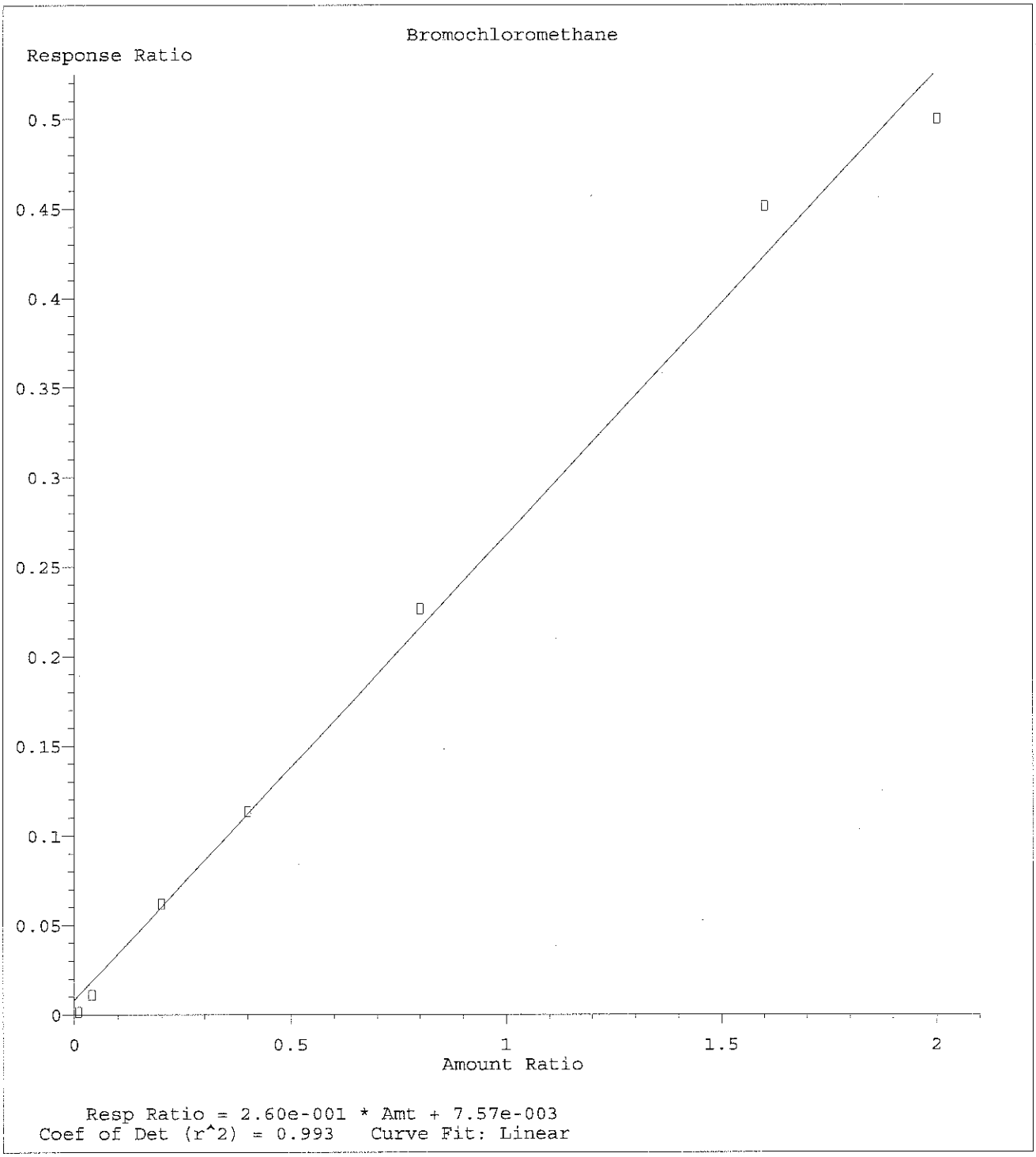
Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19



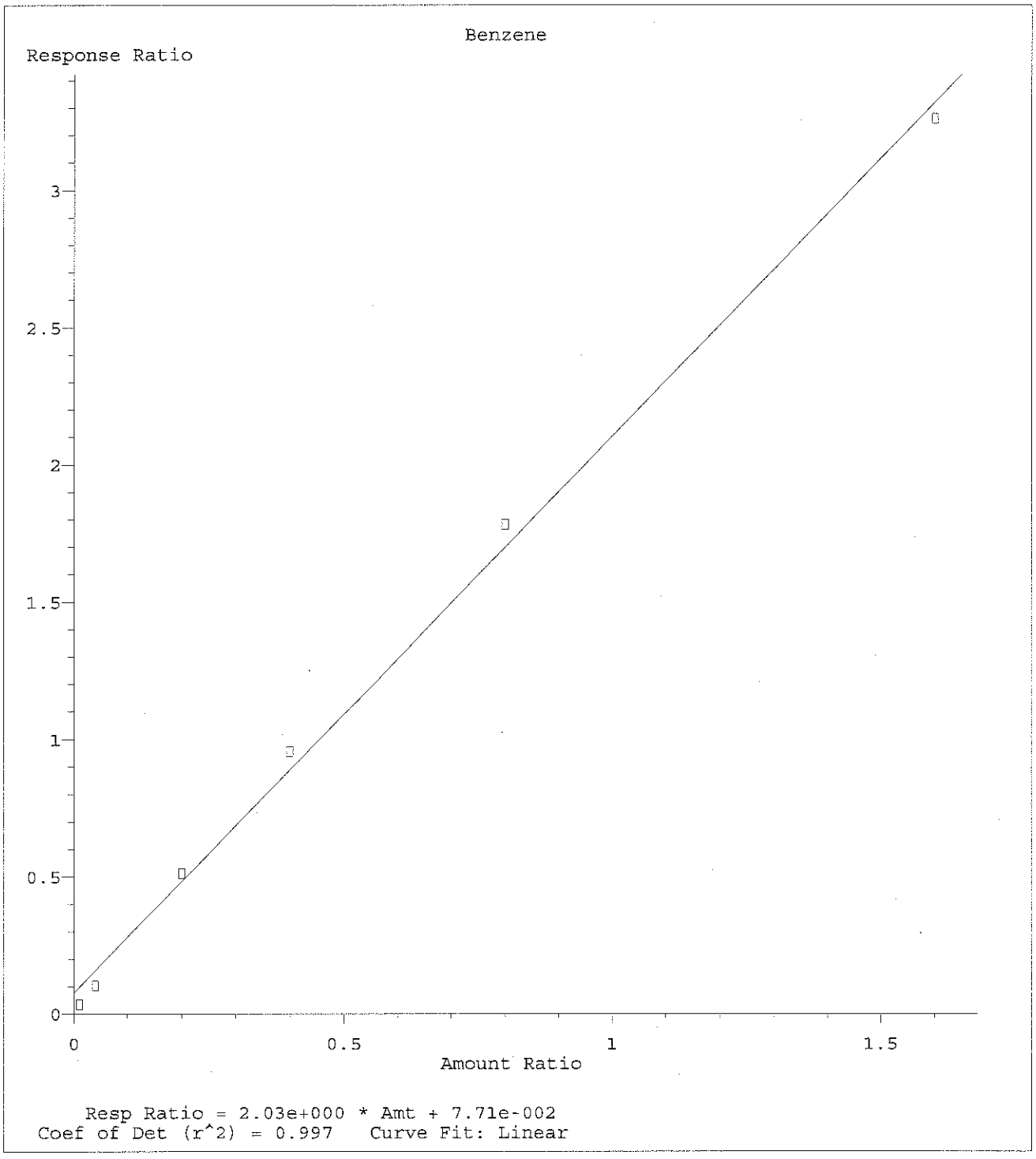
Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19



Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

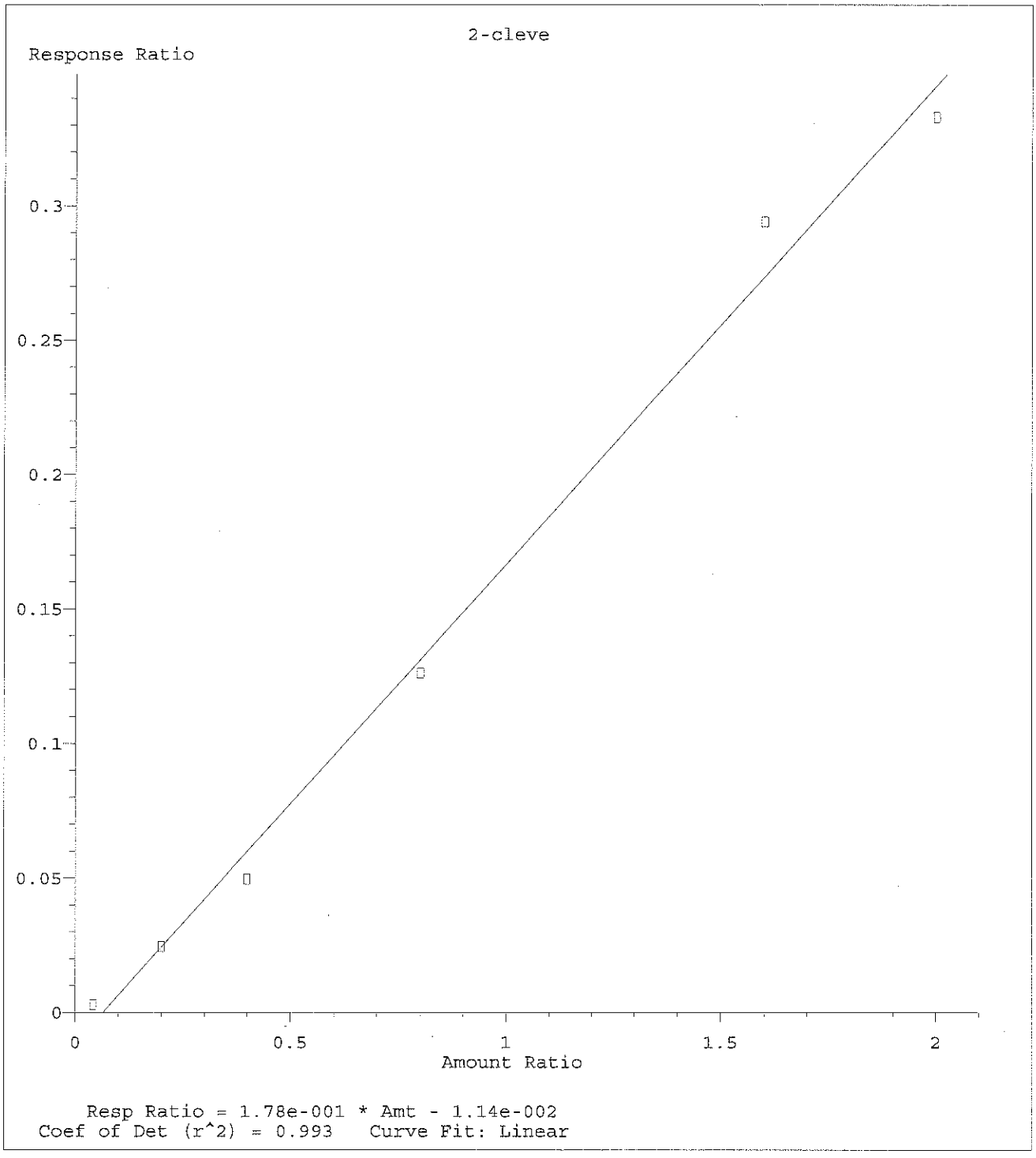
6/18/19



Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

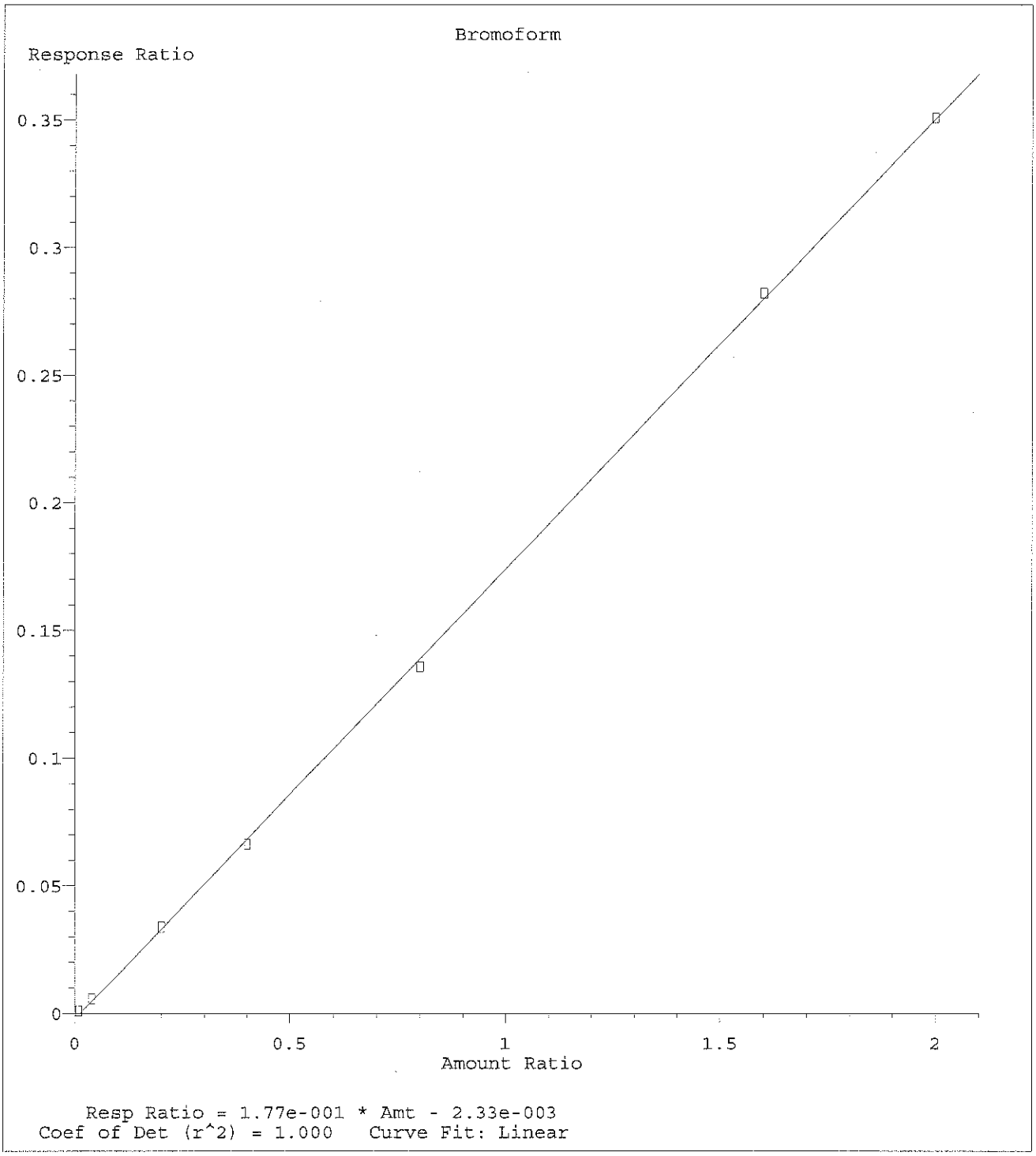
not used

6/18/19



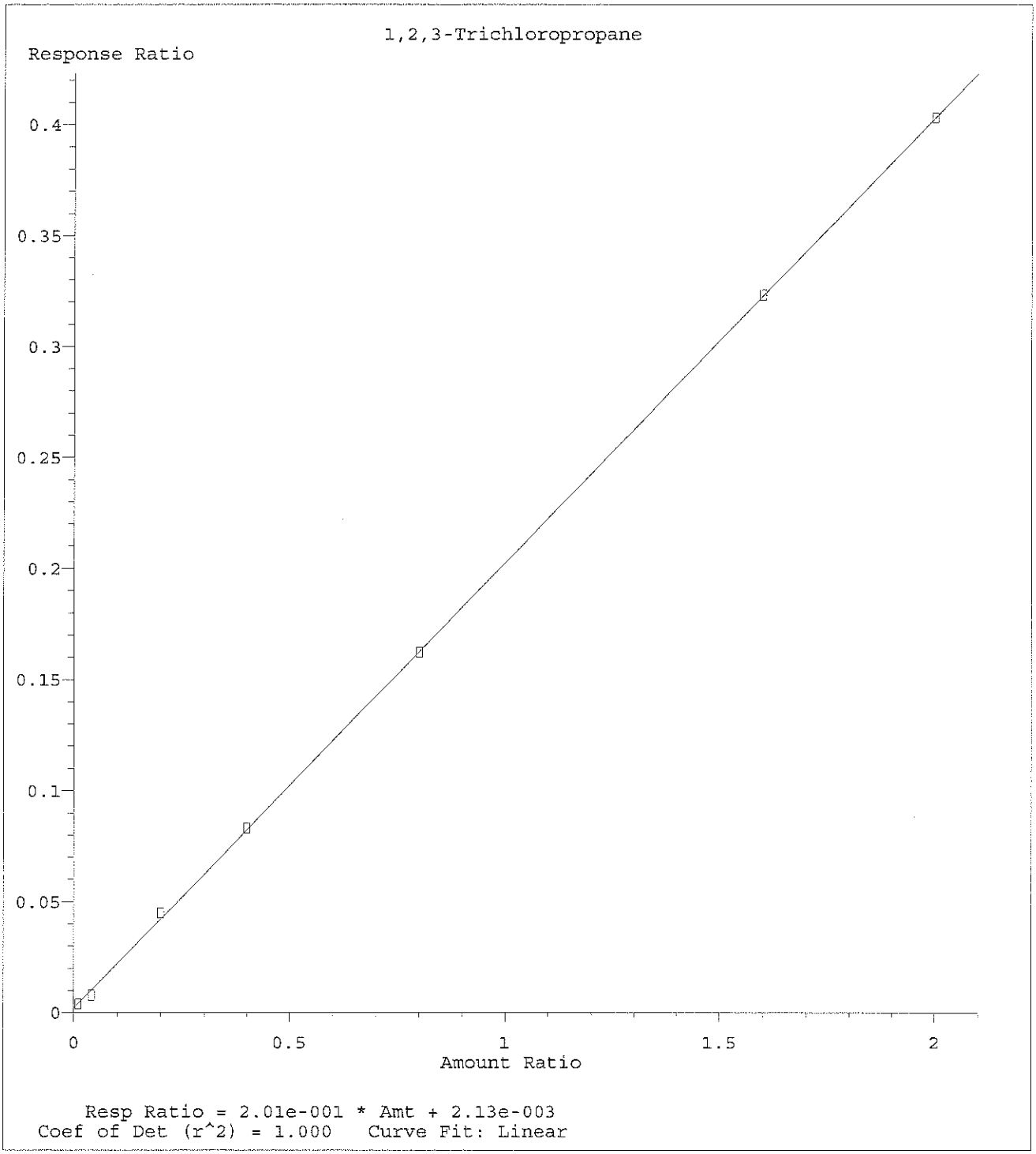
Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19



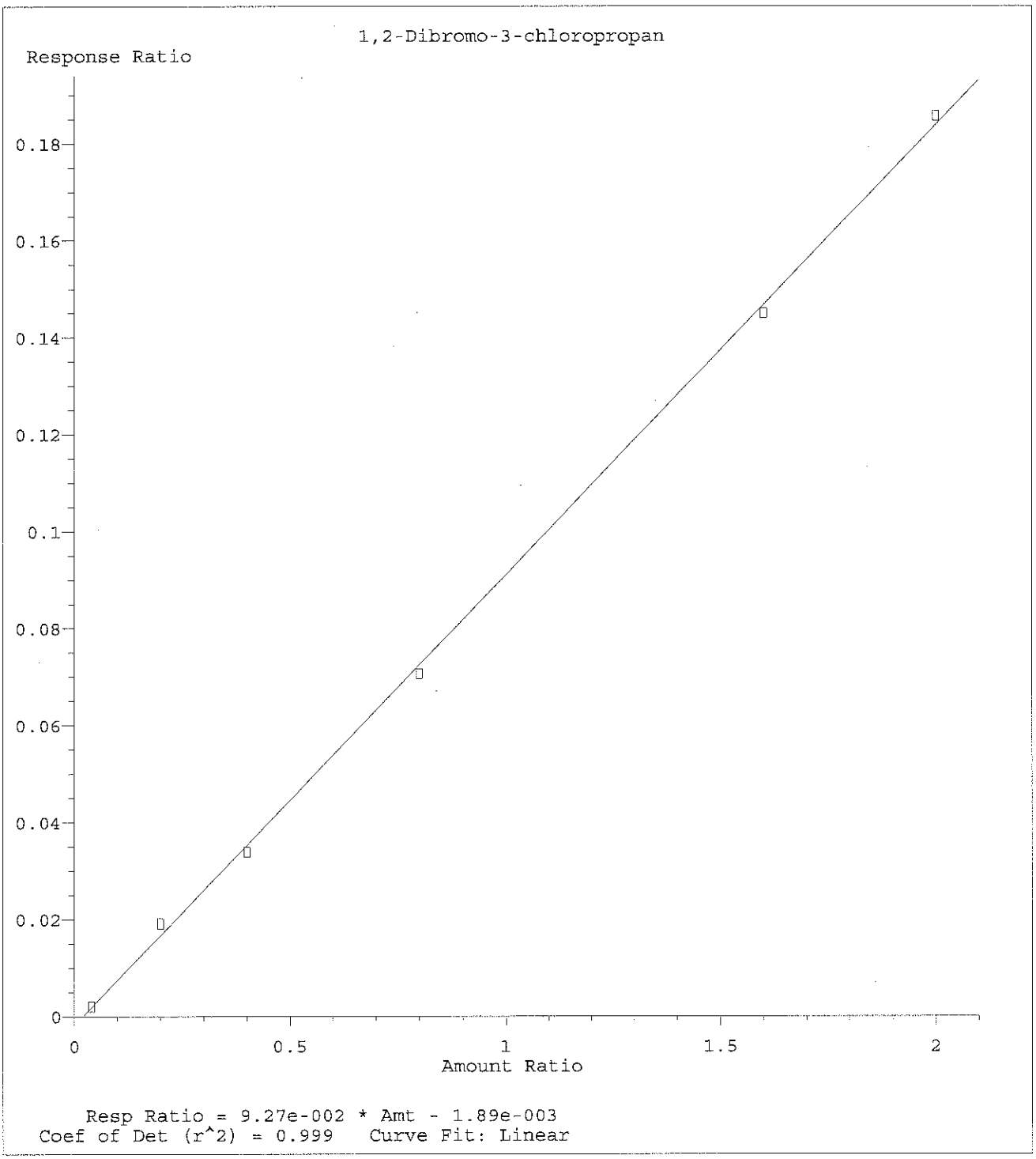
Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19



Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19



Method Name: C:\HPCHEM\1\METHODS\061719.M
Calibration Table Last Updated: Tue Jun 18 09:13:04 2019

6/18/19

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:24 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 032119

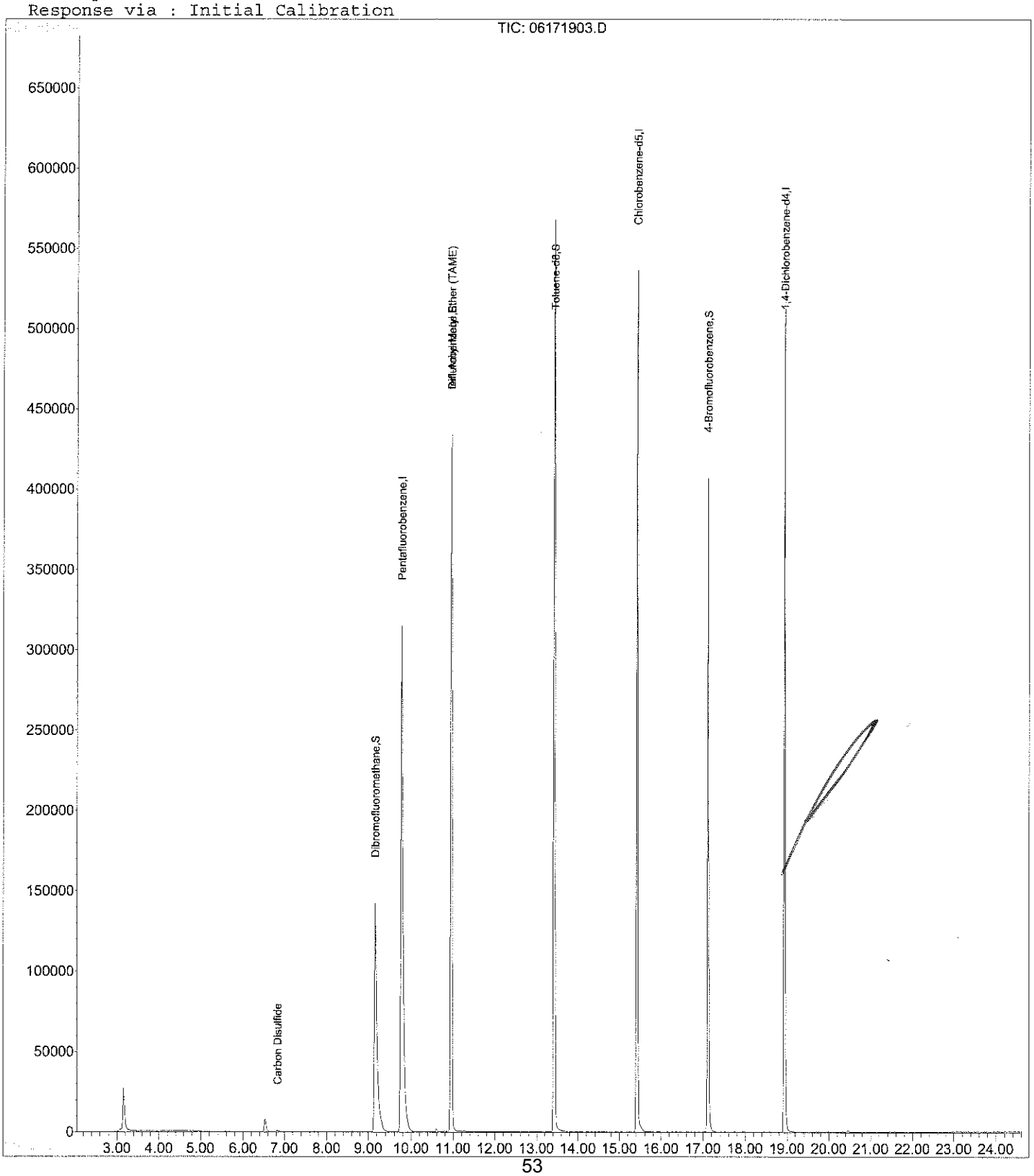
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.77	168	2692744	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	4117211	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1933632	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.17	113	1746201	51.30	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.60%		
34) Diflurobenzene	10.95	114	4808283	49.48	ug/L	0.00
Spiked Amount 50.000			Recovery =	98.96%		
45) Toluene-d8	13.43	98	5162318	48.92	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.84%		
63) 4-Bromofluorobenzene	17.12	95	2024577	50.16	ug/L	0.00
Spiked Amount 50.000			Recovery =	100.32%		
Target Compounds						Qvalue
14) Methylene Chloride	6.53	84	88001	Below Cal		99
15) Carbon Disulfide	6.84	76	26003	0.33	ug/l #	74
32) Benzene	10.60	78	25760	Below Cal		100
33) tert-Amyl Metyl Ether (TAM	10.95	73	46258	0.78	ug/l #	48

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:24 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 11:07 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.77	168	2692744	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	4122923	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1933632	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.17	113	1708903	50.60	ug/L	0.02
Spiked Amount 50.000			Recovery =	101.20%		
34) Diflurobenzene	10.95	114	4808283	52.30	ug/L	0.00
Spiked Amount 50.000			Recovery =	104.60%		
45) Toluene-d8	13.43	98	5160130	56.22	ug/L	0.00
Spiked Amount 50.000			Recovery =	112.44%		
63) 4-Bromofluorobenzene	17.12	95	2024577	52.69	ug/L	0.00
Spiked Amount 50.000			Recovery =	105.38%		
Target Compounds						Qvalue
14) Methylene Chloride	6.53	84	88001	Below Cal		97
32) Benzene	10.60	78	25760	Below Cal		100
33) tert-Amyl Metyl Ether (TAM	10.95	73	46258	0.80	ug/l #	48

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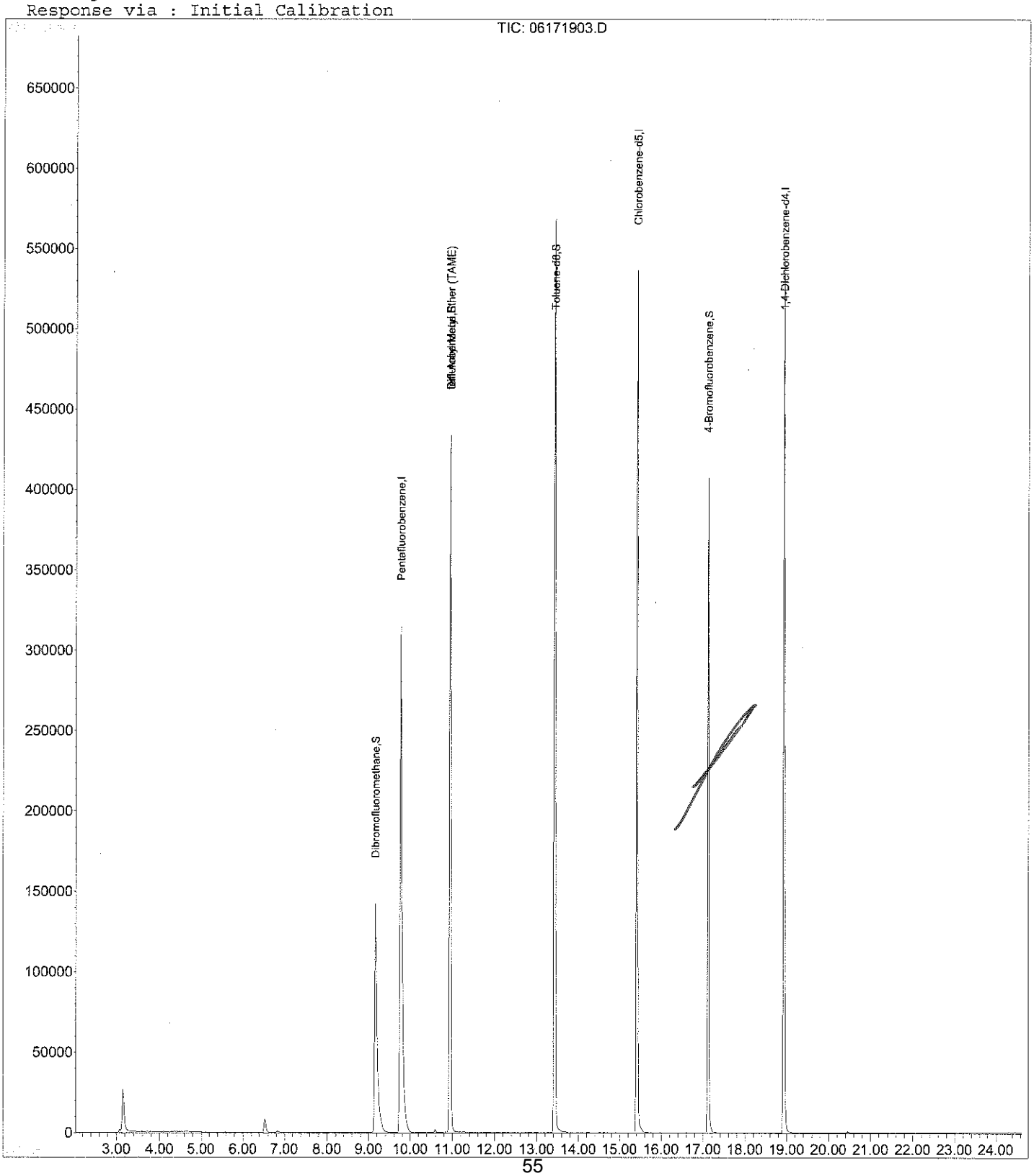
(#) = qualifier out of range (m) = manual integration

06171903.D 061719.M Tue Jun 18 09:24:37 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171903.D Vial: 9
Acq On : 17 Jun 2019 10:42 am Operator: CZ/MS9
Sample : BLK1@SW060619A1 Inst : GC/MS Ins
Misc : IS 9061301, SS 9061302 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 11:07 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:07 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2603426	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3968834	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1868497	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	0.00	113	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
34) Diflurobenzene	10.95	114	4698612	52.86	ug/L		0.00
Spiked Amount 50.000			Recovery =	105.72%			
45) Toluene-d8	0.00	98	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
63) 4-Bromofluorobenzene	0.00	95	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	17597m	0.43	ug/l		
3) Chloromethane	3.75	50	5449m	0.35	ug/l		
4) Vinyl Chloride	3.98	62	9139m	0.43	ug/l		
5) Bromomethane	4.52	94	5868m	3.27	ug/l		
6) Chloroethane	4.69	64	4347m	0.39	ug/l		
8) Trichlorofluoromethane(R11	5.51	101	31597	0.49	ug/l	#	85
12) 1,1-Dichloroethylene	6.30	96	9914m	0.46	ug/l		
14) Methylene Chloride	6.52	84	138170	1.83	ug/l		96
15) Carbon Disulfide	6.81	76	33057	0.32	ug/l	#	74
16) trans-1,2-Dichloroethylene	7.49	96	12387m	0.43	ug/L		
17) Methyl-tert-Butyl-Ether (M	7.69	73	63047	1.09	ug/L		94
18) 1,1-Dichloroethane	7.85	63	19609m	0.49	ug/L		
19) Vinyl Acetate	8.10	43	13665m	1.23	ug/L		
21) Diisopropyl ether (DIPE)	8.54	45	31744	0.57	ug/l		99
22) cis-1,2-Dichloroethylene	8.68	96	15206m	0.49	ug/l		
24) Chloroform	8.98	83	24637m	0.40	ug/L		
25) 2,2-Dichloropropane	9.08	77	18273m	Below Cal			
27) Ethyl-tert-Butyl Ether (ET	9.10	59	29356	0.48	ug/l		89
28) 1,2-Dichloroethane (EDC)	9.90	62	12641m	0.33	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	19413m	0.31	ug/L		
30) 1,1-Dichloropropylene	10.29	75	21430m	0.50	ug/L		
31) Carbon Tetrachloride	10.53	117	16875m	0.31	ug/l		
32) Benzene	10.59	78	90431m	Below Cal			
33) tert-Amyl Metyl Ether (TAM	10.84	73	30709m	0.55	ug/l		
35) Dibromomethane	11.37	93	6175m	0.36	ug/L		
36) 1,2-Dichloropropane	11.42	63	12422m	0.63	ug/L		
37) Trichloroethylene (TCE)	11.48	95	15370m	0.45	ug/L		
38) Bromodichloromethane	11.55	83	18273m	0.39	ug/L		
40) cis-1,3-Dichloropropylene	12.46	75	18782m	0.43	ug/L		
43) trans-1,3-Dichloropropylen	13.07	75	13719m	0.36	ug/L		
44) 1,1,2-Trichloroethane	13.27	83	8595m	0.51	ug/L		
46) Toluene	13.53	92	34875	0.53	ug/L		97
47) 1,3-Dichloropropane	13.60	76	17920m	0.54	ug/L		
49) Dibromochloromethane	13.96	129	11845m	0.33	ug/L		
50) 1,2-Dibromoethane(EDB)	14.29	107	9044m	0.37	ug/L		
51) Tetrachloroethylene (PCE)	14.53	164	10765m	0.41	ug/L		
52) 1,1,1,2-Tetrachloroethane	15.35	131	13544m	0.39	ug/L		
53) Chlorobenzene	15.46	112	36837	0.47	ug/L		93
54) Ethylbenzene	15.75	91	63670	0.49	ug/L		97
55) m,p-Xylenes	16.02	106	47766	0.99	ug/L		97
57) Styrene	16.47	104	34351	0.44	ug/L	#	83
58) o-Xylene	16.56	106	21926m	0.47	ug/L		
59) 1,1,2,2-Tetrachloroethane	16.56	83	11371m	0.56	ug/L		

(#) = qualifier out of range (m) = manual integration

06171913.D 061719.M Tue Jun 18 09:33:18 2019 Page 1

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:07 2019 Quant Results File: 032119.RES

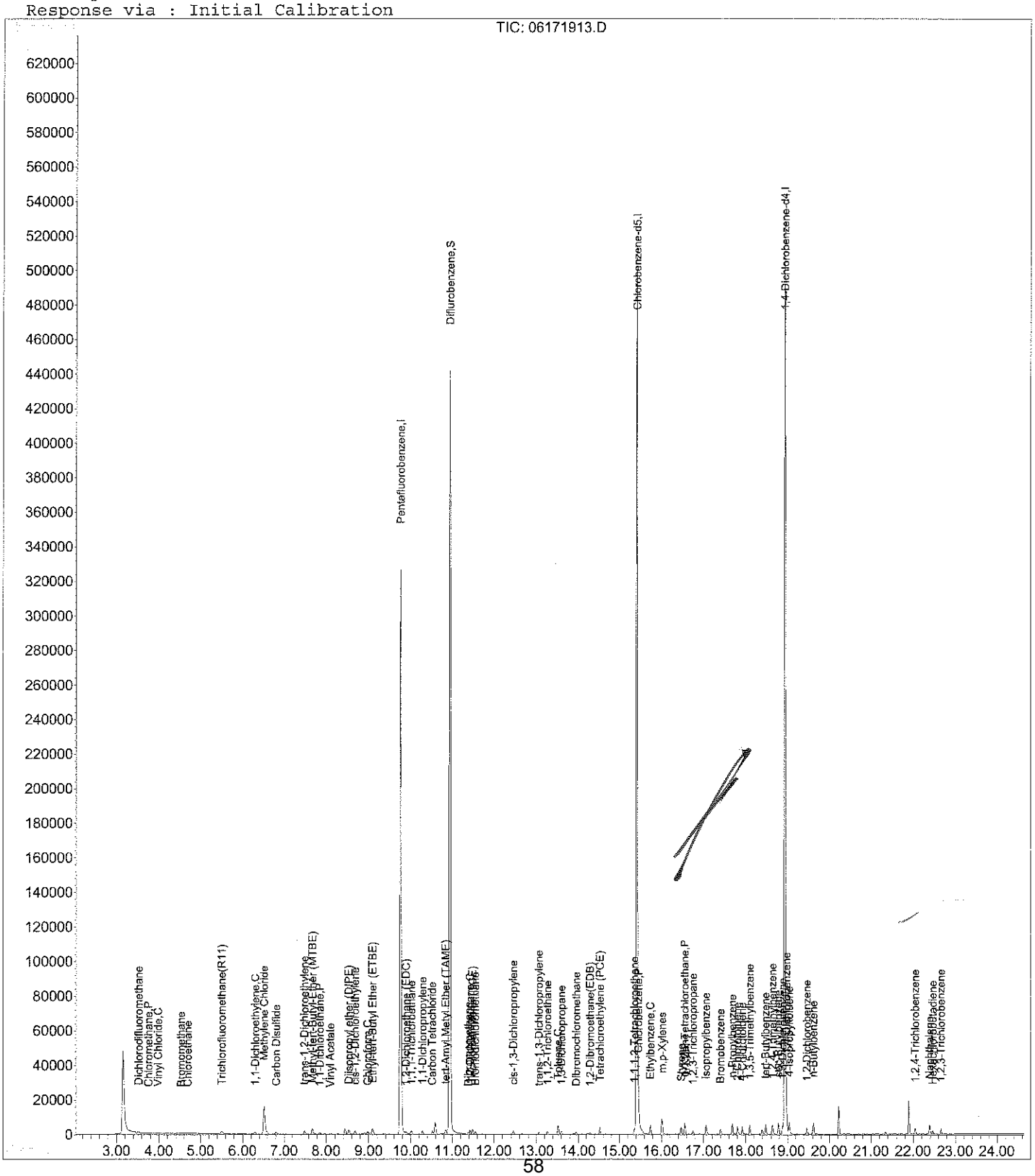
Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
60)	1,2,3-Trichloropropane	16.76	75	14740m	0.93	ug/L		
62)	Isopropylbenzene	17.07	105	56969	0.44	ug/l	#	49
64)	Bromobenzene	17.40	156	14616m	0.45	ug/l		
65)	n-Propylbenzene	17.68	91	80296	0.51	ug/l	#	54
66)	2-Chlorotoluene	17.81	91	46558	0.50	ug/l	#	39
67)	4-Chlorotoluene	17.92	91	47900	0.49	ug/l	#	39
68)	1,3,5-Trimethylbenzene	18.10	105	47953	0.43	ug/l	#	26
69)	tert-Butylbenzene	18.48	119	43742	0.45	ug/l	#	86
70)	1,2,4-Trimethylbenzene	18.64	105	51787	0.46	ug/l	#	30
71)	sec-Butylbenzene	18.79	105	72104	0.49	ug/l	#	57
72)	1,3-Dichlorobenzene	18.88	146	30892	0.49	ug/l	#	25
73)	1,4-Dichlorobenzene	18.98	146	31837	0.52	ug/l	#	25
74)	4-Isopropyltoluene	19.05	119	55594	0.44	ug/l	#	50
75)	1,2-Dichlorobenzene	19.47	146	26592	0.47	ug/l	#	25
76)	n-Butylbenzene	19.62	91	57965	0.48	ug/l	#	84
78)	1,2,4-Trichlorobenzene	22.04	180	16944m	0.46	ug/l		
79)	Naphthalene	22.39	128	67855	0.97	ug/l		100
80)	Hexachlorobutadiene	22.47	225	5945m	0.36	ug/l		
81)	1,2,3-Trichlorobenzene	22.66	180	17169m	0.57	ug/l		

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:07 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171905.D Vial: 15
Acq On : 17 Jun 2019 11:50 am Operator: CZ/MS9
Sample : ICAL 8260 2.0PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:12 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2528600	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3885147	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1821150	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	9.16	113	370368	11.68	ug/L		0.01
Spiked Amount 50.000			Recovery = 23.36%				
34) Diflurobenzene	10.95	114	4580854	53.06	ug/L		0.00
Spiked Amount 50.000			Recovery = 106.12%				
45) Toluene-d8	13.43	98	1146978	13.26	ug/L		0.00
Spiked Amount 50.000			Recovery = 26.52%				
63) 4-Bromofluorobenzene	17.12	95	441440	12.20	ug/L		0.00
Spiked Amount 50.000			Recovery = 24.40%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	68033	1.70	ug/l	#	42
3) Chloromethane	3.76	50	26582	1.78	ug/l	#	42
4) Vinyl Chloride	3.98	62	33987	1.64	ug/l	#	43
5) Bromomethane	4.50	94	11180m	3.48	ug/l		
6) Chloroethane	4.70	64	21173m	1.94	ug/l		
8) Trichlorofluoromethane(R11	5.51	101	114273m	1.81	ug/l		
9) Iodomethane	6.33	142	10463m	1.74	ug/l		
10) tert-Butyl alcohol	6.39	59	9825m	3.97	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	45075	1.28	ug/l		93
12) 1,1-Dichloroethylene	6.30	96	51669	2.48	ug/l		98
14) Methylene Chloride	6.52	84	101474	0.50	ug/l		98
15) Carbon Disulfide	6.82	76	152915	2.45	ug/l	#	74
16) trans-1,2-Dichloroethylene	7.50	96	64411	2.32	ug/L		89
17) Methyl-tert-Butyl-Ether (M	7.69	73	226303	4.01	ug/L		99
18) 1,1-Dichloroethane	7.87	63	100671	2.58	ug/L		95
19) Vinyl Acetate	8.10	43	56775	5.27	ug/L	#	88
21) Diisopropyl ether (DIPE)	8.53	45	147386	2.73	ug/l		98
22) cis-1,2-Dichloroethylene	8.69	96	71561	2.36	ug/l		97
23) Bromochloromethane	8.91	128	27677	2.17	ug/L		98
24) Chloroform	8.99	83	117956	1.96	ug/L		95
25) 2,2-Dichloropropane	9.09	77	85000	Below Cal			91
27) Ethyl-tert-Butyl Ether (ET	9.10	59	126307	2.11	ug/l		100
28) 1,2-Dichloroethane (EDC)	9.90	62	55555	1.50	ug/L		94
29) 1,1,1-Trichloroethane	10.03	97	100070	1.64	ug/L		92
30) 1,1-Dichloropropylene	10.29	75	90904	2.18	ug/L		96
31) Carbon Tetrachloride	10.53	117	81332	1.56	ug/l		98
33) tert-Amyl Metyl Ether (TAM	10.85	73	109759	2.01	ug/l		96
35) Dibromomethane	11.38	93	31015	1.84	ug/L		92
36) 1,2-Dichloropropane	11.43	63	53348	2.78	ug/L	#	83
37) Trichloroethylene (TCE)	11.49	95	70941	2.15	ug/L		92
38) Bromodichloromethane	11.56	83	80991	1.79	ug/L		98
39) 2-cleve	12.18	63	7455m	0.78	ug/L		
40) cis-1,3-Dichloropropylene	12.46	75	90341	2.12	ug/L		97
41) 4-methyl-2-Pentanone(MIBK)	12.65	100	953m	0.50	ug/L		
43) trans-1,3-Dichloropropylen	13.07	75	64654	1.71	ug/L		98
44) 1,1,2-Trichloroethane	13.27	83	36239	2.18	ug/L		96
46) Toluene	13.53	92	148980	2.33	ug/L		97
47) 1,3-Dichloropropane	13.60	76	73090	2.25	ug/L		98
48) 2-Hexanone	13.86	43	11073m	1.66	ug/L		
49) Dibromochloromethane	13.96	129	49978	1.44	ug/L		98
50) 1,2-Dibromoethane(EDB)	14.30	107	42807	1.79	ug/L		92
51) Tetrachloroethylene (PCE)	14.53	164	49738	1.94	ug/L		93
52) 1,1,1,2-Tetrachloroethane	15.36	131	56621	1.66	ug/L		99

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171905.D Vial: 15
Acq On : 17 Jun 2019 11:50 am Operator: CZ/MS9
Sample : ICAL 8260 2.0PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:12 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

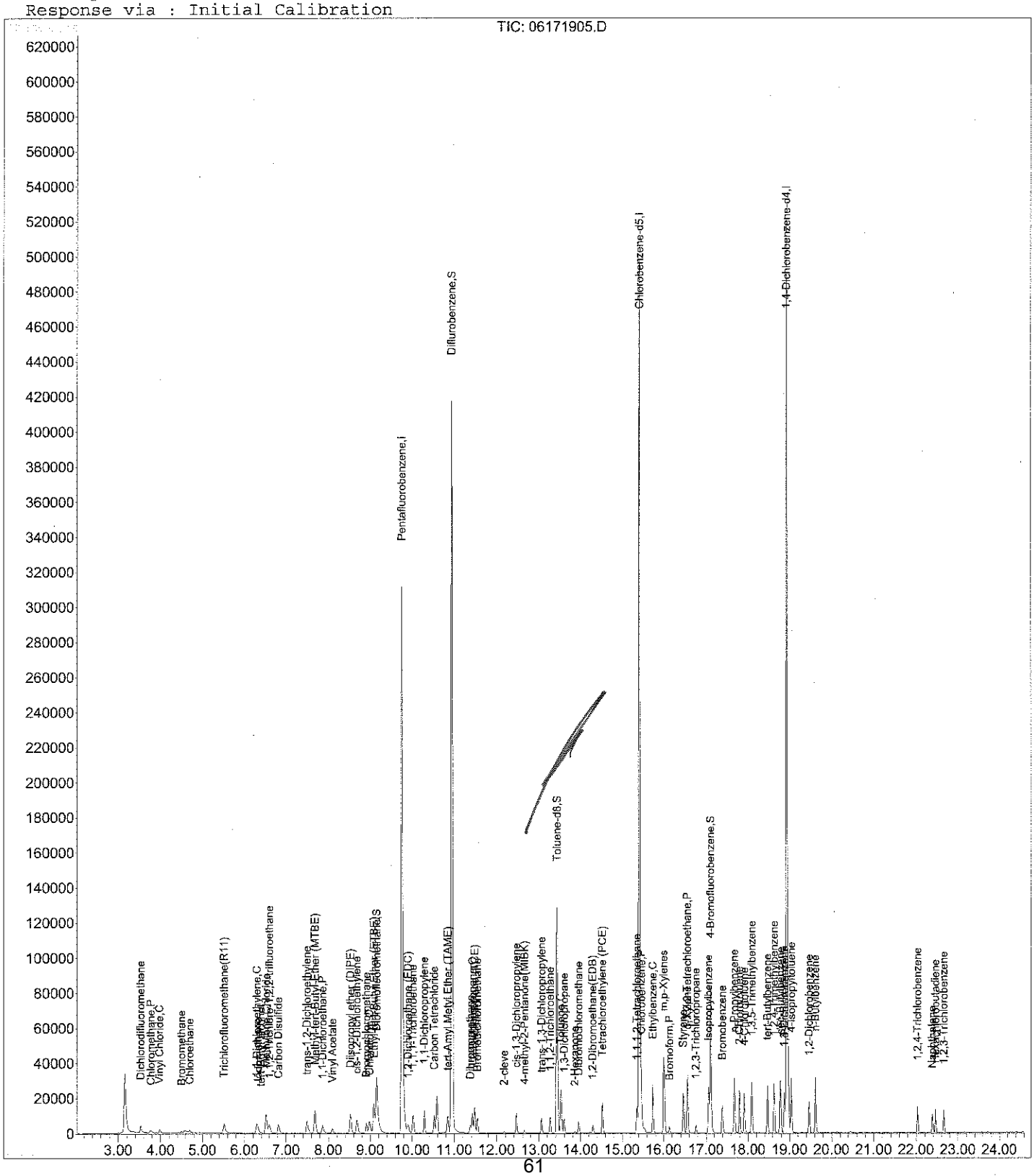
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
53)	Chlorobenzene	15.46	112	158538	2.04 ug/L		96
54)	Ethylbenzene	15.74	91	277378	2.16 ug/L		92
55)	m,p-Xylenes	16.01	106	208184	4.43 ug/L		94
56)	Bromoform	16.14	173	22107m	1.46 ug/L		
57)	Styrene	16.47	104	155151	2.01 ug/L		96
58)	o-Xylene	16.56	106	97169	2.11 ug/L		99
59)	1,1,2,2-Tetrachloroethane	16.56	83	47039	2.37 ug/L		93
60)	1,2,3-Trichloropropane	16.76	75	30380	1.95 ug/L		91
62)	Isopropylbenzene	17.07	105	257408	2.03 ug/l		96
64)	Bromobenzene	17.40	156	58478	1.84 ug/l		89
65)	n-Propylbenzene	17.68	91	344677	2.27 ug/l		96
66)	2-Chlorotoluene	17.81	91	195683	2.17 ug/l		95
67)	4-Chlorotoluene	17.92	91	202100	2.11 ug/l		97
68)	1,3,5-Trimethylbenzene	18.10	105	219646	2.02 ug/l		96
69)	tert-Butylbenzene	18.48	119	181640	1.92 ug/l		95
70)	1,2,4-Trimethylbenzene	18.64	105	218978	2.01 ug/l		98
71)	sec-Butylbenzene	18.78	105	305755	2.12 ug/l		97
72)	1,3-Dichlorobenzene	18.88	146	126228	2.07 ug/l		99
73)	1,4-Dichlorobenzene	18.88	146	126241	2.12 ug/l		98
74)	4-Isopropyltoluene	19.05	119	234552	1.92 ug/l		97
75)	1,2-Dichlorobenzene	19.47	146	104656	1.88 ug/l		98
76)	n-Butylbenzene	19.62	91	250786	2.15 ug/l		98
77)	1,2-Dibromo-3-chloropropan	20.13	75	3661m	Below Cal		
78)	1,2,4-Trichlorobenzene	22.04	180	63420	1.79 ug/l	#	83
79)	Naphthalene	22.39	128	119911	1.76 ug/l		100
80)	Hexachlorobutadiene	22.47	225	27864	1.72 ug/l	#	18
81)	1,2,3-Trichlorobenzene	22.67	180	54418	1.87 ug/l	#	80

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171905.D Vial: 15
Acq On : 17 Jun 2019 11:50 am Operator: CZ/MS9
Sample : ICAL 8260 2.0PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 9:12 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171906.D Vial: 15
Acq On : 17 Jun 2019 12:27 pm Operator: CZ/MS9
Sample : ICAL 8260 10PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:39 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2488247	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3789993	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1795328	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	9.16	113	663446	21.26	ug/L		0.01
Spiked Amount 50.000			Recovery =	42.52%			
34) Diflurobenzene	10.95	114	4523858	53.25	ug/L		0.00
Spiked Amount 50.000			Recovery =	106.50%			
45) Toluene-d8	13.43	98	2093277	24.81	ug/L		0.00
Spiked Amount 50.000			Recovery =	49.62%			
63) 4-Bromofluorobenzene	17.12	95	793251	22.23	ug/L		0.00
Spiked Amount 50.000			Recovery =	44.46%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	346839	8.78	ug/l		98
3) Chloromethane	3.77	50	144151	9.79	ug/l		100
4) Vinyl Chloride	3.98	62	183227	8.97	ug/l		98
5) Bromomethane	4.50	94	116833m	7.73	ug/l		
6) Chloroethane	4.70	64	104981	9.78	ug/l		96
7) ethanol	4.77	45	17184m	235.85	ug/l		
8) Trichlorofluoromethane(R11	5.51	101	554805m	8.93	ug/l		
9) Iodomethane	6.34	142	214099	9.31	ug/l	#	87
10) tert-Butyl alcohol	6.38	59	56963m	42.85	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	239549m	6.90	ug/l		
12) 1,1-Dichloroethylene	6.30	96	283548	13.83	ug/l		99
13) Acetone	5.74	58	12002m	16.94	ug/l		
14) Methylene Chloride	6.52	84	584475	20.49	ug/l		96
15) Carbon Disulfide	6.82	76	826000	14.58	ug/l		99
16) trans-1,2-Dichloroethylene	7.50	96	342412	12.56	ug/L		96
17) Methyl-tert-Butyl-Ether (M	7.68	73	1178234	21.23	ug/L		100
18) 1,1-Dichloroethane	7.86	63	480366	12.52	ug/L		98
19) Vinyl Acetate	8.09	43	326955	30.82	ug/L		98
20) 2-Butanone (MEK)	8.54	72	14659m	11.92	ug/l		
21) Diisopropyl ether (DIPE)	8.53	45	774949	14.60	ug/l		97
22) cis-1,2-Dichloroethylene	8.69	96	373815	12.54	ug/l		99
23) Bromochloromethane	8.91	128	153295	12.23	ug/L		96
24) Chloroform	8.99	83	604521	10.18	ug/L		99
25) 2,2-Dichloropropane	9.09	77	457292	8.01	ug/L		100
27) Ethyl-tert-Butyl Ether (ET	9.09	59	672559	11.40	ug/l		100
28) 1,2-Dichloroethane (EDC)	9.90	62	345927m	9.48	ug/L		
29) 1,1,1-Trichloroethane	10.03	97	526267	8.75	ug/L		99
30) 1,1-Dichloropropylene	10.29	75	471240	11.50	ug/L		97
31) Carbon Tetrachloride	10.53	117	464988	9.04	ug/l		98
32) Benzene	10.59	78	1270231	13.44	ug/l		100
33) tert-Amyl Metyl Ether (TAM	10.85	73	582653	10.84	ug/l		97
35) Dibromomethane	11.38	93	164601	9.95	ug/L		97
36) 1,2-Dichloropropane	11.43	63	281363	14.89	ug/L		99
37) Trichloroethylene (TCE)	11.49	95	383212	11.78	ug/L		97
38) Bromodichloromethane	11.56	83	431351	9.68	ug/L		98
39) 2-cleve	12.18	63	60709	6.47	ug/L		95
40) cis-1,3-Dichloropropylene	12.46	75	509028	12.13	ug/L		96
41) 4-methyl-2-Pentanone(MIBK)	12.65	100	17461m	9.33	ug/L		
43) trans-1,3-Dichloropropylen	13.07	75	380596	10.33	ug/L		97
44) 1,1,2-Trichloroethane	13.27	83	198773	12.25	ug/L		99
46) Toluene	13.53	92	779843	12.50	ug/L		100
47) 1,3-Dichloropropane	13.61	76	381178	12.03	ug/L		100
48) 2-Hexanone	13.85	43	74110	11.42	ug/L	#	96

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171906.D Vial: 15
Acq On : 17 Jun 2019 12:27 pm Operator: CZ/MS9
Sample : ICAL 8260 10PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:39 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

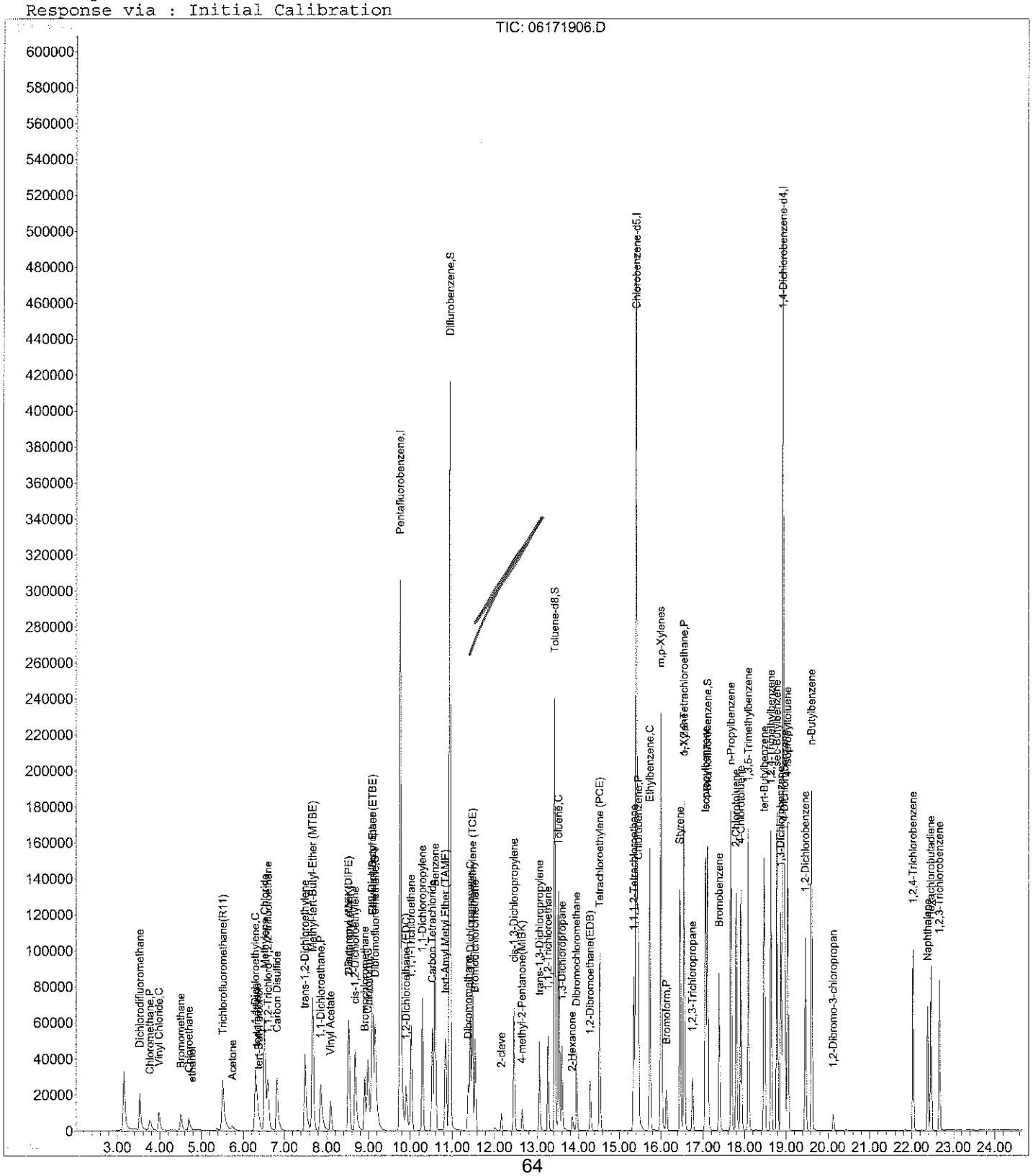
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.96	129	295192	8.71	ug/L	99
50)	1,2-Dibromoethane(EDB)	14.29	107	236962	10.17	ug/L	95
51)	Tetrachloroethylene (PCE)	14.53	164	268670	10.76	ug/L	98
52)	1,1,1,2-Tetrachloroethane	15.36	131	312876	9.38	ug/L	97
53)	Chlorobenzene	15.46	112	837734	11.07	ug/L	96
54)	Ethylbenzene	15.74	91	1469342	11.74	ug/L	98
55)	m,p-Xylenes	16.01	106	1106302	24.13	ug/L	96
56)	Bromoform	16.15	173	128148	8.66	ug/L	99
57)	Styrene	16.47	104	868570	11.55	ug/L	99
58)	o-Xylene	16.56	106	543732	12.10	ug/L	100
59)	1,1,2,2-Tetrachloroethane	16.56	83	248449	12.83	ug/L	98
60)	1,2,3-Trichloropropane	16.76	75	169932	11.18	ug/L	100
62)	Isopropylbenzene	17.07	105	1428498	11.43	ug/l	98
64)	Bromobenzene	17.40	156	332417	10.60	ug/l	93
65)	n-Propylbenzene	17.68	91	1864640	12.45	ug/l	98
66)	2-Chlorotoluene	17.81	91	1020910	11.48	ug/l	97
67)	4-Chlorotoluene	17.92	91	1053619	11.16	ug/l	98
68)	1,3,5-Trimethylbenzene	18.10	105	1206846	11.26	ug/l	96
69)	tert-Butylbenzene	18.48	119	1047094	11.22	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	1208773	11.25	ug/l	97
71)	sec-Butylbenzene	18.79	105	1723059	12.14	ug/l	97
72)	1,3-Dichlorobenzene	18.88	146	662065	11.02	ug/l	98
73)	1,4-Dichlorobenzene	18.98	146	652081	11.09	ug/l	97
74)	4-Isopropyltoluene	19.05	119	1347353	11.17	ug/l	97
75)	1,2-Dichlorobenzene	19.47	146	595589	10.88	ug/l	98
76)	n-Butylbenzene	19.62	91	1470232	12.80	ug/l	97
77)	1,2-Dibromo-3-chloropropan	20.13	75	34406	6.84	ug/l	87
78)	1,2,4-Trichlorobenzene	22.04	180	386859	11.05	ug/l	99
79)	Naphthalene	22.39	128	712344	10.60	ug/l	100
80)	Hexachlorobutadiene	22.47	225	173509	10.89	ug/l	99
81)	1,2,3-Trichlorobenzene	22.67	180	311948	10.86	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171906.D Vial: 15
Acq On : 17 Jun 2019 12:27 pm Operator: CZ/MS9
Sample : ICAL 8260 10PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:39 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171907.D Vial: 15
Acq On : 17 Jun 2019 1:00 pm Operator: CZ/MS9
Sample : ICAL 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:41 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2452128	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3772842	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1766427	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1487384	48.37	ug/L	0.01
Spiked Amount 50.000			Recovery =	96.74%		
34) Diflurobenzene	10.95	114	4498033	53.73	ug/L	0.00
Spiked Amount 50.000			Recovery =	107.46%		
45) Toluene-d8	13.43	98	4743030	56.47	ug/L	0.00
Spiked Amount 50.000			Recovery =	112.94%		
63) 4-Bromofluorobenzene	17.12	95	1801109	51.31	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.62%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	706957	18.17	ug/l	99
3) Chloromethane	3.77	50	289307	19.95	ug/l	99
4) Vinyl Chloride	3.97	62	340666	16.92	ug/l	99
5) Bromomethane	4.50	94	321364m	16.12	ug/l	
6) Chloroethane	4.70	64	213355	20.17	ug/l	95
7) ethanol	4.76	45	34432	479.55	ug/l #	100
8) Trichlorofluoromethane(R11	5.52	101	1077740m	17.60	ug/l	
9) Iodomethane	6.34	142	446532m	18.20	ug/l	
10) tert-Butyl alcohol	6.38	59	126068m	101.19	ug/l	
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	487737m	14.25	ug/l	
12) 1,1-Dichloroethylene	6.30	96	527880	26.13	ug/l	100
13) Acetone	5.75	58	22448m	33.61	ug/l	
14) Methylene Chloride	6.52	84	713623	26.25	ug/l	98
15) Carbon Disulfide	6.82	76	1514832	27.34	ug/l	100
16) trans-1,2-Dichloroethylene	7.51	96	634556	23.62	ug/L	99
17) Methyl-tert-Butyl-Ether (M	7.68	73	2185930	39.97	ug/L	99
18) 1,1-Dichloroethane	7.87	63	879021	23.25	ug/L	96
19) Vinyl Acetate	8.09	43	602982	57.67	ug/L	98
20) 2-Butanone (MEK)	8.53	72	29882	24.65	ug/l	86
21) Diisopropyl ether (DIPE)	8.53	45	1442678	27.59	ug/l	97
22) cis-1,2-Dichloroethylene	8.69	96	709819	24.16	ug/l	99
23) Bromochloromethane	8.91	128	278075	22.52	ug/L	98
24) Chloroform	8.99	83	1086970	18.58	ug/L	100
25) 2,2-Dichloropropane	9.09	77	769768	16.17	ug/L	98
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1215586	20.91	ug/l	99
28) 1,2-Dichloroethane (EDC)	9.91	62	633028m	17.60	ug/L	
29) 1,1,1-Trichloroethane	10.03	97	991457	16.72	ug/L	98
30) 1,1-Dichloropropylene	10.29	75	895755	22.18	ug/L	98
31) Carbon Tetrachloride	10.53	117	862980	17.02	ug/l	100
32) Benzene	10.60	78	2341268	28.02	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1091683	20.61	ug/l	100
35) Dibromomethane	11.38	93	286010	17.54	ug/L	95
36) 1,2-Dichloropropane	11.43	63	535529	28.76	ug/L	97
37) Trichloroethylene (TCE)	11.49	95	717634	22.38	ug/L	96
38) Bromodichloromethane	11.56	83	815055	18.55	ug/L	99
39) 2-cleve	12.17	63	121412	13.12	ug/L	97
40) cis-1,3-Dichloropropylene	12.46	75	970926	23.47	ug/L	100
41) 4-methyl-2-Pentanone(MIBK)	12.65	100	35832	19.43	ug/L	94
43) trans-1,3-Dichloropropylen	13.07	75	710726	19.37	ug/L	99
44) 1,1,2-Trichloroethane	13.27	83	367381	22.74	ug/L	99
46) Toluene	13.53	92	1463314	23.56	ug/L	98
47) 1,3-Dichloropropane	13.61	76	699244	22.16	ug/L	98
48) 2-Hexanone	13.85	43	137843	21.33	ug/L	97

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171907.D Vial: 15
Acq On : 17 Jun 2019 1:00 pm Operator: CZ/MS9
Sample : ICAL 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:41 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

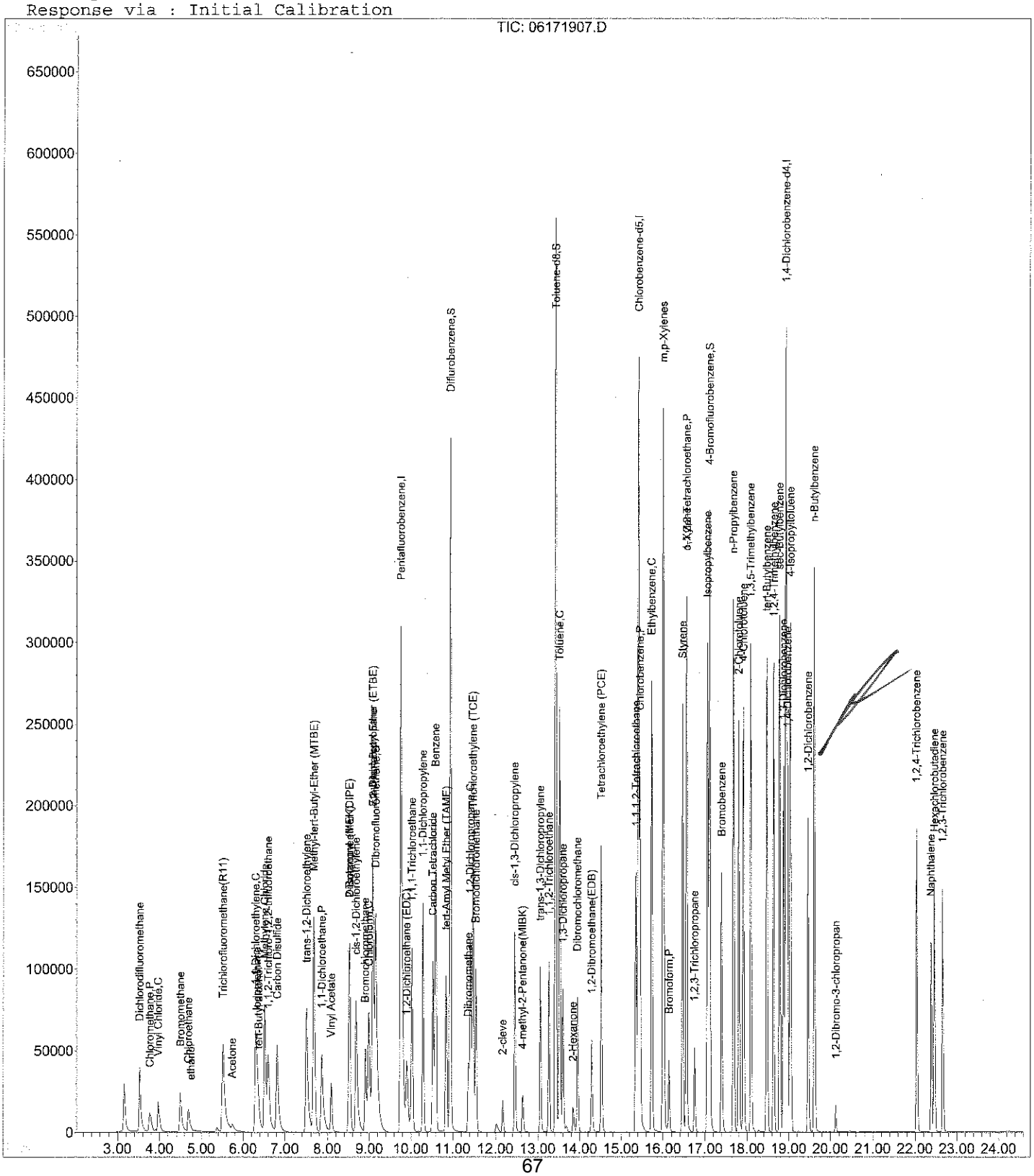
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.96	129	570105	16.90	ug/L	100
50)	1,2-Dibromoethane(EDB)	14.30	107	450161	19.41	ug/L	100
51)	Tetrachloroethylene (PCE)	14.53	164	510740	20.54	ug/L	97
52)	1,1,1,2-Tetrachloroethane	15.36	131	589316	17.76	ug/L	99
53)	Chlorobenzene	15.46	112	1544549	20.51	ug/L	98
54)	Ethylbenzene	15.74	91	2739525	21.98	ug/L	99
55)	m,p-Xylenes	16.01	106	2105299	46.13	ug/L	97
56)	Bromoform	16.15	173	249540	16.95	ug/L	99
57)	Styrene	16.47	104	1674627	22.37	ug/L	98
58)	o-Xylene	16.56	106	1028231	22.98	ug/L	100
59)	1,1,2,2-Tetrachloroethane	16.56	83	467433	24.24	ug/L	98
60)	1,2,3-Trichloropropane	16.76	75	313751	20.74	ug/L	99
62)	Isopropylbenzene	17.07	105	2675794	21.76	ug/l	98
64)	Bromobenzene	17.40	156	629432	20.40	ug/l	95
65)	n-Propylbenzene	17.68	91	3455235	23.44	ug/l	98
66)	2-Chlorotoluene	17.81	91	1892320	21.63	ug/l	98
67)	4-Chlorotoluene	17.92	91	1981916	21.33	ug/l	97
68)	1,3,5-Trimethylbenzene	18.10	105	2211900	20.98	ug/l	97
69)	tert-Butylbenzene	18.48	119	1912197	20.83	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	2219615	21.00	ug/l	99
71)	sec-Butylbenzene	18.79	105	3091852	22.13	ug/l	97
72)	1,3-Dichlorobenzene	18.88	146	1212414	20.51	ug/l	98
73)	1,4-Dichlorobenzene	18.98	146	1198439	20.72	ug/l	98
74)	4-Isopropyltoluene	19.05	119	2399425	20.21	ug/l	98
75)	1,2-Dichlorobenzene	19.47	146	1089665	20.23	ug/l	98
76)	n-Butylbenzene	19.62	91	2594249	22.96	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.13	75	59844	13.39	ug/l	91
78)	1,2,4-Trichlorobenzene	22.04	180	704102	20.43	ug/l	100
79)	Naphthalene	22.39	128	1262235	19.10	ug/l	100
80)	Hexachlorobutadiene	22.47	225	306609	19.57	ug/l	99
81)	1,2,3-Trichlorobenzene	22.67	180	564826	19.98	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171907.D Vial: 15
Acq On : 17 Jun 2019 1:00 pm Operator: CZ/MS9
Sample : ICAL 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:41 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171908.D Vial: 15
Acq On : 17 Jun 2019 1:46 pm Operator: CZ/MS9
Sample : ICAL 8260 40PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:44 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2483737	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3742391	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1736725	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	9.15	113	1842700	59.16	ug/L		0.00
Spiked Amount 50.000			Recovery =	118.32%			
34) Diflurobenzene	10.95	114	4439688	52.36	ug/L		0.00
Spiked Amount 50.000			Recovery =	104.72%			
45) Toluene-d8	13.43	98	5577244	66.94	ug/L		0.00
Spiked Amount 50.000			Recovery =	133.88%			
63) 4-Bromofluorobenzene	17.12	95	2135493	61.88	ug/L		0.00
Spiked Amount 50.000			Recovery =	123.76%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	1405858	35.67	ug/l		99
3) Chloromethane	3.76	50	569256	38.75	ug/l		99
4) Vinyl Chloride	3.96	62	561587	27.55	ug/l		98
5) Bromomethane	4.50	94	715280	31.77	ug/l		87
6) Chloroethane	4.69	64	410827	38.35	ug/l		98
7) ethanol	4.76	45	62669	861.70	ug/l	#	100
8) Trichlorofluoromethane(R11	5.51	101	1984996	32.00	ug/l		100
9) Iodomethane	6.34	142	1164993	44.75	ug/l		98
10) tert-Butyl alcohol	6.37	59	259558m	209.79	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	880256	25.39	ug/l		99
12) 1,1-Dichloroethylene	6.29	96	1047652	51.21	ug/l		99
13) Acetone	5.74	58	47619	72.16	ug/l		84
14) Methylene Chloride	6.52	84	1331400	51.40	ug/l		97
15) Carbon Disulfide	6.81	76	2991071	53.52	ug/l		99
16) trans-1,2-Dichloroethylene	7.50	96	1259707	46.29	ug/L		98
17) Methyl-tert-Butyl-Ether (M	7.67	73	4296609	77.57	ug/L		99
18) 1,1-Dichloroethane	7.86	63	1727312	45.11	ug/L		96
19) Vinyl Acetate	8.09	43	1235975	116.71	ug/L		97
20) 2-Butanone (MEK)	8.53	72	59064	48.10	ug/l		85
21) Diisopropyl ether (DIPE)	8.53	45	2774646	52.38	ug/l		98
22) cis-1,2-Dichloroethylene	8.68	96	1373312	46.16	ug/l		99
23) Bromochloromethane	8.90	128	562201	44.95	ug/L		98
24) Chloroform	8.98	83	2243197m	37.85	ug/L		
25) 2,2-Dichloropropane	9.08	77	1653986	38.23	ug/L		100
27) Ethyl-tert-Butyl Ether (ET	9.09	59	2336139	39.67	ug/l		96
28) 1,2-Dichloroethane (EDC)	9.90	62	1241160m	34.07	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	1938086	32.26	ug/L		99
30) 1,1-Dichloropropylene	10.29	75	1739015	42.52	ug/L		98
31) Carbon Tetrachloride	10.53	117	1682169	32.76	ug/l		99
32) Benzene	10.59	78	4423423	55.15	ug/l		100
33) tert-Amyl Metyl Ether (TAM	10.84	73	2160051	40.27	ug/l		100
35) Dibromomethane	11.38	93	572438	34.65	ug/L		95
36) 1,2-Dichloropropane	11.43	63	1029378	54.58	ug/L		97
37) Trichloroethylene (TCE)	11.49	95	1354571	41.70	ug/L		98
38) Bromodichloromethane	11.55	83	1595496	35.85	ug/L		99
39) 2-cleve	12.17	63	313155	33.42	ug/L		99
40) cis-1,3-Dichloropropylene	12.46	75	1912670	45.65	ug/L		98
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	75551	40.44	ug/L		96
43) trans-1,3-Dichloropropylen	13.06	75	1458517	40.07	ug/L		98
44) 1,1,2-Trichloroethane	13.27	83	712342	44.44	ug/L		99
46) Toluene	13.53	92	2737346	44.43	ug/L		98
47) 1,3-Dichloropropane	13.60	76	1340359	42.83	ug/L		99
48) 2-Hexanone	13.85	43	294305	45.91	ug/L		98

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171908.D Vial: 15
Acq On : 17 Jun 2019 1:46 pm Operator: CZ/MS9
Sample : ICAL 8260 40PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:44 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

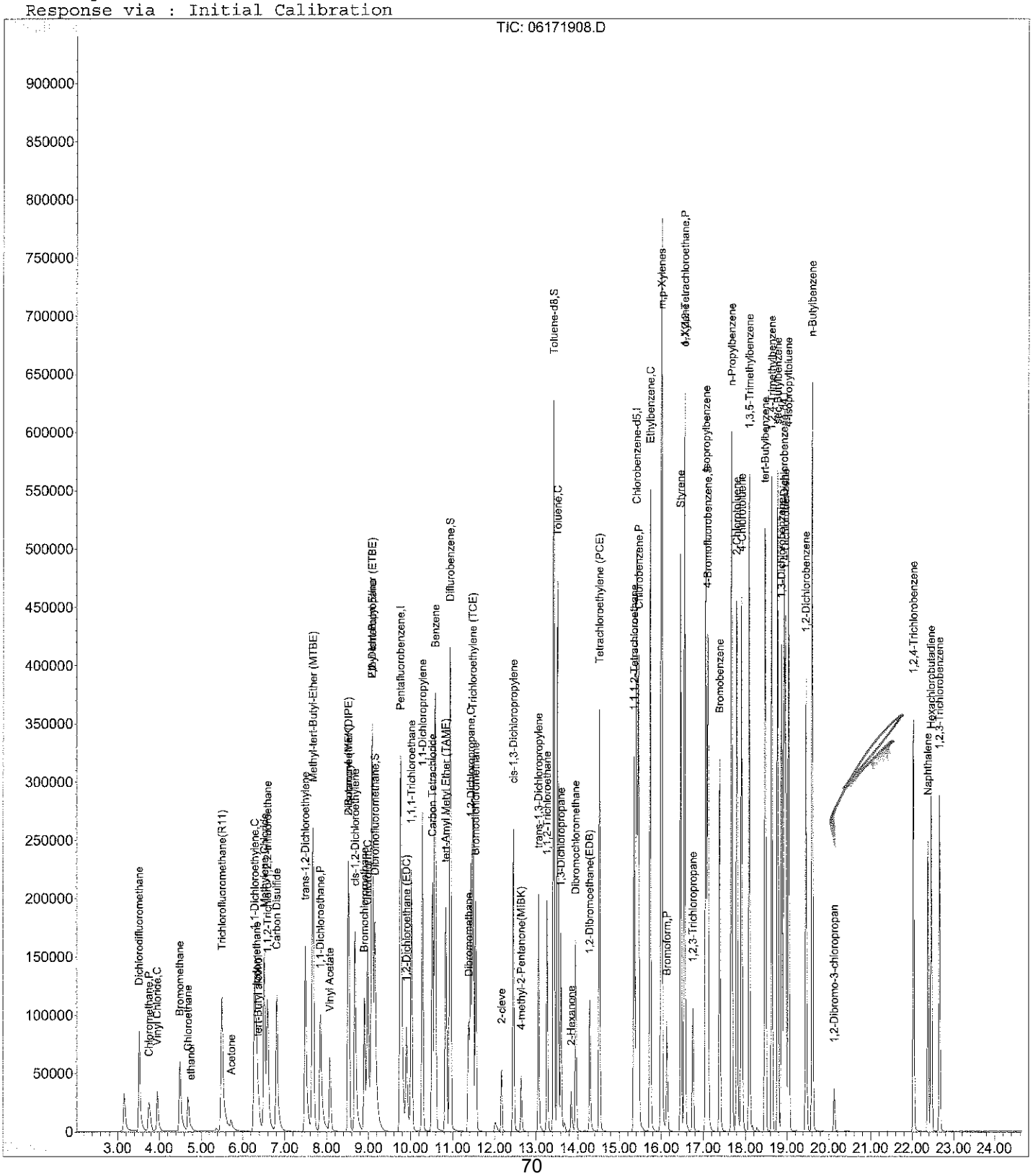
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.96	129	1096387	32.76	ug/L	97
50)	1,2-Dibromoethane(EDB)	14.29	107	892557	38.80	ug/L	98
51)	Tetrachloroethylene (PCE)	14.53	164	977604	39.63	ug/L	96
52)	1,1,1,2-Tetrachloroethane	15.36	131	1166366	35.43	ug/L	96
53)	Chlorobenzene	15.46	112	2969160	39.75	ug/L	96
54)	Ethylbenzene	15.74	91	5202756	42.09	ug/L	99
55)	m,p-Xylenes	16.01	106	3867371	85.43	ug/L	99
56)	Bromoform	16.15	173	507674	34.76	ug/L	100
57)	Styrene	16.46	104	3188137	42.93	ug/L	98
58)	o-Xylene	16.56	106	1891049	42.61	ug/L	99
59)	1,1,2,2-Tetrachloroethane	16.56	83	855593	44.73	ug/L	99
60)	1,2,3-Trichloropropane	16.76	75	607065	40.45	ug/L	98
62)	Isopropylbenzene	17.07	105	5006089	41.41	ug/l	99
64)	Bromobenzene	17.40	156	1229924	40.54	ug/l	97
65)	n-Propylbenzene	17.68	91	6379874	44.02	ug/l	100
66)	2-Chlorotoluene	17.81	91	3497740	40.67	ug/l	99
67)	4-Chlorotoluene	17.92	91	3670728	40.18	ug/l	98
68)	1,3,5-Trimethylbenzene	18.10	105	4113149	39.67	ug/l	98
69)	tert-Butylbenzene	18.48	119	3590215	39.78	ug/l	99
70)	1,2,4-Trimethylbenzene	18.64	105	4133374	39.78	ug/l	100
71)	sec-Butylbenzene	18.79	105	5621769	40.93	ug/l	98
72)	1,3-Dichlorobenzene	18.88	146	2312087	39.78	ug/l	99
73)	1,4-Dichlorobenzene	18.98	146	2251330	39.59	ug/l	99
74)	4-Isopropyltoluene	19.05	119	4422403	37.90	ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	2100525	39.66	ug/l	99
76)	n-Butylbenzene	19.62	91	4778361	43.01	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.13	75	122566	29.71	ug/l	93
78)	1,2,4-Trichlorobenzene	22.04	180	1376695	40.63	ug/l	100
79)	Naphthalene	22.39	128	2494719	38.39	ug/l	100
80)	Hexachlorobutadiene	22.47	225	587989	38.16	ug/l	100
81)	1,2,3-Trichlorobenzene	22.67	180	1075220	38.68	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171908.D Vial: 15
Acq On : 17 Jun 2019 1:46 pm Operator: CZ/MS9
Sample : ICAL 8260 40PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 14:44 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171909.D Vial: 15
Acq On : 17 Jun 2019 2:32 pm Operator: CZ/MS9
Sample : ICAL 8260 80PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 16:08 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2428725	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3716068	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1716598	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	9.15	113	1994076	65.47	ug/L		0.00
Spiked Amount 50.000			Recovery =	130.94%			
34) Diflurobenzene	10.94	114	4350751	52.47	ug/L		0.00
Spiked Amount 50.000			Recovery =	104.94%			
45) Toluene-d8	13.43	98	6078719	73.48	ug/L		0.00
Spiked Amount 50.000			Recovery =	146.96%			
63) 4-Bromofluorobenzene	17.12	95	2300468	67.44	ug/L		0.00
Spiked Amount 50.000			Recovery =	134.88%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.51	85	3111198	80.72	ug/l		99
3) Chloromethane	3.75	50	1209289	84.18	ug/l		98
4) Vinyl Chloride	3.94	62	724237m	36.33	ug/l		
5) Bromomethane	4.49	94	1764931	75.54	ug/l		86
6) Chloroethane	4.68	64	857218	81.84	ug/l		99
7) ethanol	4.77	45	113461	1595.42	ug/l	#	100
8) Trichlorofluoromethane(R11	5.49	101	4670789m	77.00	ug/l		
9) Iodomethane	6.33	142	2545544	98.32	ug/l		98
10) tert-Butyl alcohol	6.38	59	478452m	399.00	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	6.59	101	1735097	51.18	ug/l		99
12) 1,1-Dichloroethylene	6.28	96	1990431	99.49	ug/l		98
13) Acetone	5.72	58	77053m	120.48	ug/l		
14) Methylene Chloride	6.51	84	2442522	99.61	ug/l		95
15) Carbon Disulfide	6.80	76	5158654m	94.59	ug/l		
16) trans-1,2-Dichloroethylene	7.49	96	2450797	92.09	ug/L		97
17) Methyl-tert-Butyl-Ether (M	7.67	73	8035557	148.36	ug/L		99
18) 1,1-Dichloroethane	7.85	63	3378144	90.22	ug/L		97
19) Vinyl Acetate	8.08	43	2457894	237.35	ug/L		100
20) 2-Butanone (MEK)	8.52	72	120984	100.76	ug/l		64
21) Diisopropyl ether (DIPE)	8.52	45	5205367	100.49	ug/l		96
22) cis-1,2-Dichloroethylene	8.68	96	2641871	90.80	ug/l		98
23) Bromochloromethane	8.90	128	1095833	89.59	ug/L		96
24) Chloroform	8.98	83	4004546	69.10	ug/L		99
25) 2,2-Dichloropropane	9.08	77	3059847	75.46	ug/L		99
27) Ethyl-tert-Butyl Ether (ET	9.09	59	4256512	73.92	ug/l		97
28) 1,2-Dichloroethane (EDC)	9.89	62	2363391m	66.34	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	3661296	62.33	ug/L		99
30) 1,1-Dichloropropylene	10.29	75	3223767	80.61	ug/L		99
31) Carbon Tetrachloride	10.52	117	3204482	63.82	ug/l		100
32) Benzene	10.59	78	7917166	103.70	ug/l		100
33) tert-Amyl Metyl Ether (TAM	10.84	73	4150707	79.13	ug/l		99
35) Dibromomethane	11.37	93	1300710m	80.53	ug/L		
36) 1,2-Dichloropropane	11.43	63	1888377	102.39	ug/L		100
37) Trichloroethylene (TCE)	11.48	95	2470370	77.78	ug/L		97
38) Bromodichloromethane	11.55	83	3005375	69.07	ug/L		97
39) 2-cleve	12.17	63	713856	77.90	ug/L		99
40) cis-1,3-Dichloropropylene	12.46	75	3652441	89.14	ug/L		99
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	153071	83.79	ug/L		95
43) trans-1,3-Dichloropropylen	13.06	75	2842426	78.65	ug/L		98
44) 1,1,2-Trichloroethane	13.27	83	1363969	85.70	ug/L		97
46) Toluene	13.53	92	5037699	82.36	ug/L		98
47) 1,3-Dichloropropane	13.60	76	2504597	80.59	ug/L		99
48) 2-Hexanone	13.84	43	594378	93.38	ug/L	#	96

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171909.D Vial: 15
Acq On : 17 Jun 2019 2:32 pm Operator: CZ/MS9
Sample : ICAL 8260 80PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 16:08 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

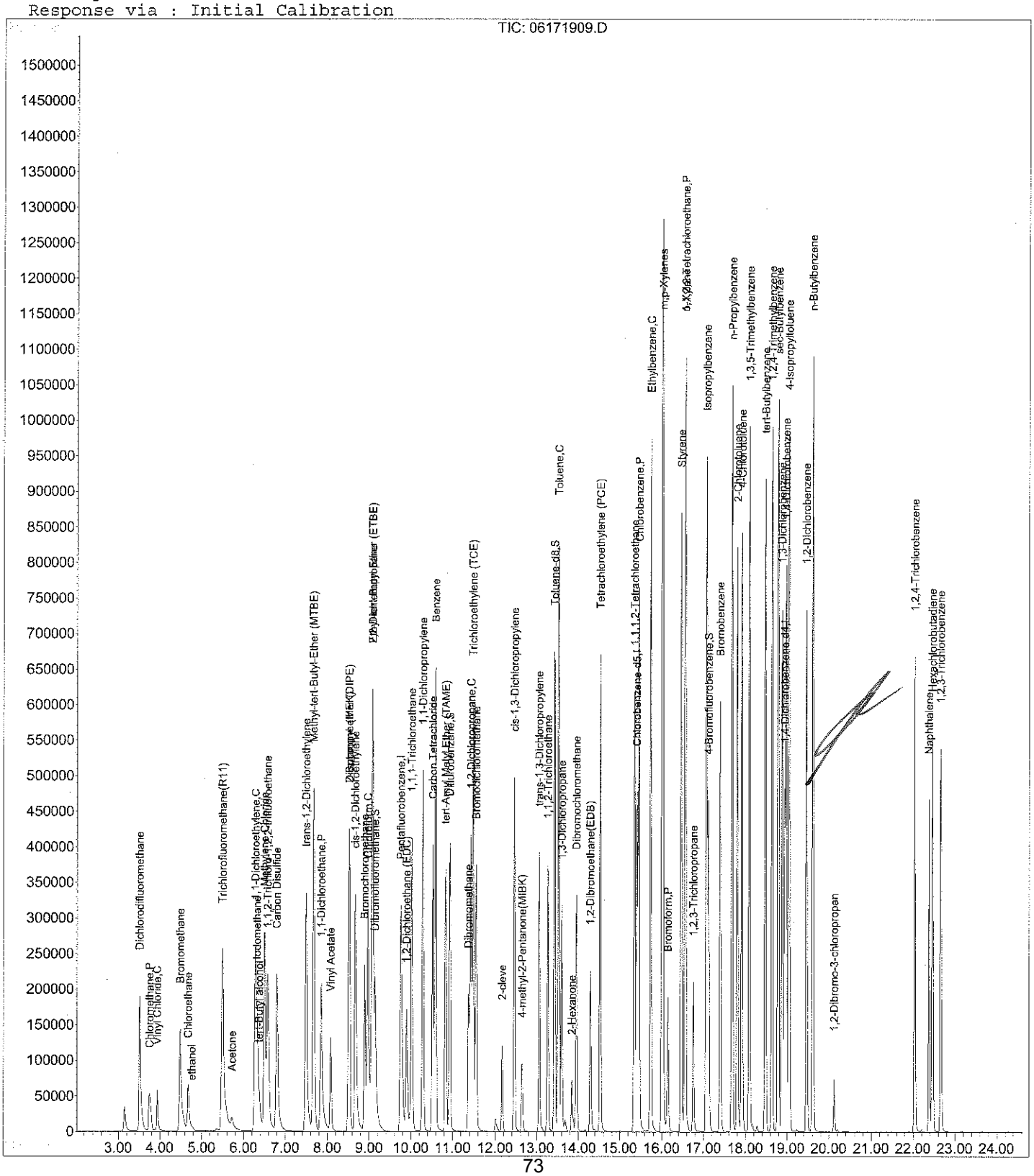
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.96	129	2218301	66.75	ug/L	99
50)	1,2-Dibromoethane(EDB)	14.29	107	1745270	76.41	ug/L	98
51)	Tetrachloroethylene (PCE)	14.53	164	1908310	77.91	ug/L	97
52)	1,1,1,2-Tetrachloroethane	15.36	131	2270977	69.47	ug/L	97
53)	Chlorobenzene	15.46	112	5649285	76.17	ug/L	97
54)	Ethylbenzene	15.74	91	9462264	77.09	ug/L	97
55)	m,p-Xylenes	16.01	106	6805075	151.39	ug/L	94
56)	Bromoform	16.15	173	1047830	72.26	ug/L	99
57)	Styrene	16.47	104	5974040	81.01	ug/L	99
58)	o-Xylene	16.56	106	3446062	78.20	ug/L	96
59)	1,1,2,2-Tetrachloroethane	16.56	83	1530051	80.56	ug/L	99
60)	1,2,3-Trichloropropane	16.76	75	1201216	80.62	ug/L	99
62)	Isopropylbenzene	17.07	105	8971685	75.08	ug/l	99
64)	Bromobenzene	17.40	156	2368038	78.97	ug/l	99
65)	n-Propylbenzene	17.68	91	11296681	78.86	ug/l	98
66)	2-Chlorotoluene	17.81	91	6335016	74.53	ug/l	99
67)	4-Chlorotoluene	17.92	91	6556650	72.61	ug/l	99
68)	1,3,5-Trimethylbenzene	18.10	105	7413333	72.34	ug/l	100
69)	tert-Butylbenzene	18.48	119	6588181	73.85	ug/l	100
70)	1,2,4-Trimethylbenzene	18.64	105	7441416	72.45	ug/l	99
71)	sec-Butylbenzene	18.79	105	10092956	74.34	ug/l	100
72)	1,3-Dichlorobenzene	18.88	146	4283737	74.57	ug/l	98
73)	1,4-Dichlorobenzene	18.98	146	4248197	75.59	ug/l	99
74)	4-Isopropyltoluene	19.04	119	8070849m	69.97	ug/l	
75)	1,2-Dichlorobenzene	19.47	146	3985840	76.13	ug/l	99
76)	n-Butylbenzene	19.62	91	8459947	77.04	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.13	75	248711	62.77	ug/l	97
78)	1,2,4-Trichlorobenzene	22.04	180	2639334	78.81	ug/l	100
79)	Naphthalene	22.39	128	4770235	74.26	ug/l	100
80)	Hexachlorobutadiene	22.47	225	1123258	73.76	ug/l	99
81)	1,2,3-Trichlorobenzene	22.67	180	2062261	75.05	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171909.D Vial: 15
Acq On : 17 Jun 2019 2:32 pm Operator: CZ/MS9
Sample : ICAL 8260 80PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 17 16:08 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171914.D Vial: 15
Acq On : 17 Jun 2019 5:22 pm Operator: CZ/MS9
Sample : ICAL 8260 100PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 8:52 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2253095	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3488955	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1672846	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	2099292	74.29	ug/L	0.01
Spiked Amount 50.000			Recovery =	148.58%		
34) Diflurobenzene	10.94	114	4020454	52.27	ug/L	0.00
Spiked Amount 50.000			Recovery =	104.54%		
45) Toluene-d8	13.43	98	6501276	83.70	ug/L	0.00
Spiked Amount 50.000			Recovery =	167.40%		
63) 4-Bromofluorobenzene	17.12	95	2528340	76.06	ug/L	0.00
Spiked Amount 50.000			Recovery =	152.12%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.52	85	3627986	101.47	ug/l	100
3) Chloromethane	3.79	50	1266249	95.01	ug/l	98
4) Vinyl Chloride	3.94	62	713594	38.58	ug/l	99
5) Bromomethane	4.49	94	2012434m	92.15	ug/l	
6) Chloroethane	4.69	64	1469635	151.25	ug/l	99
7) ethanol	4.80	45	269361	4082.84	ug/l #	100
8) Trichlorofluoromethane(R11	5.50	101	4970779m	88.33	ug/l	
9) Iodomethane	6.34	142	2060960m	85.98	ug/l	
10) tert-Butyl alcohol	6.40	59	567985m	511.69	ug/l	
11) 1,1,2-Trichloro-1,2,2-trif	6.59	101	2050127m	65.18	ug/l	
12) 1,1-Dichloroethylene	6.29	96	2057490	110.86	ug/l	99
13) Acetone	5.74	58	96305	162.88	ug/l	84
14) Methylene Chloride	6.52	84	2648669	117.04	ug/l	97
15) Carbon Disulfide	6.81	76	5990625	118.47	ug/l	100
16) trans-1,2-Dichloroethylene	7.50	96	2498578	101.21	ug/L	97
17) Methyl-tert-Butyl-Ether (M	7.68	73	9208256	183.27	ug/L	100
18) 1,1-Dichloroethane	7.86	63	3514717	101.19	ug/L	97
19) Vinyl Acetate	8.09	43	2888511	300.68	ug/L	97
20) 2-Butanone (MEK)	8.52	72	135279	121.45	ug/l	66
21) Diisopropyl ether (DIPE)	8.52	45	5836348	121.46	ug/l	95
22) cis-1,2-Dichloroethylene	8.68	96	2803661	103.87	ug/l	99
23) Bromochloromethane	8.91	128	1126620	99.29	ug/L	97
24) Chloroform	8.98	83	4233333	78.74	ug/L	99
25) 2,2-Dichloropropane	9.09	77	2803187	74.48	ug/L	99
27) Ethyl-tert-Butyl Ether (ET	9.09	59	4810144	90.04	ug/l	97
28) 1,2-Dichloroethane (EDC)	9.90	62	2672344m	80.85	ug/L	
29) 1,1,1-Trichloroethane	10.03	97	3594968	65.97	ug/L	99
30) 1,1-Dichloropropylene	10.29	75	3405280	91.78	ug/L	99
31) Carbon Tetrachloride	10.53	117	3335497	71.61	ug/l	100
32) Benzene	10.59	78	8381752	118.81	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	4728338	97.16	ug/l	100
35) Dibromomethane	11.38	93	1154667	77.06	ug/L	93
36) 1,2-Dichloropropane	11.43	63	2065246	120.71	ug/L	99
37) Trichloroethylene (TCE)	11.49	95	2616046	88.78	ug/L	98
38) Bromodichloromethane	11.56	83	3138106	77.74	ug/L	98
39) 2-cleve	12.17	63	750051	88.23	ug/L	98
40) cis-1,3-Dichloropropylene	12.46	75	3963907	104.29	ug/L	98
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	186258	109.91	ug/L	86
43) trans-1,3-Dichloropropylen	13.06	75	3146267	92.72	ug/L	99
44) 1,1,2-Trichloroethane	13.27	83	1557156	104.21	ug/L	99
46) Toluene	13.53	92	5327993	92.77	ug/L	99
47) 1,3-Dichloropropane	13.61	76	2878895	98.66	ug/L	100
48) 2-Hexanone	13.84	43	728977	121.98	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171914.D Vial: 15
Acq On : 17 Jun 2019 5:22 pm Operator: CZ/MS9
Sample : ICAL 8260 100PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 8:52 2019 Quant Results File: 032119.RES

Quant Method : C:\HPCHEM\1\METHODS\032119.M (Chemstation Integrator)
Title :
Last Update : Wed May 08 14:27:02 2019
Response via : Initial Calibration
DataAcq Meth : 032119

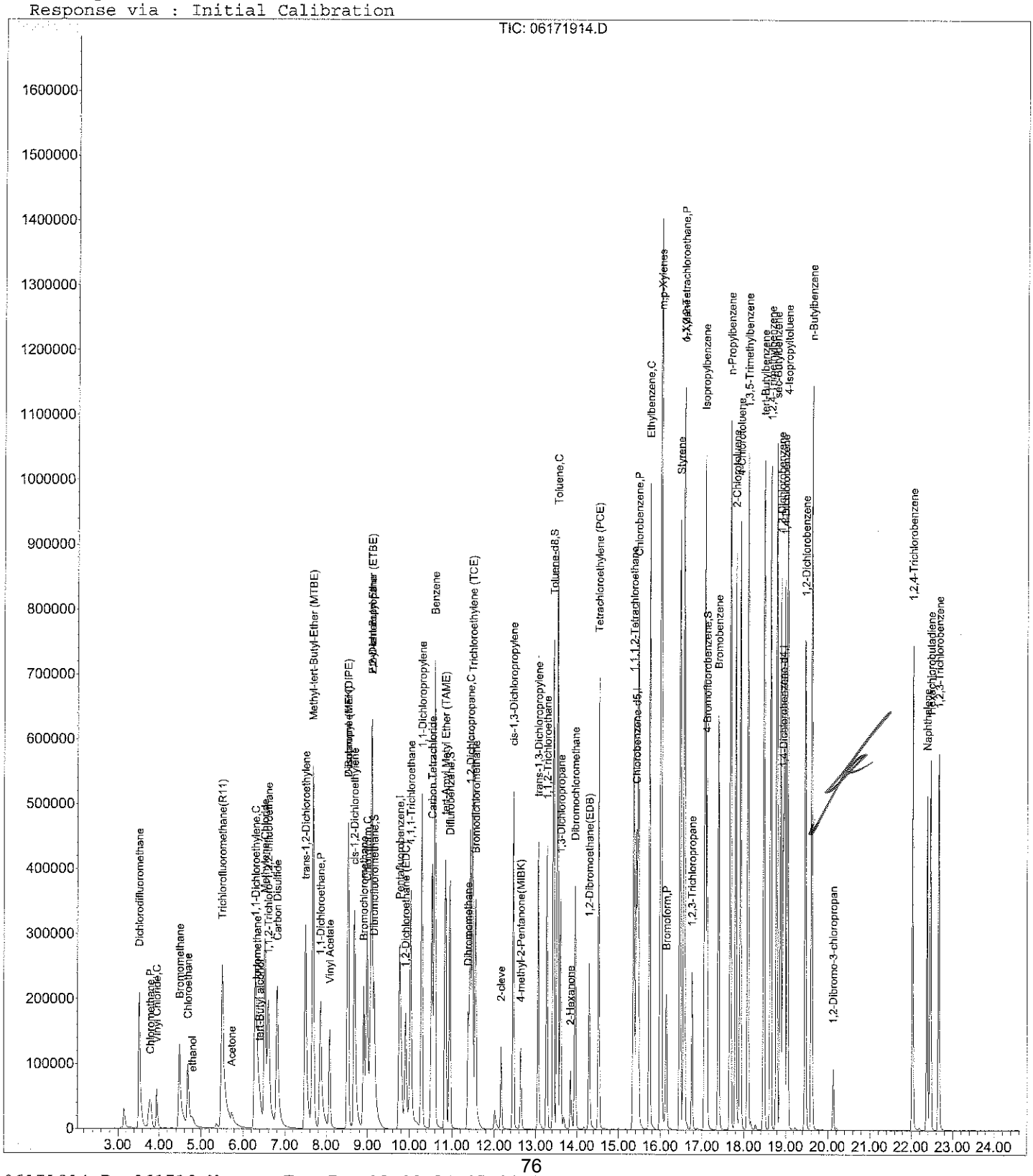
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.96	129	2491483	79.85	ug/L	99
50)	1,2-Dibromoethane(EDB)	14.29	107	2002256	93.37	ug/L	99
51)	Tetrachloroethylene (PCE)	14.53	164	1968382	85.60	ug/L	98
52)	1,1,1,2-Tetrachloroethane	15.36	131	2444696	79.65	ug/L	97
53)	Chlorobenzene	15.46	112	5981787	85.90	ug/L	98
54)	Ethylbenzene	15.74	91	9997798	86.75	ug/L	96
55)	m,p-Xylenes	16.01	106	7274302	172.36	ug/L	95
56)	Bromoform	16.15	173	1224039	89.90	ug/L	99
57)	Styrene	16.47	104	6389512	92.29	ug/L	100
58)	o-Xylene	16.56	106	3677484	88.89	ug/L	94
59)	1,1,2,2-Tetrachloroethane	16.56	83	1783574	100.02	ug/L	99
60)	1,2,3-Trichloropropane	16.76	75	1406612	100.55	ug/L	98
62)	Isopropylbenzene	17.07	105	9596479	82.41	ug/l	100
64)	Bromobenzene	17.40	156	2555539	87.45	ug/l	98
65)	n-Propylbenzene	17.68	91	11925622	85.43	ug/l	97
66)	2-Chlorotoluene	17.81	91	6685951	80.71	ug/l	98
67)	4-Chlorotoluene	17.92	91	7165407	81.43	ug/l	100
68)	1,3,5-Trimethylbenzene	18.10	105	8026994	80.38	ug/l	99
69)	tert-Butylbenzene	18.48	119	6972006	80.19	ug/l	99
70)	1,2,4-Trimethylbenzene	18.64	105	8058716	80.51	ug/l	99
71)	sec-Butylbenzene	18.79	105	10724696	81.06	ug/l	100
72)	1,3-Dichlorobenzene	18.88	146	4693358	83.84	ug/l	98
73)	1,4-Dichlorobenzene	18.98	146	4640071	84.72	ug/l	99
74)	4-Isopropyltoluene	19.05	119	8584852	76.37	ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	4389743	86.04	ug/l	99
76)	n-Butylbenzene	19.62	91	8950793	83.64	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.13	75	310498	80.88	ug/l	94
78)	1,2,4-Trichlorobenzene	22.04	180	2898211	88.81	ug/l	99
79)	Naphthalene	22.39	128	5350644	85.48	ug/l	100
80)	Hexachlorobutadiene	22.47	225	1198173	80.74	ug/l	99
81)	1,2,3-Trichlorobenzene	22.67	180	2272703	84.88	ug/l	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171914.D Vial: 15
Acq On : 17 Jun 2019 5:22 pm Operator: CZ/MS9
Sample : ICAL 8260 100PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 8:52 2019 Quant Results File: 032119.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061819\06181905.D Vial: 16
Acq On : 18 Jun 2019 12:47 pm Operator: CZ/MS9
Sample : ICV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9032103,9051407 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:14 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2515933	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.41	117	3824225	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1762377	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	9.15	113	1452578	45.67	ug/L		0.00
Spiked Amount 50.000			Recovery =	91.34%			
34) Diflurobenzene	10.94	114	4495529	49.51	ug/L		0.00
Spiked Amount 50.000			Recovery =	99.02%			
45) Toluene-d8	13.42	98	4669841	47.64	ug/L		0.00
Spiked Amount 50.000			Recovery =	95.28%			
63) 4-Bromofluorobenzene	17.11	95	1758688	47.80	ug/L		0.00
Spiked Amount 50.000			Recovery =	95.60%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.53	85	675119	18.49	ug/l		100
3) Chloromethane	3.77	50	276662	19.89	ug/l		99
4) Vinyl Chloride	3.98	62	368558	21.73	ug/l		99
5) Bromomethane	4.51	94	294097	16.32	ug/l		89
6) Chloroethane	4.70	64	232306	22.48	ug/l		94
7) ethanol	4.75	45	45027	699.46	ug/l	#	100
8) Trichlorofluoromethane(R11	5.52	101	994536	17.60	ug/l		97
9) Iodomethane	6.34	142	410647	20.63	ug/l		98
10) tert-Butyl alcohol	6.38	59	113365	93.88	ug/l		100
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	725102m	17.16	ug/l		
12) 1,1-Dichloroethylene	6.30	96	540722	21.52	ug/l		97
13) Acetone	5.73	58	22844m	20.24	ug/l		
14) Methylene Chloride	6.52	84	753715	20.16	ug/l		95
15) Carbon Disulfide	6.82	76	1732795	23.75	ug/l		96
16) trans-1,2-Dichloroethylene	7.50	96	618363	20.16	ug/L		97
17) Methyl-tert-Butyl-Ether (M	7.67	73	2016701	36.13	ug/L		98
18) 1,1-Dichloroethane	7.86	63	880220	19.98	ug/L		99
20) 2-Butanone (MEK)	8.53	72	32540	21.44	ug/l		87
21) Diisopropyl ether (DIPE)	8.52	45	1471627	21.03	ug/l		100
22) cis-1,2-Dichloroethylene	8.68	96	699904	20.46	ug/l		98
23) Bromochloromethane	8.91	128	285075	20.35	ug/L		98
24) Chloroform	8.98	83	1091755	20.16	ug/L		99
25) 2,2-Dichloropropane	9.09	77	763544	19.36	ug/L		98
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1276911	21.39	ug/l		98
28) 1,2-Dichloroethane (EDC)	9.89	62	637226m	21.10	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	948616	20.24	ug/L		99
30) 1,1-Dichloropropylene	10.29	75	888984	20.47	ug/L		99
31) Carbon Tetrachloride	10.53	117	851656	20.87	ug/l		98
32) Benzene	10.59	78	2286608	20.52	ug/l		100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1119599	20.09	ug/l		98
35) Dibromomethane	11.38	93	285254	19.40	ug/L		98
36) 1,2-Dichloropropane	11.43	63	532939	20.72	ug/L		98
37) Trichloroethylene (TCE)	11.48	95	696457	20.65	ug/L		99
38) Bromodichloromethane	11.55	83	843806	21.45	ug/L		100
40) cis-1,3-Dichloropropylene	12.45	75	933720	20.27	ug/L		99
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	36799	19.21	ug/L		92
43) trans-1,3-Dichloropropylen	13.06	75	733455	21.30	ug/L		97
44) 1,1,2-Trichloroethane	13.27	83	381192	21.20	ug/L		99
46) Toluene	13.52	92	1446374	20.81	ug/L		100
47) 1,3-Dichloropropane	13.60	76	690720	19.94	ug/L		98
48) 2-Hexanone	13.84	43	159103	21.15	ug/L		98
49) Dibromochloromethane	13.95	129	578155	21.31	ug/L		97
50) 1,2-Dibromoethane(EDB)	14.29	107	470153	21.59	ug/L		100

m = MH

(#) = qualifier out of range (m) = manual integration

6/18/19

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061819\06181905.D Vial: 16
Acq On : 18 Jun 2019 12:47 pm Operator: CZ/MS9
Sample : ICV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9032103,9051407 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:14 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 061719

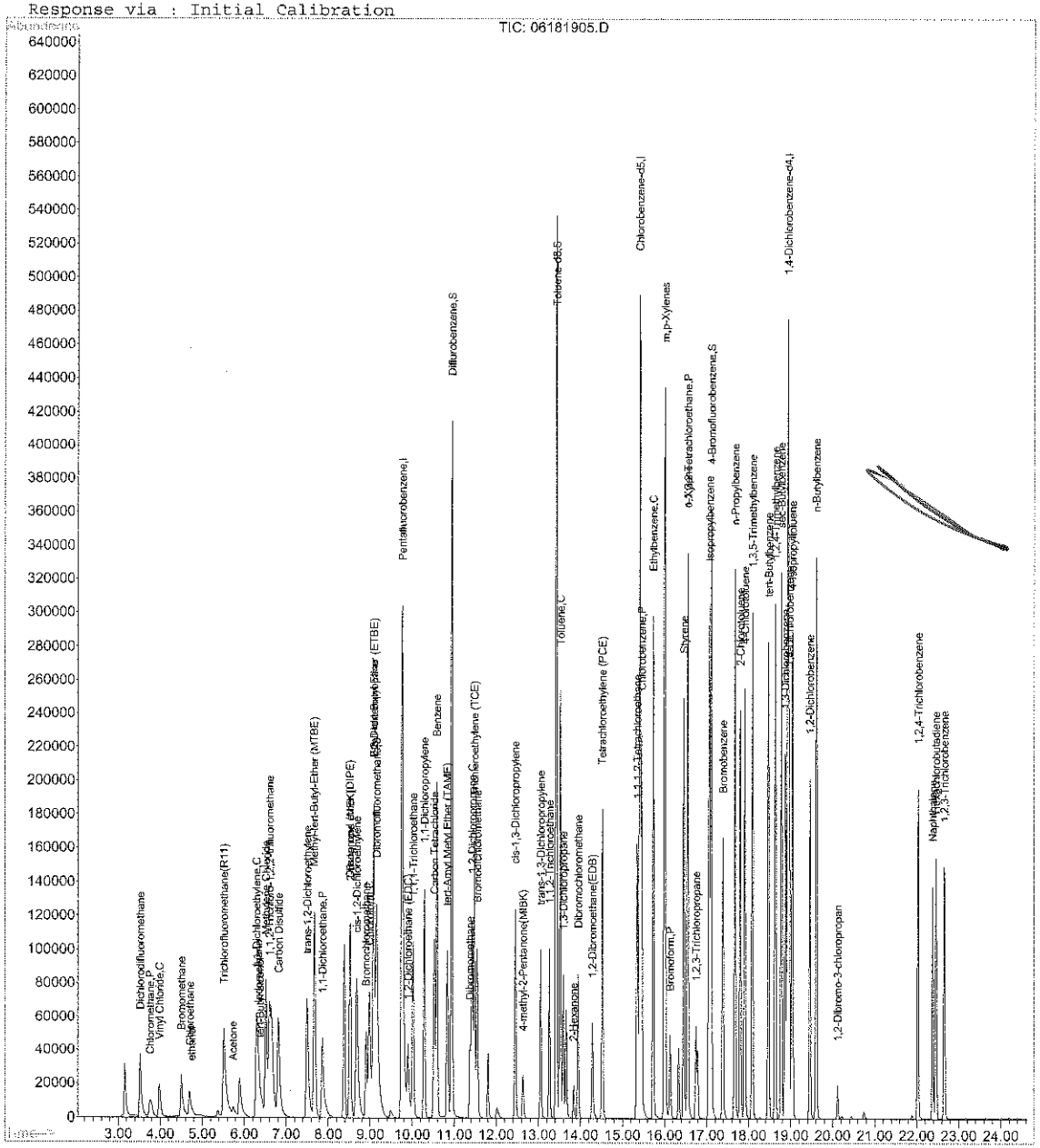
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
51)	Tetrachloroethylene (PCE)	14.52	164	518078	21.42	ug/L	98
52)	1,1,1,2-Tetrachloroethane	15.35	131	598405	20.82	ug/L	99
53)	Chlorobenzene	15.46	112	1591411	21.18	ug/L	96
54)	Ethylbenzene	15.74	91	2851452	21.92	ug/L	99
55)	m,p-Xylenes	16.01	106	2118616m	43.69	ug/L	
56)	Bromoform	16.14	173	266775	20.42	ug/L	95
57)	Styrene	16.46	104	1689475	21.76	ug/L	99
58)	o-Xylene	16.56	106	1021343	21.66	ug/L	100
59)	1,1,2,2-Tetrachloroethane	16.55	83	476010	21.51	ug/L	98
60)	1,2,3-Trichloropropane	16.75	75	315449	20.03	ug/L	96
62)	Isopropylbenzene	17.06	105	2779189	22.92	ug/l	99
64)	Bromobenzene	17.39	156	629504	21.14	ug/l	99
65)	n-Propylbenzene	17.68	91	3450083	21.83	ug/l	100
66)	2-Chlorotoluene	17.80	91	1871483	21.21	ug/l	99
67)	4-Chlorotoluene	17.91	91	1965285	21.39	ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	2209952	21.80	ug/l	99
69)	tert-Butylbenzene	18.47	119	1894800	21.47	ug/l	100
70)	1,2,4-Trimethylbenzene	18.64	105	2268744	22.11	ug/l	100
71)	sec-Butylbenzene	18.78	105	3117426	21.99	ug/l	100
72)	1,3-Dichlorobenzene	18.87	146	1223220	20.99	ug/l	100
73)	1,4-Dichlorobenzene	18.97	146	1180341	20.38	ug/l	99
74)	4-Isopropyltoluene	19.04	119	2355786	21.24	ug/l	99
75)	1,2-Dichlorobenzene	19.46	146	1119398	21.51	ug/l	100
76)	n-Butylbenzene	19.61	91	2574271	21.75	ug/l	100
77)	1,2-Dibromo-3-chloropropan	20.12	75	63752	20.52	ug/l	98
78)	1,2,4-Trichlorobenzene	22.03	180	732493	21.81	ug/l	100
79)	Naphthalene	22.38	128	1385708	22.36	ug/l	100
80)	Hexachlorobutadiene	22.46	225	299245	21.16	ug/l	99
81)	1,2,3-Trichlorobenzene	22.66	180	578518	20.75	ug/l	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061819\06181905.D Vial: 16
Acq On : 18 Jun 2019 12:47 pm Operator: CZ/MS9
Sample : ICV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9032103,9051407 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:14 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:41 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:32:52 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2603426	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3943877	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1868497	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	0.00	113	0	0.00	ug/L	
Spiked Amount 50.000			Recovery =	0.00%		
34) Diflurobenzene	10.95	114	4698612	50.01	ug/L	0.00
Spiked Amount 50.000			Recovery =	100.02%		
45) Toluene-d8	0.00	98	0	0.00	ug/L	
Spiked Amount 50.000			Recovery =	0.00%		
63) 4-Bromofluorobenzene	0.00	95	0	0.00	ug/L	
Spiked Amount 50.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.52	85	17597m	0.47	ug/l	
3) Chloromethane	3.75	50	5449m	0.38	ug/l	
4) Vinyl Chloride	3.98	62	9139m	0.52	ug/l	
5) Bromomethane	4.52	94	5868m	3.88	ug/l	
6) Chloroethane	4.69	64	4347m	0.41	ug/l	
8) Trichlorofluoromethane(R11	5.51	101	31597	0.54	ug/l #	89
10) tert-Butyl alcohol	6.39	59	1023m	0.82	ug/l	
11) 1,1,2-Trichloro-1,2,2-trif	5.54	101	12908m	0.30	ug/l	
12) 1,1-Dichloroethylene	6.30	96	9914m	0.38	ug/l	
14) Methylene Chloride	6.52	84	138170	Below Cal		98
15) Carbon Disulfide	6.81	76	33057	0.44	ug/l #	74
16) trans-1,2-Dichloroethylene	7.49	96	12387m	0.39	ug/L	
17) Methyl-tert-Butyl-Ether (M	7.69	73	63047	1.09	ug/L	92
18) 1,1-Dichloroethane	7.86	63	19596	0.43	ug/L #	79
19) Vinyl Acetate	8.10	43	13665m	0.43	ug/L	
21) Diisopropyl ether (DIPE)	8.54	45	31744	0.44	ug/l	98
22) cis-1,2-Dichloroethylene	8.68	96	15206m	0.43	ug/l	
23) Bromochloromethane	8.90	128	3769m	0.28	ug/L	
24) Chloroform	8.98	83	24630	0.44	ug/L	98
25) 2,2-Dichloropropane	9.08	77	18261	0.45	ug/L	100
27) Ethyl-tert-Butyl Ether (ET	9.10	59	29356	0.48	ug/l	88
28) 1,2-Dichloroethane (EDC)	9.90	62	12641m	0.40	ug/L	
29) 1,1,1-Trichloroethane	10.02	97	19413m	0.40	ug/L	
30) 1,1-Dichloropropylene	10.29	75	21430m	0.48	ug/L	
31) Carbon Tetrachloride	10.53	117	16875m	0.40	ug/l	
32) Benzene	10.59	78	90416	0.68	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	30709m	0.53	ug/l	
35) Dibromomethane	11.37	93	6175m	0.41	ug/L	
36) 1,2-Dichloropropane	11.42	63	12422m	0.47	ug/L	
37) Trichloroethylene (TCE)	11.48	95	15370m	0.44	ug/L	
38) Bromodichloromethane	11.55	83	18273m	0.45	ug/L	
39) 2-cleve	12.18	63	982m	3.32	ug/L	
40) cis-1,3-Dichloropropylene	12.46	75	18782m	0.39	ug/L	
43) trans-1,3-Dichloropropylen	13.07	75	13719m	0.39	ug/L	
44) 1,1,2-Trichloroethane	13.27	83	8595m	0.46	ug/L	
46) Toluene	13.53	92	34875	0.49	ug/L	100

(#) = qualifier out of range (m) = manual integration

Avg. RRF = 20.7%

Avg. RRF = 19.7%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:41 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:32:52 2019
Response via : Initial Calibration
DataAcq Meth : 032119

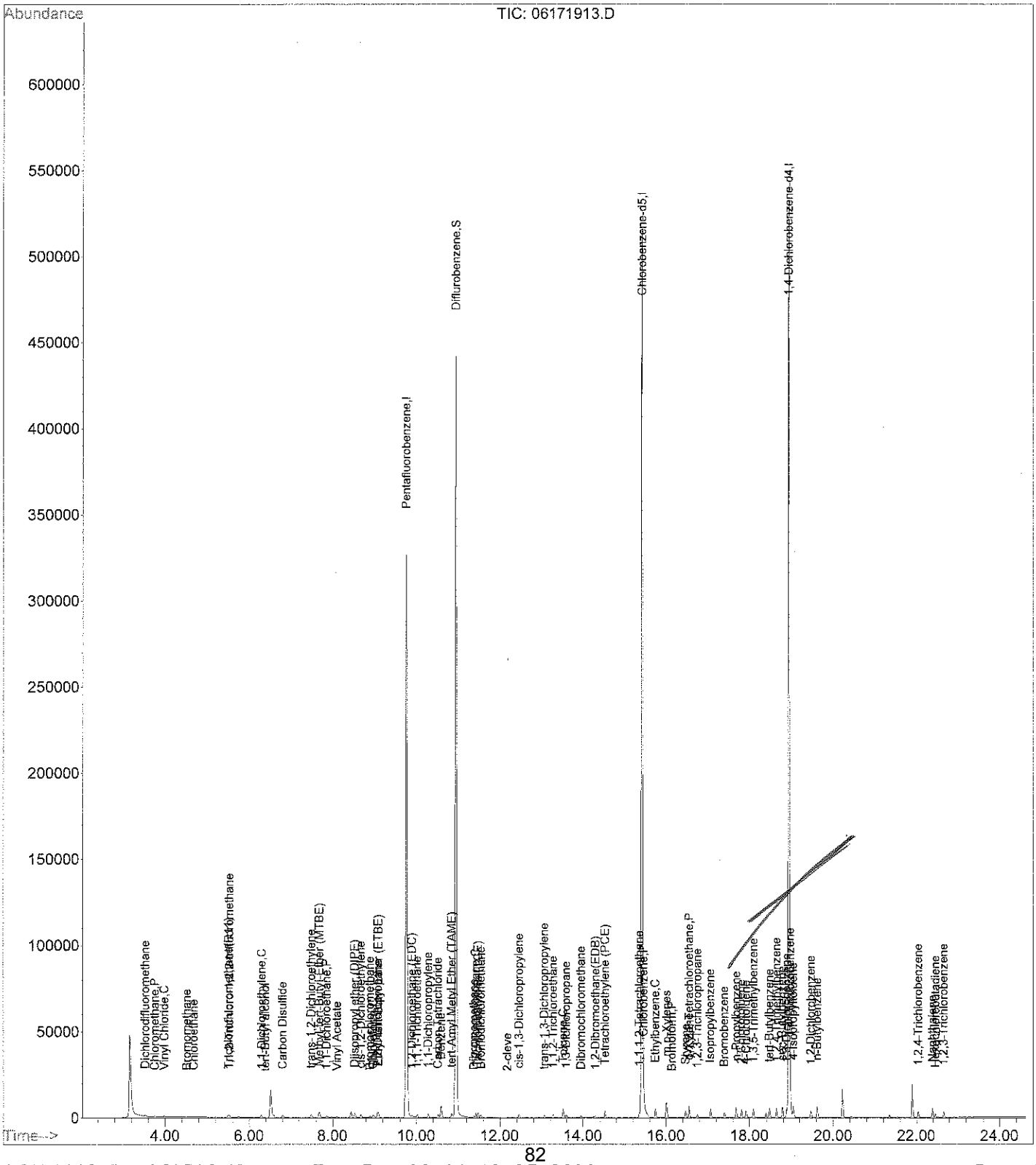
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
47)	1,3-Dichloropropane	13.60	76	17920m	0.50	ug/L		
49)	Dibromochloromethane	13.96	129	11845m	0.42	ug/L		
50)	1,2-Dibromoethane(EDB)	14.29	107	9044m	0.40	ug/L		
51)	Tetrachloroethylene (PCE)	14.53	164	10765m	0.43	ug/L		
52)	1,1,1,2-Tetrachloroethane	15.35	131	13544m	0.46	ug/L		
53)	Chlorobenzene	15.46	112	36837	0.48	ug/L		95
54)	Ethylbenzene	15.75	91	63670	0.47	ug/L		98
55)	m,p-Xylenes	16.02	106	47766	0.96	ug/L		99
56)	Bromoform	16.15	173	4129m	0.96	ug/L		
57)	Styrene	16.47	104	34351	0.43	ug/L	#	84
58)	o-Xylene	16.56	106	21926m	0.45	ug/L		
59)	1,1,2,2-Tetrachloroethane	16.56	83	11371m	0.50	ug/L		
60)	1,2,3-Trichloropropane	16.76	75	14740m	0.40	ug/L		
62)	Isopropylbenzene	17.07	105	56969	0.44	ug/l	#	50
64)	Bromobenzene	17.40	156	14616m	0.46	ug/l		
65)	n-Propylbenzene	17.68	91	80296	0.48	ug/l	#	55
66)	2-Chlorotoluene	17.81	91	46558	0.50	ug/l	#	41
67)	4-Chlorotoluene	17.92	91	47900	0.49	ug/l	#	41
68)	1,3,5-Trimethylbenzene	18.10	105	47953	0.45	ug/l	#	28
69)	tert-Butylbenzene	18.48	119	43742	0.47	ug/l	#	86
70)	1,2,4-Trimethylbenzene	18.64	105	51787	0.48	ug/l	#	30
71)	sec-Butylbenzene	18.79	105	72104	0.48	ug/l	#	59
72)	1,3-Dichlorobenzene	18.88	146	30892	0.50	ug/l	#	24
73)	1,4-Dichlorobenzene	18.98	146	31837	0.52	ug/l	#	25
74)	4-Isopropyltoluene	19.05	119	55594	0.47	ug/l	#	51
75)	1,2-Dichlorobenzene	19.47	146	26592	0.48	ug/l	#	24
76)	n-Butylbenzene	19.62	91	57965	0.46	ug/l	#	85
78)	1,2,4-Trichlorobenzene	22.04	180	16944m	0.48	ug/l		
79)	Naphthalene	22.39	128	67855	1.03	ug/l		100
80)	Hexachlorobutadiene	22.47	225	5945m	0.40	ug/l		
81)	1,2,3-Trichlorobenzene	22.66	180	17169m	0.58	ug/l		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:41 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:32:52 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:26 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:21:55 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2603426	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3943877	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1868497	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	0.00	113	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
34) Diflurobenzene	10.95	114	4698612	50.01	ug/L		0.00
Spiked Amount 50.000			Recovery =	100.02%			
45) Toluene-d8	0.00	98	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
63) 4-Bromofluorobenzene	0.00	95	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	17597m	0.47	ug/l		
3) Chloromethane	3.75	50	5449m	0.38	ug/l		
4) Vinyl Chloride	3.98	62	9139m	0.52	ug/l		
5) Bromomethane	4.52	94	5868m	3.88	ug/l		
6) Chloroethane	4.69	64	4347m	0.41	ug/l		
8) Trichlorofluoromethane(R11	5.51	101	31597	0.54	ug/l	#	89
10) tert-Butyl alcohol	6.39	59	1023m	0.82	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	5.54	101	13266m	0.30	ug/l		
12) 1,1-Dichloroethylene	6.30	96	9914m	0.38	ug/l		
14) Methylene Chloride	6.52	84	138170	Below Cal			98
15) Carbon Disulfide	6.81	76	33057	0.44	ug/l	#	74
16) trans-1,2-Dichloroethylene	7.49	96	12387m	0.39	ug/L		
17) Methyl-tert-Butyl-Ether (M	7.69	73	63047	1.09	ug/L		92
18) 1,1-Dichloroethane	7.86	63	19596	0.43	ug/L	#	79
19) Vinyl Acetate	8.10	43	13665m	0.43	ug/L		
21) Diisopropyl ether (DIPE)	8.54	45	31744	0.44	ug/l		98
22) cis-1,2-Dichloroethylene	8.68	96	15206m	0.43	ug/l		
23) Bromochloromethane	8.90	128	3769m	Below Cal			
24) Chloroform	8.98	83	24630	0.44	ug/L		98
25) 2,2-Dichloropropane	9.08	77	18261	0.45	ug/L		100
27) Ethyl-tert-Butyl Ether (ET	9.10	59	29356	0.48	ug/l		88
28) 1,2-Dichloroethane (EDC)	9.90	62	12641m	0.40	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	19413m	0.40	ug/L		
30) 1,1-Dichloropropylene	10.29	75	21430m	0.48	ug/L		
31) Carbon Tetrachloride	10.53	117	16875m	0.40	ug/l		
32) Benzene	10.59	78	90416	0.68	ug/l		100
33) tert-Amyl Metyl Ether (TAM	10.84	73	30709m	0.53	ug/l		
35) Dibromomethane	11.37	93	6175m	0.41	ug/L		
36) 1,2-Dichloropropane	11.42	63	12422m	0.47	ug/L		
37) Trichloroethylene (TCE)	11.48	95	15370m	0.44	ug/L		
38) Bromodichloromethane	11.55	83	18273m	0.45	ug/L		
39) 2-cleve	12.18	63	982m	3.32	ug/L		
40) cis-1,3-Dichloropropylene	12.46	75	18782m	0.39	ug/L		
43) trans-1,3-Dichloropropylen	13.07	75	13719m	0.39	ug/L		
44) 1,1,2-Trichloroethane	13.27	83	8595m	0.46	ug/L		
46) Toluene	13.53	92	34875	0.49	ug/L		100
47) 1,3-Dichloropropane	13.60	76	17920m	0.50	ug/L		
49) Dibromochloromethane	13.96	129	11845m	0.42	ug/L		
50) 1,2-Dibromoethane(EDB)	14.29	107	9044m	0.40	ug/L		
51) Tetrachloroethylene (PCE)	14.53	164	10765m	0.43	ug/L		
52) 1,1,1,2-Tetrachloroethane	15.35	131	13079m	0.44	ug/L		
53) Chlorobenzene	15.46	112	36837	0.48	ug/L		95
54) Ethylbenzene	15.75	91	63670	0.47	ug/L		98

(#) = qualifier out of range (m) = manual integration

Linear Regression
Avg. RRF = 19.7%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:26 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:21:55 2019
Response via : Initial Calibration
DataAcq Meth : 032119

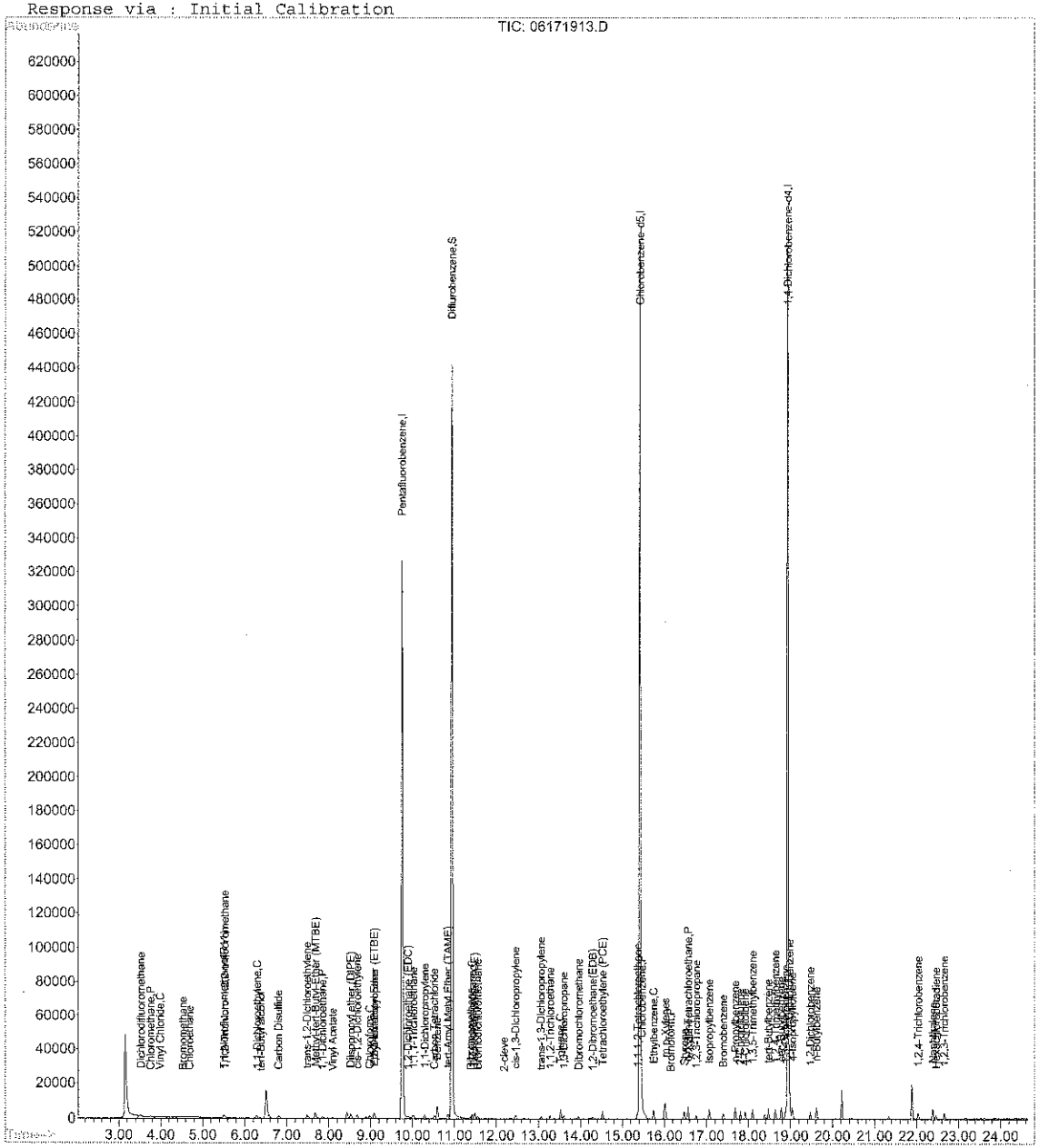
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	m,p-Xylenes	16.02	106	47766	0.96	ug/L		99
56)	Bromoform	16.15	173	4129m	0.96	ug/L		
57)	Styrene	16.47	104	34351	0.43	ug/L	#	84
58)	o-Xylene	16.56	106	21926m	0.45	ug/L		
59)	1,1,2,2-Tetrachloroethane	16.56	83	11371m	0.50	ug/L		
60)	1,2,3-Trichloropropane	16.76	75	14740m	0.40	ug/L		
62)	Isopropylbenzene	17.07	105	56969	0.44	ug/l	#	50
64)	Bromobenzene	17.40	156	14616m	0.46	ug/l		
65)	n-Propylbenzene	17.68	91	80296	0.48	ug/l	#	55
66)	2-Chlorotoluene	17.81	91	46558	0.50	ug/l	#	41
67)	4-Chlorotoluene	17.92	91	47900	0.49	ug/l	#	41
68)	1,3,5-Trimethylbenzene	18.10	105	47953	0.45	ug/l	#	28
69)	tert-Butylbenzene	18.48	119	43742	0.47	ug/l	#	86
70)	1,2,4-Trimethylbenzene	18.64	105	51787	0.48	ug/l	#	30
71)	sec-Butylbenzene	18.79	105	72104	0.48	ug/l	#	59
72)	1,3-Dichlorobenzene	18.88	146	30892	0.50	ug/l	#	24
73)	1,4-Dichlorobenzene	18.98	146	31837	0.52	ug/l	#	25
74)	4-Isopropyltoluene	19.05	119	55594	0.47	ug/l	#	51
75)	1,2-Dichlorobenzene	19.47	146	26592	0.48	ug/l	#	24
76)	n-Butylbenzene	19.62	91	57965	0.46	ug/l	#	85
78)	1,2,4-Trichlorobenzene	22.04	180	16944m	0.48	ug/l		
79)	Naphthalene	22.39	128	67855	1.03	ug/l		100
80)	Hexachlorobutadiene	22.47	225	5945m	0.40	ug/l		
81)	1,2,3-Trichlorobenzene	22.66	180	17169m	0.58	ug/l		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 14:26 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 14:21:55 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:53 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 032119

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Pentafluorobenzene	9.76	168	2603426	50.00	ug/L		0.00
42) Chlorobenzene-d5	15.42	117	3943877	50.00	ug/L		0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1868497	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane	0.00	113	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
34) Diflurobenzene	10.95	114	4698612	50.01	ug/L		0.00
Spiked Amount 50.000			Recovery =	100.02%			
45) Toluene-d8	0.00	98	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
63) 4-Bromofluorobenzene	0.00	95	0	0.00	ug/L		
Spiked Amount 50.000			Recovery =	0.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	3.52	85	17597m	0.47	ug/l		
3) Chloromethane	3.75	50	5449m	0.38	ug/l		
4) Vinyl Chloride	3.98	62	9139m	0.52	ug/l		
5) Bromomethane	4.52	94	5868m	3.88	ug/l		
6) Chloroethane	4.69	64	4347m	0.41	ug/l		
8) Trichlorofluoromethane(R11	5.51	101	31604m	0.54	ug/l		
11) 1,1,2-Trichloro-1,2,2-trif	5.54	101	13165m	0.30	ug/l		
12) 1,1-Dichloroethylene	6.30	96	9914m	0.38	ug/l		
14) Methylene Chloride	6.52	84	138170	Below Cal			98
15) Carbon Disulfide	6.81	76	33057	0.44	ug/l	#	74
16) trans-1,2-Dichloroethylene	7.49	96	12387m	0.39	ug/L		
17) Methyl-tert-Butyl-Ether (M	7.69	73	63047	1.09	ug/L		92
18) 1,1-Dichloroethane	7.86	63	19596	0.43	ug/L	#	79
21) Diisopropyl ether (DIPE)	8.54	45	31744	0.44	ug/l		98
22) cis-1,2-Dichloroethylene	8.68	96	15206m	0.43	ug/l		
23) Bromochloromethane	8.90	128	3769m	Below Cal			
24) Chloroform	8.98	83	24630	0.44	ug/L		98
25) 2,2-Dichloropropane	9.08	77	18261	0.45	ug/L		100
27) Ethyl-tert-Butyl Ether (ET	9.10	59	29356	0.48	ug/l		88
28) 1,2-Dichloroethane (EDC)	9.90	62	12641m	0.40	ug/L		
29) 1,1,1-Trichloroethane	10.02	97	19413m	0.40	ug/L		
30) 1,1-Dichloropropylene	10.29	75	21430m	0.48	ug/L		
31) Carbon Tetrachloride	10.53	117	16875m	0.40	ug/l		
32) Benzene	10.59	78	90416	Below Cal			100
33) tert-Amyl Metyl Ether (TAM	10.84	73	30709m	0.53	ug/l		
35) Dibromomethane	11.37	93	6175m	0.41	ug/L		
36) 1,2-Dichloropropane	11.42	63	12422m	0.47	ug/L		
37) Trichloroethylene (TCE)	11.48	95	15370m	0.44	ug/L		
38) Bromodichloromethane	11.55	83	18273m	0.45	ug/L		
39) 2-cleve	12.18	63	982m	3.32	ug/L		
40) cis-1,3-Dichloropropylene	12.46	75	18782m	0.39	ug/L		
43) trans-1,3-Dichloropropylen	13.07	75	13719m	0.39	ug/L		
44) 1,1,2-Trichloroethane	13.27	83	8595m	0.46	ug/L		
46) Toluene	13.53	92	34875	0.49	ug/L		100
47) 1,3-Dichloropropane	13.60	76	17920m	0.50	ug/L		
49) Dibromochloromethane	13.96	129	11845m	0.42	ug/L		
50) 1,2-Dibromoethane(EDB)	14.29	107	9044m	0.40	ug/L		
51) Tetrachloroethylene (PCE)	14.53	164	10765m	0.43	ug/L		
52) 1,1,1,2-Tetrachloroethane	15.35	131	13383m	0.45	ug/L		
53) Chlorobenzene	15.46	112	36837	0.48	ug/L		95
54) Ethylbenzene	15.75	91	63670	0.47	ug/L		98
55) m,p-Xylenes	16.02	106	47766	0.96	ug/L		99
56) Bromoform	16.15	173	4129m	0.96	ug/L		

linear regression

linear Regression

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:53 2019 Quant Results File: 061719.RES

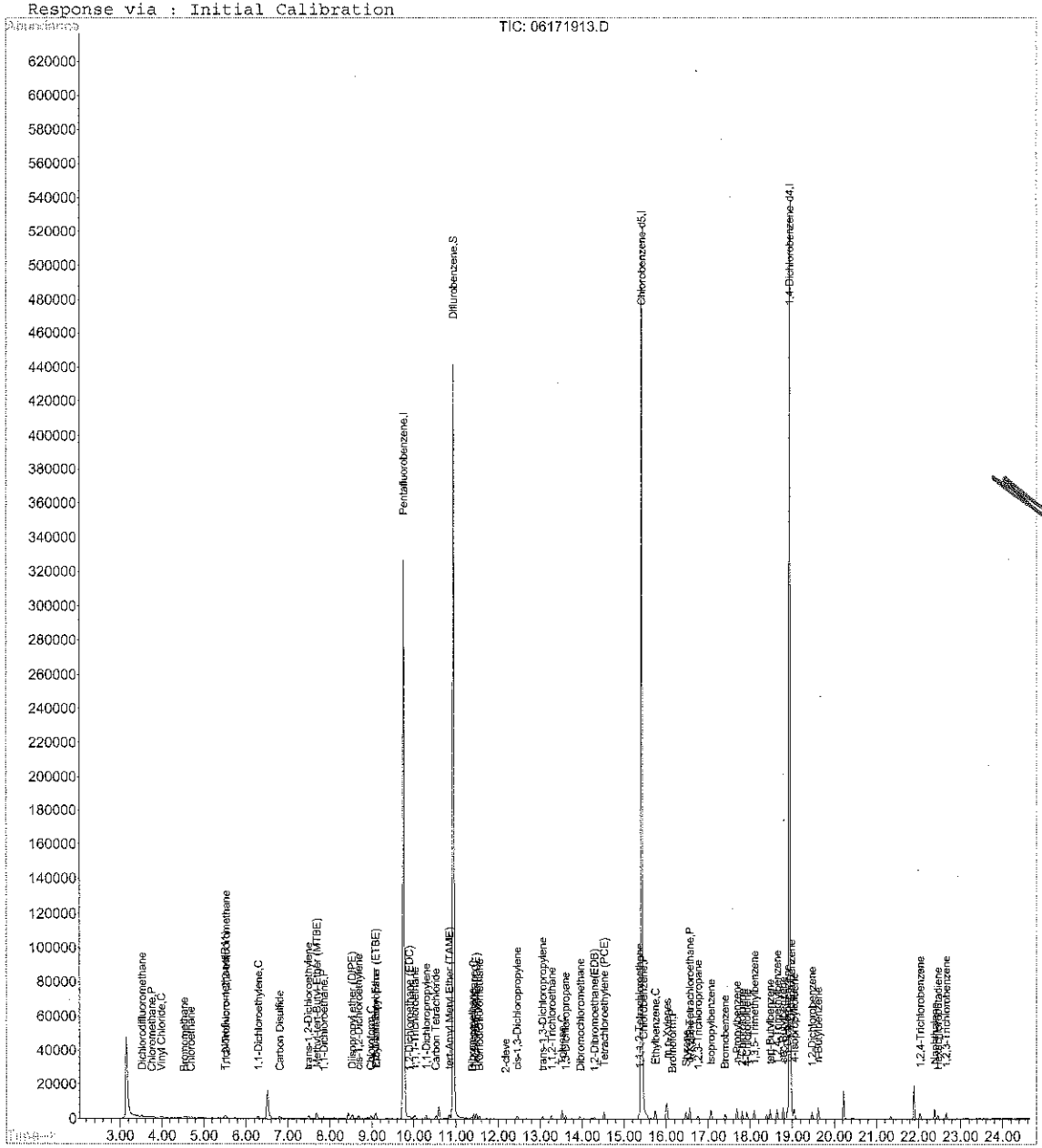
Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration
DataAcq Meth : 032119

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	Styrene	16.47	104	34351	0.43	ug/L	#	84
58)	o-Xylene	16.56	106	21926m	0.45	ug/L		
59)	1,1,2,2-Tetrachloroethane	16.56	83	11371m	0.50	ug/L		
60)	1,2,3-Trichloropropane	16.76	75	14740m	0.40	ug/L		
62)	Isopropylbenzene	17.07	105	56969	0.44	ug/l	#	50
64)	Bromobenzene	17.40	156	14616m	0.46	ug/l		
65)	n-Propylbenzene	17.68	91	80296	0.48	ug/l	#	55
66)	2-Chlorotoluene	17.81	91	46558	0.50	ug/l	#	41
67)	4-Chlorotoluene	17.92	91	47900	0.49	ug/l	#	41
68)	1,3,5-Trimethylbenzene	18.10	105	47953	0.45	ug/l	#	28
69)	tert-Butylbenzene	18.48	119	43742	0.47	ug/l	#	86
70)	1,2,4-Trimethylbenzene	18.64	105	51787	0.48	ug/l	#	30
71)	sec-Butylbenzene	18.79	105	72104	0.48	ug/l	#	59
72)	1,3-Dichlorobenzene	18.88	146	30892	0.50	ug/l	#	24
73)	1,4-Dichlorobenzene	18.98	146	31837	0.52	ug/l	#	25
74)	4-Isopropyltoluene	19.05	119	55594	0.47	ug/l	#	51
75)	1,2-Dichlorobenzene	19.47	146	26592	0.48	ug/l	#	24
76)	n-Butylbenzene	19.62	91	57965	0.46	ug/l	#	85
78)	1,2,4-Trichlorobenzene	22.04	180	16944m	0.48	ug/l		
79)	Naphthalene	22.39	128	67855	1.03	ug/l		100
80)	Hexachlorobutadiene	22.47	225	5945m	0.40	ug/l		
81)	1,2,3-Trichlorobenzene	22.66	180	17169m	0.58	ug/l		

Quantitation Report

Data File : C:\HPCHEM\1\DATA\061719\06171913.D Vial: 16
Acq On : 17 Jun 2019 4:50 pm Operator: CZ/MS9
Sample : ICAL 8260 0.5PPB/RR2 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 18 13:53 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 18 09:13:04 2019
Response via : Initial Calibration



Injection Log

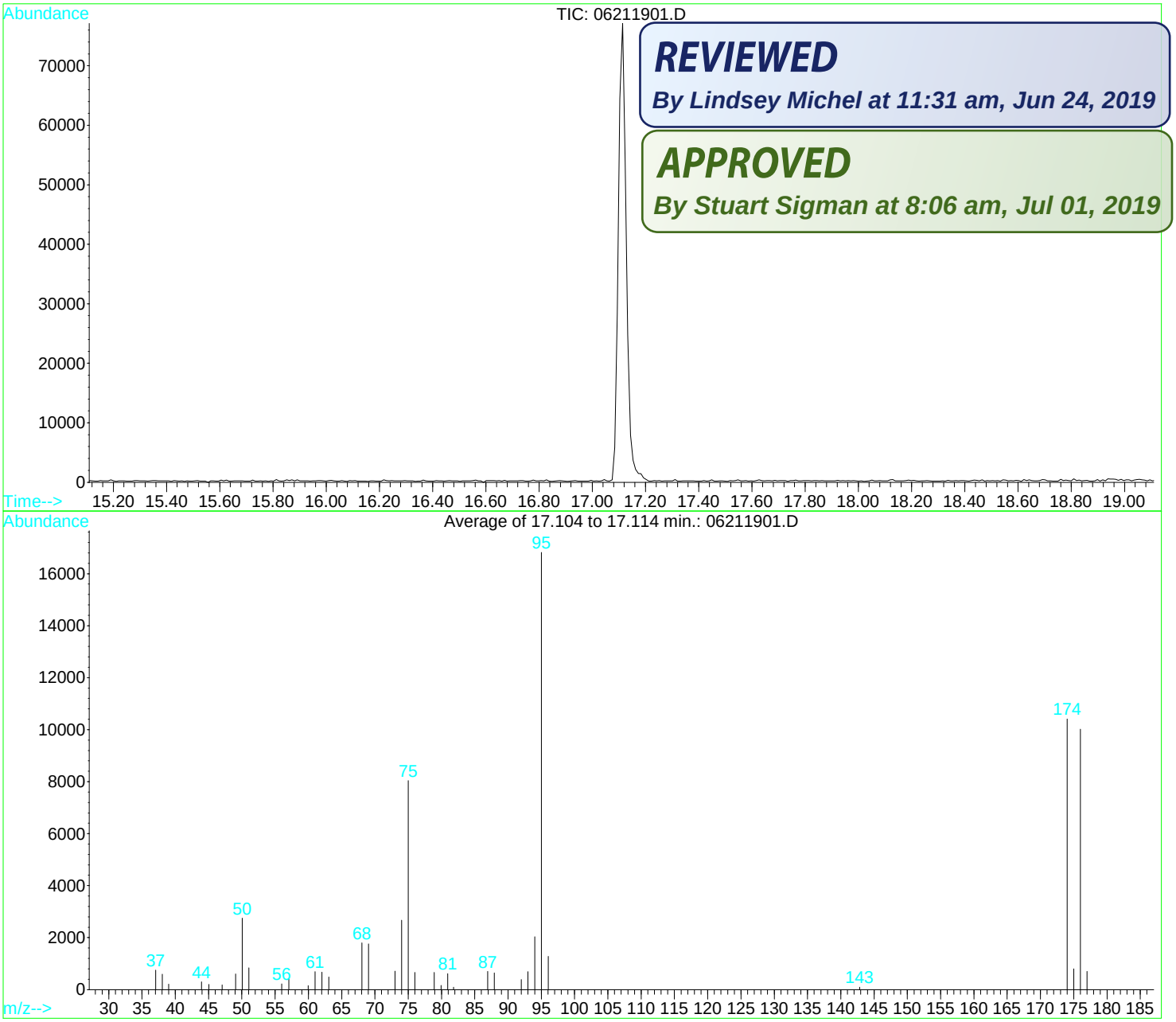
Directory: C:\HPCHEM\1\DATA\062119

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	14	06211901.d	1.	BFB tune 50ng/GCMS9	BFB 9040205	21 Jun 2019 07:07
2	15	06211902.d	1.	CCV 8260 20PPB	STDS.9040401,9060...	21 Jun 2019 07:39
3	16	06211903.d	1.	B9F2101-BS1	STDS.9040401,9060...	21 Jun 2019 08:11
4	12	06211904.d	1.	CCV GASOLINE 500PPB	STD. 9022703	21 Jun 2019 08:43
5	2	06211905.d	1.	B9F2101-BLK1	IS/SS 9053001 @SW...	21 Jun 2019 09:15
6	3	06211906.d	1.	9F13001-16	1	21 Jun 2019 09:49
7	4	06211907.d	1.	9F13001-17	1	21 Jun 2019 10:21
8	5	06211908.d	1.	9F13001-19	1	21 Jun 2019 10:53
9	6	06211909.d	1.	9F14004-01	1	21 Jun 2019 11:25
10	8	06211910.d	1.	9F14004-02	1	21 Jun 2019 11:58
11	9	06211911.d	1.	9F14004-03	1	21 Jun 2019 12:29
12	10	06211912.d	1.	9F14004-04	1	21 Jun 2019 13:01
13	11	06211913.d	1.	9F14004-05	1	21 Jun 2019 13:34
14	12	06211914.d	1.	B9F2101-MS1@9F14005-11	STDS.9040401,9060...	21 Jun 2019 14:05
15	13	06211915.d	1.	B9F2101-MSD1@9F14005-11	STDS.9040401,9060...	21 Jun 2019 14:37
16	14	06211916.d	1.	BFB tune 50ng/GCMS9	BFB 9040205	21 Jun 2019 15:09
17	15	06211917.d	1.	CCV 8260 20PPB	STDS.9040401,9060...	21 Jun 2019 15:41
18	16	06211918.d	1.	CCV GASOLINE 500PPB	STD. 9022703	21 Jun 2019 16:13
19	2	06211919.d	1.	9F14004-07	1	21 Jun 2019 16:45
20	3	06211920.d	1.	9F14005-06	1	21 Jun 2019 17:16
21	4	06211921.d	1.	9F14005-07	4	21 Jun 2019 17:48
22	5	06211922.d	1.	9F14005-09	1	21 Jun 2019 18:20
23	6	06211923.d	1.	9F14005-11	1	21 Jun 2019 18:52
24	8	06211924.d	1.	9F13001-20	1	21 Jun 2019 19:24
25	9	06211925.d	1.	9F14004-06	1	21 Jun 2019 19:56
26	10	06211926.d	1.	9F14005-08	1	21 Jun 2019 20:28
27	11	06211927.d	1.	9F14005-10	1	21 Jun 2019 21:00
28	12	06211928.d	1.	9F14005-12	1	21 Jun 2019 21:32
29	13	06211929.d	1.	9F14005-04	1	21 Jun 2019 22:04
30	14	06211930.d	1.	9F14005-05	1	21 Jun 2019 22:36
31	15	06211931.d	1.	B9F2101-BSD1	STDS.9040401,9060...	21 Jun 2019 23:08
32	1	06211932.d	1.	WASH/AIR BLANK	1	21 Jun 2019 23:40

REVIEWED
By Lindsey Michel at 11:31 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:06 am, Jul 01, 2019

Data File : C:\HPCHEM\1\DATA\062119\06211901.D Vial: 14
Acq On : 21 Jun 2019 7:07 am Operator: LM/MS9
Sample : BFB tune 50ng/GCMS9 Inst : GC/MS Ins
Misc : BFB 9040205 Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :



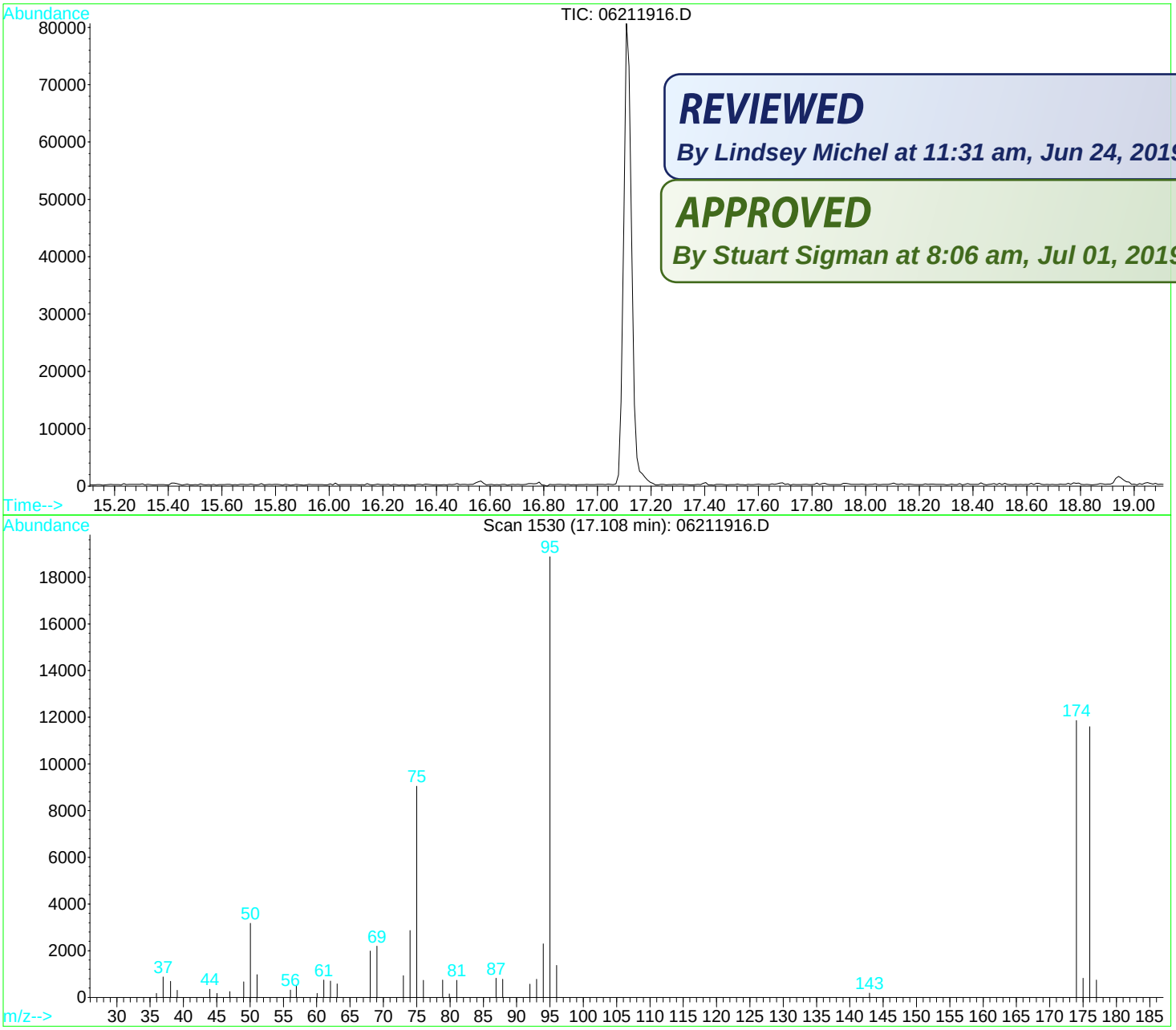
REVIEWED
By Lindsey Michel at 11:31 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:06 am, Jul 01, 2019

Spectrum Information: Average of 17.104 to 17.114 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	2751	PASS
75	95	30	60	47.8	8038	PASS
95	95	100	100	100.0	16815	PASS
96	95	5	9	7.6	1279	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	61.9	10407	PASS
175	174	5	9	7.6	794	PASS
176	174	95	101	96.3	10023	PASS
177	176	5	9	7.0	704	PASS

Data File : C:\HPCHEM\1\DATA\062119\06211916.D Vial: 14
Acq On : 21 Jun 2019 3:09 pm Operator: LM/MS9
Sample : BFB tune 50ng/GCMS9 Inst : GC/MS Ins
Misc : BFB 9040205 Multiplr: 1.00
MS Integration Params: events.e
Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :



REVIEWED
By Lindsey Michel at 11:31 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:06 am, Jul 01, 2019

Spectrum Information: Scan 1530

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	3174	PASS
75	95	30	60	48.0	9050	PASS
95	95	100	100	100.0	18872	PASS
96	95	5	9	7.3	1374	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	62.9	11862	PASS
175	174	5	9	6.9	824	PASS
176	174	95	101	97.7	11595	PASS
177	176	5	9	6.4	744	PASS

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211905.D Vial: 2
Acq On : 21 Jun 2019 9:15 am Operator: LM/MS9
Sample : B9F2101-BLK1 Inst : GC/MS Ins
Misc : IS/SS 9053001 @SW060619A1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:48 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2601639	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3897793	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1785633	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1624882	49.40	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.80%			
34) Diflurobenzene	10.94	114	4681454	49.86	ug/L	0.00
Spiked Amount 50.000			Recovery = 99.72%			
45) Toluene-d8	13.43	98	4782803	47.88	ug/L	0.00
Spiked Amount 50.000			Recovery = 95.76%			
63) 4-Bromofluorobenzene	17.11	95	1823894	48.93	ug/L	0.00
Spiked Amount 50.000			Recovery = 97.86%			
Target Compounds						Qvalue
14) Methylene Chloride	6.52	84	40950	Below Cal		98

ND

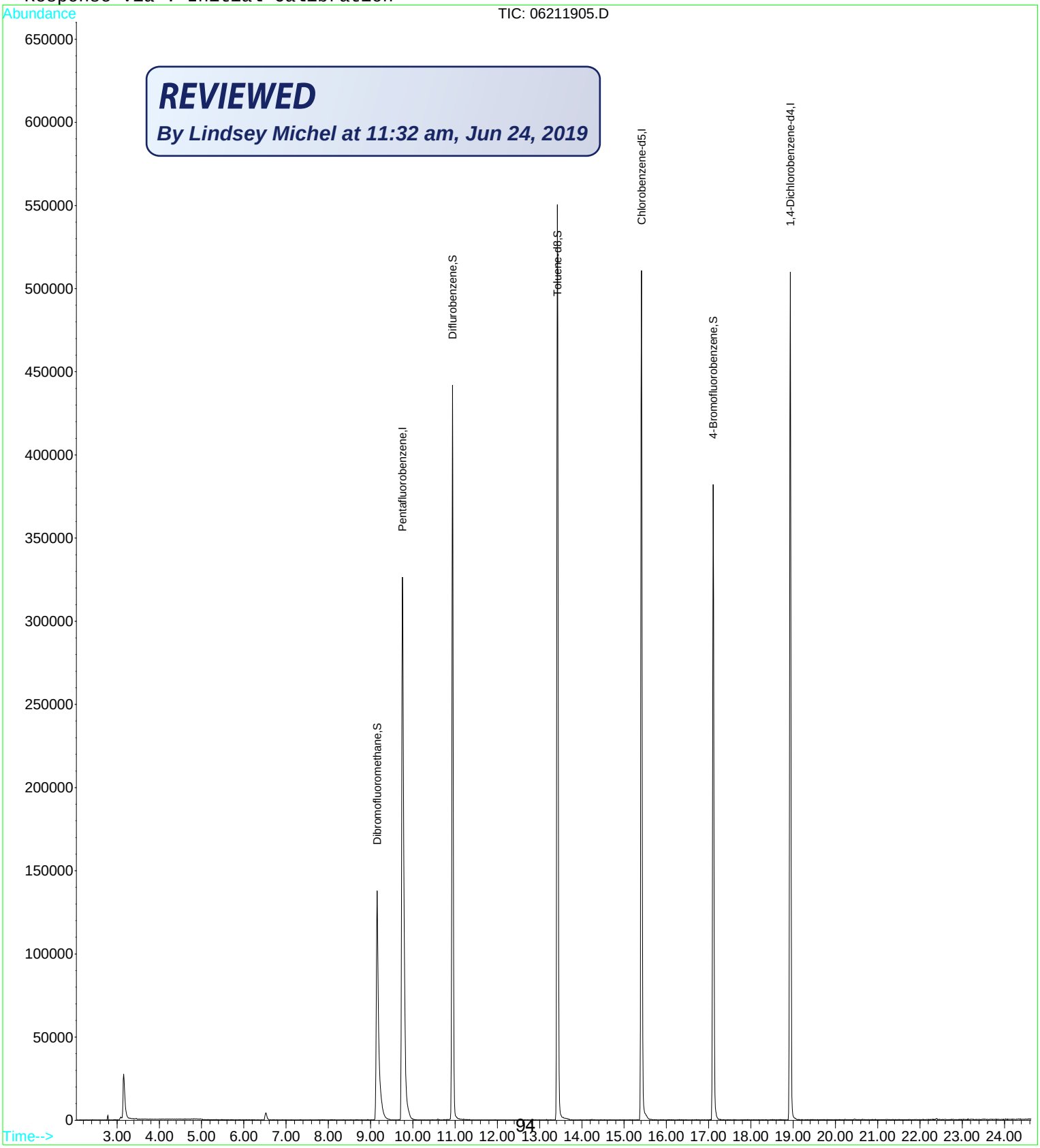
REVIEWED
By Lindsey Michel at 11:32 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:06 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211905.D Vial: 2
Acq On : 21 Jun 2019 9:15 am Operator: LM/MS9
Sample : B9F2101-BLK1 Inst : GC/MS Ins
Misc : IS/SS 9053001 @SW060619A1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:48 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



REVIEWED
By Lindsey Michel at 11:32 am, Jun 24, 2019

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062119\06211902.D Vial: 15
Acq On : 21 Jun 2019 7:39 am Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	90	0.00
2		Dichlorodifluoromethane	0.726	0.781	-7.6	98	0.00
3	P	Chloromethane	0.276	0.300	-8.7	92	0.00
4	C	Vinyl Chloride	0.337	0.395	-17.2#	103	0.01
5		Bromomethane	0.308	0.310	-0.6	85	0.00
6		Chloroethane	0.205	0.457	-122.9#	190#	0.00
7		ethanol	0.001	0.003	-200.0#	182#	0.01
8		Trichlorofluoromethane(R11)	1.123	1.092	2.8	90	0.00
9		Iodomethane	0.396	0.363	8.3	72	0.00
10		tert-Butyl alcohol	0.024	0.026	-8.3	91	0.00
11		1,1,2-Trichloro-1,2,2-trifl	0.840	0.676	19.5	71	0.02
12	C	1,1-Dichloroethylene	0.499	0.524	-5.0#	88	0.00
13		Acetone	0.022	0.020	9.1	78	0.01
14		Methylene Chloride	0.799	0.759	5.0	94	0.00
15		Carbon Disulfide	1.450	1.567	-8.1	92	0.00
16		trans-1,2-Dichloroethylene	0.610	0.641	-5.1	90	0.00
17		Methyl-tert-Butyl-Ether (MT	1.109	1.187	-7.0	96	0.00
18	P	1,1-Dichloroethane	0.876	0.961	-9.7	97	0.00
19		Vinyl Acetate	0.608	0.672	-10.5	99	0.00
20		2-Butanone (MEK)	0.030	0.029	3.3	85	0.00
21		Diisopropyl ether (DIPE)	1.391	1.599	-15.0	98	0.00
22		cis-1,2-Dichloroethylene	0.680	0.711	-4.6	89	0.00
23		Bromochloromethane	0.261	0.285	-9.2	91	0.00
24	C	Chloroform	1.076	1.186	-10.2#	97	0.00
25		2,2-Dichloropropane	0.784	0.805	-2.7	93	0.00
26	S	Dibromofluoromethane	0.632	0.624	1.3	93	0.00
27		Ethyl-tert-Butyl Ether (ETB	1.187	1.348	-13.6	98	0.00
28		1,2-Dichloroethane (EDC)	0.600	0.700	-16.7	98	0.00
29		1,1,1-Trichloroethane	0.931	1.081	-16.1	97	0.00
30		1,1-Dichloropropylene	0.863	0.976	-13.1	97	0.00
31		Carbon Tetrachloride	0.811	0.926	-14.2	95	0.00
32		Benzene	2.541	2.399	5.6	91	0.00
33		tert-Amyl Metyl Ether (TAME	1.108	1.151	-3.9	93	0.00
34	S	Diflurobenzene	1.805	1.839	-1.9	91	0.00
35		Dibromomethane	0.292	0.297	-1.7	92	0.00
36	C	1,2-Dichloropropane	0.511	0.571	-11.7#	95	0.00
37		Trichloroethylene (TCE)	0.670	0.749	-11.8	93	0.00
38		Bromodichloromethane	0.782	0.914	-16.9	99	0.00
39		2-cleve	0.138	0.130	5.8	95	0.00
40		cis-1,3-Dichloropropylene	0.916	1.021	-11.5	93	0.00
41		4-methyl-2-Pentanone(MIBK)	0.038	0.037	2.6	91	0.00
42	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
43		trans-1,3-Dichloropropylene	0.450	0.507	-12.7	97	0.00
44		1,1,2-Trichloroethane	0.235	0.252	-7.2	94	0.00
45	S	Toluene-d8	1.281	1.257	1.9	90	0.00
46	C	Toluene	0.909	0.962	-5.8#	90	0.00
47		1,3-Dichloropropane	0.453	0.497	-9.7	97	0.00
48		2-Hexanone	0.098	0.106	-8.2	105	0.00
49		Dibromochloromethane	0.355	0.383	-7.9	92	0.00
50		1,2-Dibromoethane(EDB)	0.285	0.303	-6.3	92	0.00
51		Tetrachloroethylene (PCE)	0.316	0.323	-2.2	86	0.00
52		1,1,1,2-Tetrachloroethane	0.376	0.393	-4.5	91	0.00
53	P	Chlorobenzene	0.982	1.019	-3.8	90	0.00
54	C	Ethylbenzene	1.701	1.867	-9.8#	93	0.00
55		m,p-Xylenes	0.634	0.690	-8.8	89	0.00
56	P	Bromoform	0.157	0.163	-3.8	89	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062119\06211902.D Vial: 15
Acq On : 21 Jun 2019 7:39 am Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
57		Styrene	1.015	1.101	-8.5	90	0.00
58		o-Xylene	0.616	0.677	-9.9	90	0.00
59	P	1,1,2,2-Tetrachloroethane	0.289	0.326	-12.8	95	0.00
60		1,2,3-Trichloropropane	0.229	0.223	2.6	97	0.00
61	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00
62		Isopropylbenzene	3.441	3.681	-7.0	92	0.00
63	S	4-Bromofluorobenzene	1.044	1.008	3.4	93	0.00
64		Bromobenzene	0.845	0.850	-0.6	90	0.00
65		n-Propylbenzene	4.483	4.795	-7.0	93	0.00
66		2-Chlorotoluene	2.503	2.649	-5.8	93	0.00
67		4-Chlorotoluene	2.607	2.733	-4.8	92	0.00
68		1,3,5-Trimethylbenzene	2.876	3.098	-7.7	93	0.00
69		tert-Butylbenzene	2.503	2.618	-4.6	91	0.00
70		1,2,4-Trimethylbenzene	2.911	3.074	-5.6	92	0.00
71		sec-Butylbenzene	4.022	4.254	-5.8	92	0.00
72		1,3-Dichlorobenzene	1.653	1.669	-1.0	92	0.00
73		1,4-Dichlorobenzene	1.643	1.639	0.2	91	0.00
74		4-Isopropyltoluene	3.147	3.274	-4.0	91	0.00
75		1,2-Dichlorobenzene	1.477	1.501	-1.6	92	0.00
76		n-Butylbenzene	3.358	3.636	-8.3	94	0.00
77		1,2-Dibromo-3-chloropropan	0.084	0.091	-8.3	102	0.00
78		1,2,4-Trichlorobenzene	0.953	0.939	1.5	89	0.00
79		Naphthalene	1.758	1.679	4.5	89	0.00
80		Hexachlorobutadiene	0.401	0.400	0.2	87	0.00
81		1,2,3-Trichlorobenzene	0.791	0.755	4.6	89	0.00

REVIEWED
By Lindsey Michel at 11:33 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211902.D Vial: 15
Acq On : 21 Jun 2019 7:39 am Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:44 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2216994	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3406669	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1667917	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1383646	49.37	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.74%			
34) Diflurobenzene	10.94	114	4078113	50.97	ug/L	0.00
Spiked Amount 50.000			Recovery = 101.94%			
45) Toluene-d8	13.43	98	4280634	49.03	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.06%			
63) 4-Bromofluorobenzene	17.11	95	1681018	48.28	ug/L	0.00
Spiked Amount 50.000			Recovery = 96.56%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	692385	21.52	ug/l	98
3) Chloromethane	3.78	50	266310	21.72	ug/l	99
4) Vinyl Chloride	3.98	62	350671	23.47	ug/l	99
5) Bromomethane	4.51	94	274522	17.07	ug/l	94
6) Chloroethane	4.71	64	404874	44.47	ug/l	98
7) ethanol	4.77	45	62525	1102.27	ug/l #	100
8) Trichlorofluoromethane(R11	5.53	101	968138	19.44	ug/l	95
9) Iodomethane	6.35	142	322003	18.36	ug/l	93
10) tert-Butyl alcohol	6.38	59	114639	107.74	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.61	101	599375m	16.09	ug/l	
12) 1,1-Dichloroethylene	6.31	96	464665	20.99	ug/l	91
13) Acetone	5.76	58	17402m	17.49	ug/l	
14) Methylene Chloride	6.53	84	672829	20.50	ug/l	98
15) Carbon Disulfide	6.83	76	1389218	21.61	ug/l	100
16) trans-1,2-Dichloroethylene	7.51	96	568183	21.02	ug/l	97
17) Methyl-tert-Butyl-Ether (M	7.68	73	2105195	42.80	ug/l	98
18) 1,1-Dichloroethane	7.87	63	852563	21.96	ug/l	99
19) Vinyl Acetate	8.09	43	595856	22.12	ug/l	97
20) 2-Butanone (MEK)	8.53	72	25414	19.00	ug/l	50
21) Diisopropyl ether (DIPE)	8.52	45	1418103	23.00	ug/l	96
22) cis-1,2-Dichloroethylene	8.69	96	630747	20.92	ug/l	95
23) Bromochloromethane	8.91	128	252897	21.88	ug/l	95
24) Chloroform	8.99	83	1051556	22.03	ug/l	100
25) 2,2-Dichloropropane	9.09	77	713850	20.54	ug/l	98
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1195017	22.71	ug/l	99
28) 1,2-Dichloroethane (EDC)	9.90	62	620793m	23.33	ug/l	
29) 1,1,1-Trichloroethane	10.03	97	958205	23.21	ug/l	99
30) 1,1-Dichloropropylene	10.29	75	865343	22.61	ug/l	96
31) Carbon Tetrachloride	10.53	117	821502	22.84	ug/l	100
32) Benzene	10.59	78	2127494	18.88	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1020316	20.78	ug/l	97
35) Dibromomethane	11.38	93	263244	20.32	ug/l	92
36) 1,2-Dichloropropane	11.43	63	506729	22.36	ug/l	99
37) Trichloroethylene (TCE)	11.49	95	664205	22.35	ug/l	97
38) Bromodichloromethane	11.55	83	810956	23.39	ug/l	99
39) 2-cleve	12.17	63	115183	17.78	ug/l	96
40) cis-1,3-Dichloropropylene	12.46	75	905653	22.31	ug/l	97
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	32540	19.28	ug/l	84
43) trans-1,3-Dichloropropylen	13.06	75	691536	22.55	ug/l	99
44) 1,1,2-Trichloroethane	13.27	83	344033	21.47	ug/l	99
46) Toluene	13.52	92	1311329	21.18	ug/l	100
47) 1,3-Dichloropropane	13.60	76	677482	21.96	ug/l	98
48) 2-Hexanone	13.84	43	144615	21.58	ug/l	97

m = MH

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211902.D Vial: 15
Acq On : 21 Jun 2019 7:39 am Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:44 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.95	129	521854	21.59	ug/L	97
50)	1,2-Dibromoethane(EDB)	14.29	107	413448	21.32	ug/L	95
51)	Tetrachloroethylene (PCE)	14.53	164	440149	20.43	ug/L	97
52)	1,1,1,2-Tetrachloroethane	15.35	131	535028	20.89	ug/L	99
53)	Chlorobenzene	15.46	112	1388290	20.74	ug/L	96
54)	Ethylbenzene	15.74	91	2543946	21.95	ug/L	98
55)	m,p-Xylenes	16.01	106	1880474	43.53	ug/L	98
56)	Bromoform	16.14	173	221582	19.08	ug/L	96
57)	Styrene	16.46	104	1500839	21.70	ug/L	96
58)	o-Xylene	16.56	106	922811	21.97	ug/L	99
59)	1,1,2,2-Tetrachloroethane	16.55	83	444422	22.54	ug/L	98
60)	1,2,3-Trichloropropane	16.75	75	304309	21.73	ug/L	98
62)	Isopropylbenzene	17.06	105	2455526	21.39	ug/l	100
64)	Bromobenzene	17.39	156	566916	20.12	ug/l	96
65)	n-Propylbenzene	17.68	91	3198878	21.39	ug/l	99
66)	2-Chlorotoluene	17.80	91	1767146	21.16	ug/l	98
67)	4-Chlorotoluene	17.91	91	1823680	20.97	ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	2066787	21.54	ug/l	98
69)	tert-Butylbenzene	18.47	119	1746754	20.92	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	2050568	21.12	ug/l	100
71)	sec-Butylbenzene	18.78	105	2838020	21.15	ug/l	100
72)	1,3-Dichlorobenzene	18.88	146	1113433	20.19	ug/l	99
73)	1,4-Dichlorobenzene	18.97	146	1093384	19.95	ug/l	99
74)	4-Isopropyltoluene	19.04	119	2184258	20.80	ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	1001149	20.33	ug/l	99
76)	n-Butylbenzene	19.61	91	2425631	21.65	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.12	75	60856	20.69	ug/l	90
78)	1,2,4-Trichlorobenzene	22.04	180	626625	19.72	ug/l	99
79)	Naphthalene	22.38	128	1120079	19.10	ug/l	100
80)	Hexachlorobutadiene	22.46	225	266659	19.93	ug/l	99
81)	1,2,3-Trichlorobenzene	22.66	180	503936	19.09	ug/l	99

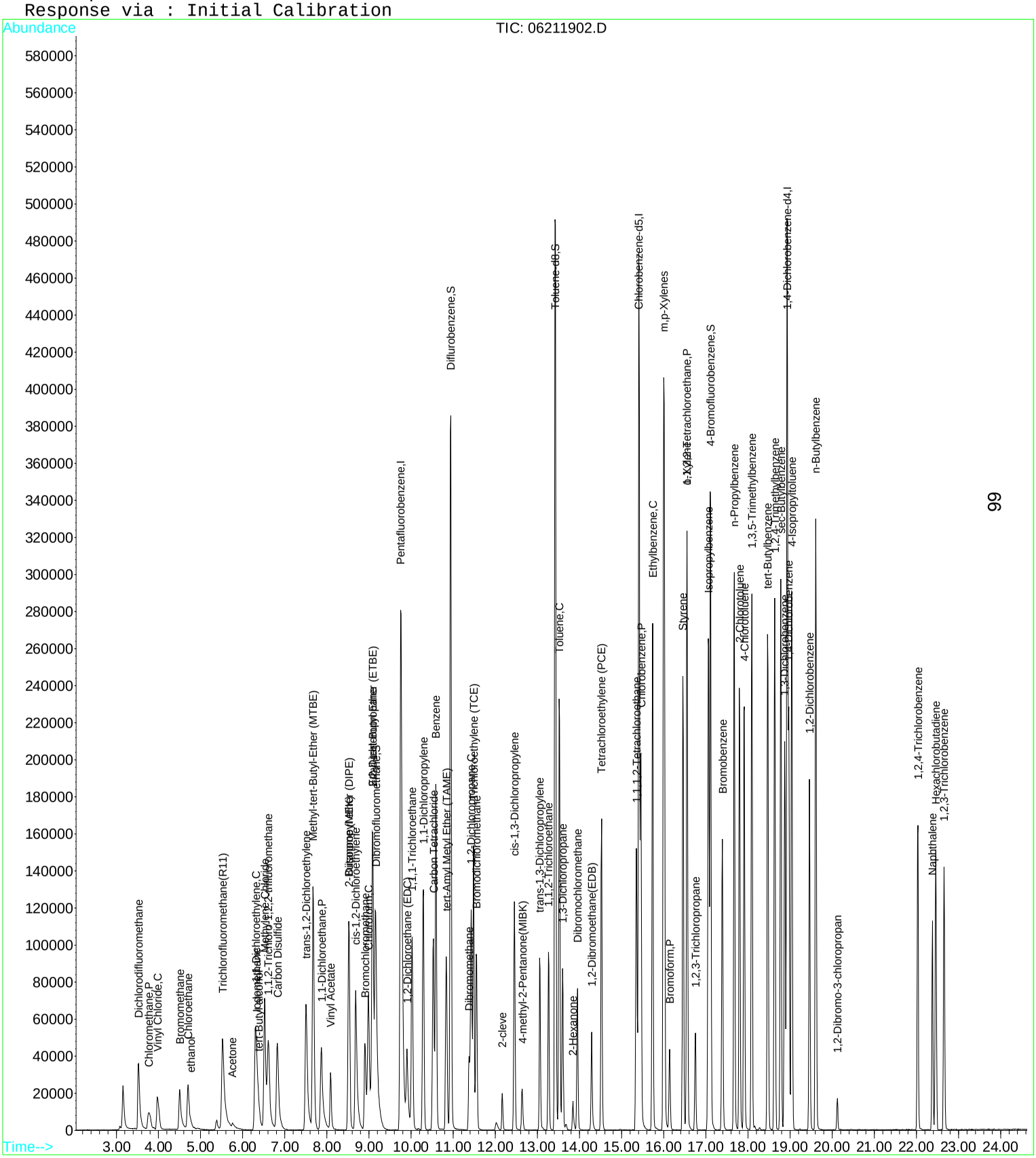
APPROVED
By Stuart Sigman at 8:07 am, Jul 01, 2019

REVIEWED
By Lindsey Michel at 11:34 am, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211902.D Vial: 15
Acq On : 21 Jun 2019 7:39 am Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:44 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062119\06211917.D Vial: 15
Acq On : 21 Jun 2019 3:41 pm Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	89	0.00
2		Dichlorodifluoromethane	0.726	0.740	-1.9	91	0.00
3	P	Chloromethane	0.276	0.291	-5.4	88	0.01
4	C	Vinyl Chloride	0.337	0.374	-11.0#	96	0.00
5		Bromomethane	0.308	0.411	-33.4#	112	0.00
6		Chloroethane	0.205	0.487	-137.6#	199#	0.00
7		ethanol	0.001	0.003	-200.0#	211#	0.01
8		Trichlorofluoromethane(R11)	1.123	1.046	6.9	85	0.00
9		Iodomethane	0.396	0.339	14.4	66	0.01
10		tert-Butyl alcohol	0.024	0.025	-4.2	86	0.00
11		1,1,2-Trichloro-1,2,2-trifl	0.840	0.633	24.6	65	0.03
12	C	1,1-Dichloroethylene	0.499	0.525	-5.2#	87	0.00
13		Acetone	0.022	0.018	18.2	71	0.03
14		Methylene Chloride	0.799	0.861	-7.8	105	0.00
15		Carbon Disulfide	1.450	1.525	-5.2	88	0.00
16		trans-1,2-Dichloroethylene	0.610	0.645	-5.7	89	0.00
17		Methyl-tert-Butyl-Ether (MT	1.109	1.241	-11.9	99	0.00
18	P	1,1-Dichloroethane	0.876	0.938	-7.1	93	0.00
19		Vinyl Acetate	0.608	0.704	-15.8	102	0.00
20		2-Butanone (MEK)	0.030	0.027	10.0	79	0.00
21		Diisopropyl ether (DIPE)	1.391	1.635	-17.5	99	0.00
22		cis-1,2-Dichloroethylene	0.680	0.728	-7.1	89	0.00
23		Bromochloromethane	0.261	0.275	-5.4	86	0.00
24	C	Chloroform	1.076	1.165	-8.3#	93	0.00
25		2,2-Dichloropropane	0.784	0.712	9.2	81	0.00
26	S	Dibromofluoromethane	0.632	0.622	1.6	91	0.00
27		Ethyl-tert-Butyl Ether (ETB	1.187	1.379	-16.2	99	0.00
28		1,2-Dichloroethane (EDC)	0.600	0.721	-20.2	99	0.00
29		1,1,1-Trichloroethane	0.931	1.033	-11.0	91	0.00
30		1,1-Dichloropropylene	0.863	0.966	-11.9	94	0.00
31		Carbon Tetrachloride	0.811	0.907	-11.8	92	0.00
32		Benzene	2.541	2.416	4.9	90	0.00
33		tert-Amyl Metyl Ether (TAME	1.108	1.187	-7.1	95	0.00
34	S	Diflurobenzene	1.805	1.837	-1.8	89	0.00
35		Dibromomethane	0.292	0.302	-3.4	92	0.00
36	C	1,2-Dichloropropane	0.511	0.570	-11.5#	93	0.00
37		Trichloroethylene (TCE)	0.670	0.730	-9.0	89	0.00
38		Bromodichloromethane	0.782	0.891	-13.9	95	0.00
39		2-cleve	0.138	0.132	4.3	95	0.00
40		cis-1,3-Dichloropropylene	0.916	1.016	-10.9	91	0.00
41		4-methyl-2-Pentanone(MIBK)	0.038	0.039	-2.6	96	0.00
42	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
43		trans-1,3-Dichloropropylene	0.450	0.490	-8.9	94	0.00
44		1,1,2-Trichloroethane	0.235	0.263	-11.9	97	0.00
45	S	Toluene-d8	1.281	1.244	2.9	89	0.00
46	C	Toluene	0.909	0.943	-3.7#	88	0.00
47		1,3-Dichloropropane	0.453	0.507	-11.9	99	0.00
48		2-Hexanone	0.098	0.111	-13.3	109	0.00
49		Dibromochloromethane	0.355	0.385	-8.5	92	0.00
50		1,2-Dibromoethane(EDB)	0.285	0.312	-9.5	94	0.00
51		Tetrachloroethylene (PCE)	0.316	0.312	1.3	83	0.00
52		1,1,1,2-Tetrachloroethane	0.376	0.384	-2.1	89	0.00
53	P	Chlorobenzene	0.982	0.994	-1.2	88	0.00
54	C	Ethylbenzene	1.701	1.809	-6.3#	90	0.00
55		m,p-Xylenes	0.634	0.666	-5.0	86	0.00
56	P	Bromoform	0.157	0.172	-9.6	94	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\062119\06211917.D Vial: 15
Acq On : 21 Jun 2019 3:41 pm Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
57		Styrene	1.015	1.083	-6.7	88	0.00
58		o-Xylene	0.616	0.646	-4.9	86	0.00
59	P	1,1,2,2-Tetrachloroethane	0.289	0.334	-15.6	97	0.00
60		1,2,3-Trichloropropane	0.229	0.237	-3.5	103	0.00
61	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
62		Isopropylbenzene	3.441	3.505	-1.9	88	0.00
63	S	4-Bromofluorobenzene	1.044	0.987	5.5	92	0.00
64		Bromobenzene	0.845	0.830	1.8	89	0.00
65		n-Propylbenzene	4.483	4.605	-2.7	90	0.00
66		2-Chlorotoluene	2.503	2.531	-1.1	90	0.00
67		4-Chlorotoluene	2.607	2.664	-2.2	90	0.00
68		1,3,5-Trimethylbenzene	2.876	2.949	-2.5	90	0.00
69		tert-Butylbenzene	2.503	2.516	-0.5	88	0.00
70		1,2,4-Trimethylbenzene	2.911	2.984	-2.5	90	0.00
71		sec-Butylbenzene	4.022	4.106	-2.1	89	0.00
72		1,3-Dichlorobenzene	1.653	1.614	2.4	89	0.00
73		1,4-Dichlorobenzene	1.643	1.600	2.6	90	0.00
74		4-Isopropyltoluene	3.147	3.135	0.4	88	0.00
75		1,2-Dichlorobenzene	1.477	1.483	-0.4	91	0.00
76		n-Butylbenzene	3.358	3.472	-3.4	90	0.00
77		1,2-Dibromo-3-chloropropan	0.084	0.093	-10.7	104	0.00
78		1,2,4-Trichlorobenzene	0.953	0.941	1.3	90	0.00
79		Naphthalene	1.758	1.761	-0.2	94	0.00
80		Hexachlorobutadiene	0.401	0.395	1.5	87	0.00
81		1,2,3-Trichlorobenzene	0.791	0.762	3.7	91	0.00

REVIEWED
By Lindsey Michel at 11:34 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211917.D Vial: 15
Acq On : 21 Jun 2019 3:41 pm Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:23 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2180455	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3403064	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1679684	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1356142	49.20	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.40%			
34) Diflurobenzene	10.95	114	4005172	50.89	ug/L	0.00
Spiked Amount 50.000			Recovery = 101.78%			
45) Toluene-d8	13.43	98	4232267	48.52	ug/L	0.00
Spiked Amount 50.000			Recovery = 97.04%			
63) 4-Bromofluorobenzene	17.11	95	1658389	47.29	ug/L	0.00
Spiked Amount 50.000			Recovery = 94.58%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	645711	20.40	ug/l	99
3) Chloromethane	3.78	50	254038	21.07	ug/l	99
4) Vinyl Chloride	3.98	62	325882	22.17	ug/l	98
5) Bromomethane	4.51	94	358527	21.48	ug/l	91
6) Chloroethane	4.71	64	424983	47.46	ug/l	97
7) ethanol	4.77	45	72593	1301.19	ug/l #	100
8) Trichlorofluoromethane(R11	5.53	101	912109	18.62	ug/l	96
9) Iodomethane	6.35	142	295302	17.12	ug/l	93
10) tert-Butyl alcohol	6.38	59	107892	103.10	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.62	101	551991m	15.07	ug/l	
12) 1,1-Dichloroethylene	6.31	96	457469	21.01	ug/l	92
13) Acetone	5.78	58	15889m	16.24	ug/l	
14) Methylene Chloride	6.53	84	750802	24.11	ug/l	96
15) Carbon Disulfide	6.83	76	1330357	21.04	ug/l	99
16) trans-1,2-Dichloroethylene	7.51	96	562318	21.15	ug/l	95
17) Methyl-tert-Butyl-Ether (M	7.68	73	2164676	44.75	ug/l	98
18) 1,1-Dichloroethane	7.87	63	818182	21.43	ug/l	97
19) Vinyl Acetate	8.09	43	614442	23.19	ug/l	98
20) 2-Butanone (MEK)	8.54	72	23636	17.97	ug/l #	19
21) Diisopropyl ether (DIPE)	8.53	45	1425826	23.51	ug/l	94
22) cis-1,2-Dichloroethylene	8.69	96	634516	21.40	ug/l	95
23) Bromochloromethane	8.91	128	239965	21.11	ug/l	94
24) Chloroform	8.99	83	1015746	21.64	ug/l	100
25) 2,2-Dichloropropane	9.09	77	620719	18.16	ug/l	96
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1202874	23.25	ug/l	98
28) 1,2-Dichloroethane (EDC)	9.91	62	628995m	24.03	ug/l	
29) 1,1,1-Trichloroethane	10.03	97	901287	22.19	ug/l	97
30) 1,1-Dichloropropylene	10.29	75	842334	22.38	ug/l	96
31) Carbon Tetrachloride	10.53	117	790766	22.36	ug/l	100
32) Benzene	10.59	78	2107366	19.02	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1035207	21.43	ug/l	100
35) Dibromomethane	11.38	93	263786	20.70	ug/l	94
36) 1,2-Dichloropropane	11.43	63	497566	22.32	ug/l	99
37) Trichloroethylene (TCE)	11.49	95	636692	21.78	ug/l	98
38) Bromodichloromethane	11.56	83	776832	22.78	ug/l	98
39) 2-cleve	12.17	63	115382	18.05	ug/l	94
40) cis-1,3-Dichloropropylene	12.46	75	886245	22.19	ug/l	98
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	34315	20.67	ug/l	82
43) trans-1,3-Dichloropropylen	13.06	75	666882	21.77	ug/l	97
44) 1,1,2-Trichloroethane	13.27	83	357614	22.35	ug/l	97
46) Toluene	13.53	92	1283664	20.76	ug/l	98
47) 1,3-Dichloropropane	13.60	76	690070	22.39	ug/l	99
48) 2-Hexanone	13.85	43	150702	22.51	ug/l	95

m = MH

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211917.D Vial: 15
Acq On : 21 Jun 2019 3:41 pm Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:23 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.95	129	523535	21.68	ug/L	99
50)	1,2-Dibromoethane(EDB)	14.29	107	425141	21.94	ug/L	100
51)	Tetrachloroethylene (PCE)	14.53	164	424822	19.74	ug/L	98
52)	1,1,1,2-Tetrachloroethane	15.36	131	523311	20.46	ug/L	98
53)	Chlorobenzene	15.46	112	1352971	20.24	ug/L	95
54)	Ethylbenzene	15.74	91	2462249	21.27	ug/L	98
55)	m,p-Xylenes	16.01	106	1813288	42.02	ug/L	98
56)	Bromoform	16.14	173	233747	20.11	ug/L	97
57)	Styrene	16.46	104	1473625	21.33	ug/L	94
58)	o-Xylene	16.56	106	879881	20.97	ug/L	96
59)	1,1,2,2-Tetrachloroethane	16.55	83	454362	23.07	ug/L	98
60)	1,2,3-Trichloropropane	16.75	75	322080	23.05	ug/L	99
62)	Isopropylbenzene	17.07	105	2354922	20.37	ug/l	100
64)	Bromobenzene	17.40	156	557558	19.65	ug/l	95
65)	n-Propylbenzene	17.68	91	3094298	20.55	ug/l	99
66)	2-Chlorotoluene	17.80	91	1700632	20.22	ug/l	98
67)	4-Chlorotoluene	17.91	91	1790017	20.44	ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	1981401	20.51	ug/l	99
69)	tert-Butylbenzene	18.48	119	1690400	20.10	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	2004557	20.50	ug/l	99
71)	sec-Butylbenzene	18.78	105	2758903	20.42	ug/l	99
72)	1,3-Dichlorobenzene	18.88	146	1084584	19.53	ug/l	99
73)	1,4-Dichlorobenzene	18.97	146	1074831	19.47	ug/l	99
74)	4-Isopropyltoluene	19.04	119	2106275	19.92	ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	996057	20.08	ug/l	100
76)	n-Butylbenzene	19.62	91	2332742	20.68	ug/l	98
77)	1,2-Dibromo-3-chloropropan	20.13	75	62294	21.01	ug/l	95
78)	1,2,4-Trichlorobenzene	22.04	180	632313	19.76	ug/l	99
79)	Naphthalene	22.38	128	1182846	20.03	ug/l	100
80)	Hexachlorobutadiene	22.47	225	265642	19.71	ug/l	98
81)	1,2,3-Trichlorobenzene	22.66	180	512231	19.27	ug/l	99

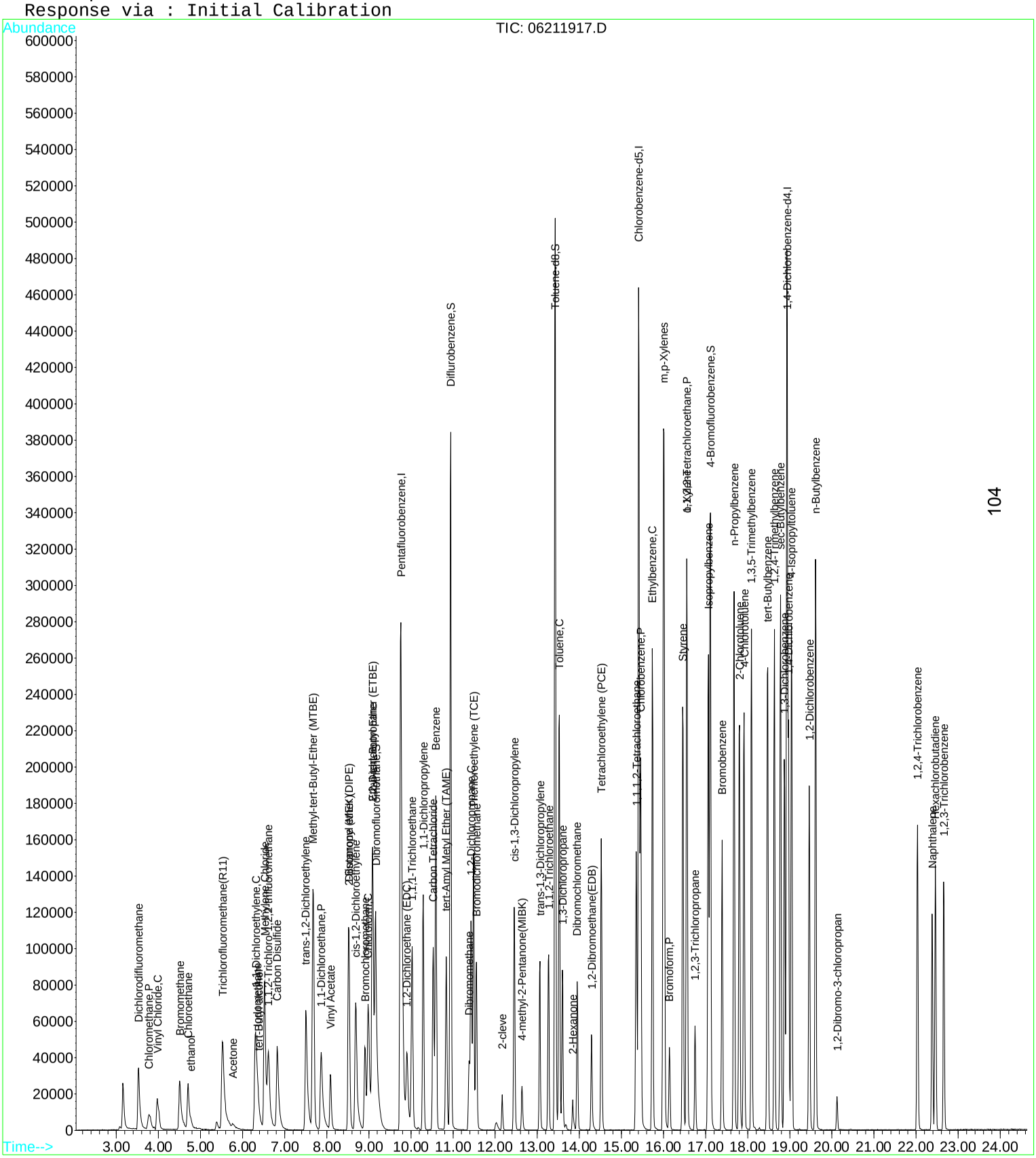
REVIEWED
By Lindsey Michel at 11:34 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:07 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211917.D Vial: 15
Acq On : 21 Jun 2019 3:41 pm Operator: LM/MS9
Sample : CCV 8260 20PPB Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:23 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211903.D Vial: 16
Acq On : 21 Jun 2019 8:11 am Operator: LM/MS9
Sample : B9F2101-BS1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:47 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2249090	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3464256	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1682901	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1382717	48.63	ug/L	0.00
Spiked Amount 50.000			Recovery = 97.26%			
34) Diflurobenzene	10.94	114	4140110	51.00	ug/L	0.00
Spiked Amount 50.000			Recovery = 102.00%			
45) Toluene-d8	13.43	98	4303380	48.47	ug/L	0.00
Spiked Amount 50.000			Recovery = 96.94%			
63) 4-Bromofluorobenzene	17.11	95	1660414	47.26	ug/L	0.00
Spiked Amount 50.000			Recovery = 94.52%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	659707	20.21	ug/l	100
3) Chloromethane	3.78	50	266569	21.43	ug/l	99
4) Vinyl Chloride	3.98	62	345517	22.79	ug/l	96
5) Bromomethane	4.51	94	301294	18.17	ug/l	90
6) Chloroethane	4.71	64	394852	42.75	ug/l	96
7) ethanol	4.77	45	66246	1151.19	ug/l #	100
8) Trichlorofluoromethane(R11	5.52	101	923102	18.27	ug/l	96
9) Iodomethane	6.35	142	319382	17.95	ug/l	94
10) tert-Butyl alcohol	6.38	59	102265	94.74	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	573078m	15.17	ug/l	
12) 1,1-Dichloroethylene	6.31	96	477802	21.27	ug/l	94
13) Acetone	5.77	58	16811m	16.66	ug/l	
14) Methylene Chloride	6.52	84	686810	20.67	ug/l	99
15) Carbon Disulfide	6.82	76	1382926	21.21	ug/l	99
16) trans-1,2-Dichloroethylene	7.51	96	589582	21.50	ug/l	97
17) Methyl-tert-Butyl-Ether (M	7.68	73	2164488	43.38	ug/L	100
18) 1,1-Dichloroethane	7.87	63	841252	21.36	ug/L	96
19) Vinyl Acetate	8.09	43	613972	22.46	ug/L	98
20) 2-Butanone (MEK)	8.54	72	25349	18.68	ug/l	47
21) Diisopropyl ether (DIPE)	8.52	45	1420103	22.70	ug/l	96
22) cis-1,2-Dichloroethylene	8.69	96	643271	21.03	ug/l	95
23) Bromochloromethane	8.91	128	251941	21.48	ug/L	99
24) Chloroform	8.99	83	1041755	21.52	ug/L	100
25) 2,2-Dichloropropane	9.09	77	713594	20.24	ug/L	97
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1199489	22.47	ug/l	97
28) 1,2-Dichloroethane (EDC)	9.91	62	647883m	24.00	ug/L	
29) 1,1,1-Trichloroethane	10.03	97	962625	22.98	ug/L	99
30) 1,1-Dichloropropylene	10.29	75	850237	21.90	ug/L	98
31) Carbon Tetrachloride	10.53	117	814131	22.31	ug/l	99
32) Benzene	10.59	78	2131449	18.65	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1032729	20.73	ug/l	100
35) Dibromomethane	11.38	93	274493	20.89	ug/L	95
36) 1,2-Dichloropropane	11.43	63	504288	21.93	ug/L	100
37) Trichloroethylene (TCE)	11.49	95	664427	22.04	ug/L	96
38) Bromodichloromethane	11.55	83	790144	22.47	ug/L	98
39) 2-cleve	12.17	63	122386	18.47	ug/L	95
40) cis-1,3-Dichloropropylene	12.45	75	920463	22.35	ug/L	99
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	33805	19.74	ug/L	94
43) trans-1,3-Dichloropropylen	13.06	75	693220	22.23	ug/L	98
44) 1,1,2-Trichloroethane	13.27	83	359059	22.04	ug/L	98
46) Toluene	13.52	92	1312280	20.84	ug/L	100
47) 1,3-Dichloropropane	13.60	76	699030	22.28	ug/L	99
48) 2-Hexanone	13.84	43	143105	21.00	ug/L	94

m = MH

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211903.D Vial: 16
Acq On : 21 Jun 2019 8:11 am Operator: LM/MS9
Sample : B9F2101-BS1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:47 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.95	129	529963	21.56	ug/L	98
50)	1,2-Dibromoethane(EDB)	14.29	107	428441	21.72	ug/L	98
51)	Tetrachloroethylene (PCE)	14.53	164	446871	20.39	ug/L	99
52)	1,1,1,2-Tetrachloroethane	15.35	131	538742	20.69	ug/L	96
53)	Chlorobenzene	15.46	112	1402370	20.61	ug/L	94
54)	Ethylbenzene	15.74	91	2577412	21.87	ug/L	98
55)	m,p-Xylenes	16.01	106	1897716	43.20	ug/L	97
56)	Bromoform	16.14	173	236096	19.96	ug/L	94
57)	Styrene	16.46	104	1512420	21.51	ug/L	96
58)	o-Xylene	16.56	106	918518	21.51	ug/L	96
59)	1,1,2,2-Tetrachloroethane	16.55	83	462751	23.08	ug/L	98
60)	1,2,3-Trichloropropane	16.75	75	325534	22.89	ug/L	100
62)	Isopropylbenzene	17.06	105	2439736	21.07	ug/l	99
64)	Bromobenzene	17.39	156	560702	19.72	ug/l	95
65)	n-Propylbenzene	17.68	91	3208234	21.26	ug/l	99
66)	2-Chlorotoluene	17.80	91	1740690	20.66	ug/l	99
67)	4-Chlorotoluene	17.91	91	1830637	20.86	ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	2008117	20.74	ug/l	99
69)	tert-Butylbenzene	18.47	119	1726230	20.49	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	2045406	20.87	ug/l	99
71)	sec-Butylbenzene	18.78	105	2831200	20.91	ug/l	99
72)	1,3-Dichlorobenzene	18.88	146	1097472	19.72	ug/l	99
73)	1,4-Dichlorobenzene	18.97	146	1082437	19.57	ug/l	98
74)	4-Isopropyltoluene	19.04	119	2171150	20.50	ug/l	99
75)	1,2-Dichlorobenzene	19.46	146	1017464	20.47	ug/l	100
76)	n-Butylbenzene	19.61	91	2427857	21.48	ug/l	99
77)	1,2-Dibromo-3-chloropropan	20.12	75	64557	21.70	ug/l	93
78)	1,2,4-Trichlorobenzene	22.04	180	642106	20.02	ug/l	99
79)	Naphthalene	22.38	128	1229792	20.78	ug/l	100
80)	Hexachlorobutadiene	22.46	225	261693	19.38	ug/l	98
81)	1,2,3-Trichlorobenzene	22.66	180	518898	19.49	ug/l	99

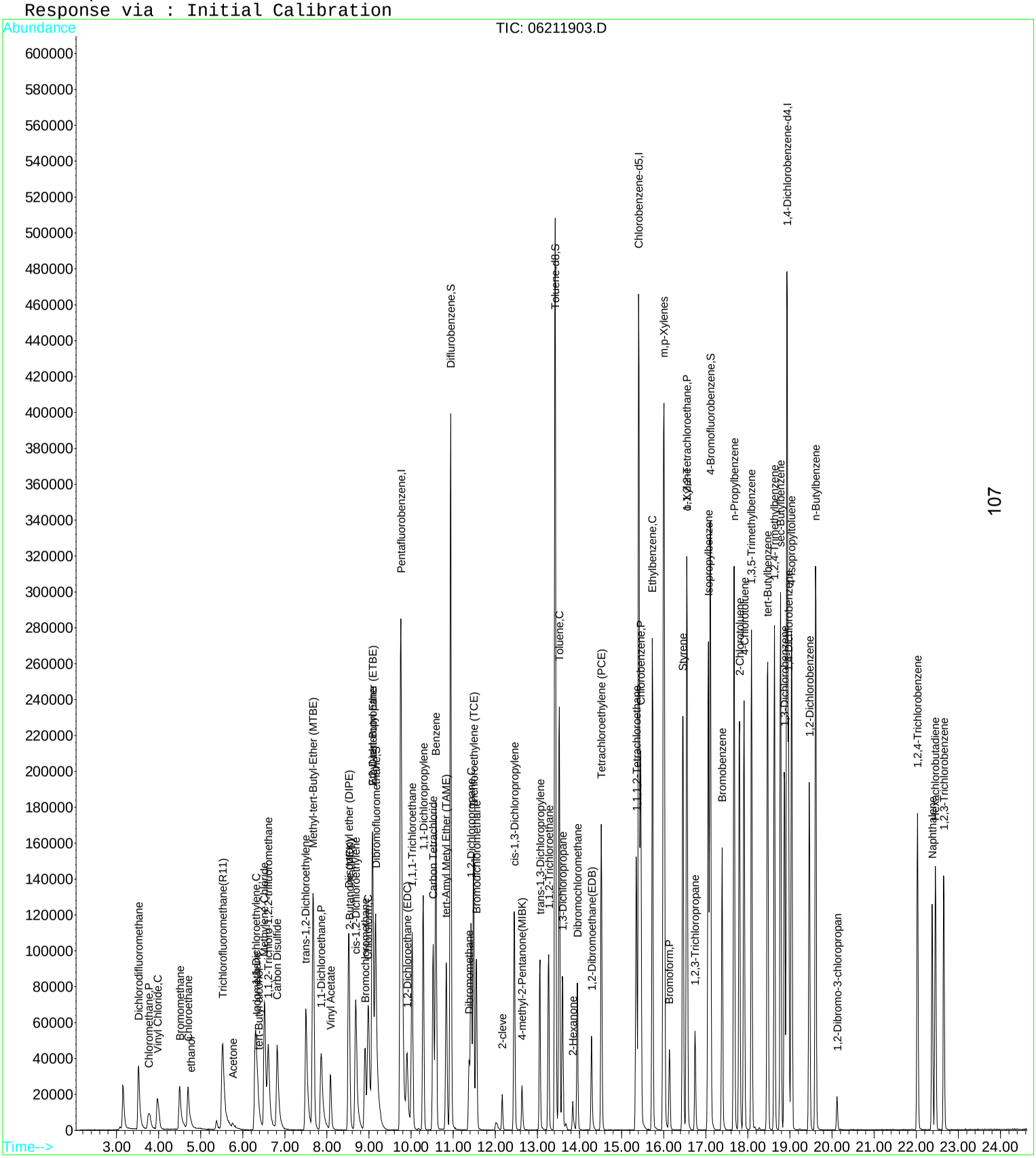
APPROVED
By Stuart Sigman at 8:07 am, Jul 01, 2019

REVIEWED
By Lindsey Michel at 11:35 am, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211903.D Vial: 16
Acq On : 21 Jun 2019 8:11 am Operator: LM/MS9
Sample : B9F2101-BS1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9051701 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 9:47 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211931.D Vial: 15
Acq On : 21 Jun 2019 11:08 pm Operator: LM/MS9
Sample : B9F2101-BSD1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:52 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

leak in line

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	672979	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	1177277	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	599004	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.15	113	533185	62.67	ug/L	0.00
Spiked Amount 50.000			Recovery =	125.34%		
34) Diflurobenzene	10.94	114	1311949	54.01	ug/L	0.00
Spiked Amount 50.000			Recovery =	108.02%		
45) Toluene-d8	13.43	98	1406454	46.61	ug/L	0.00
Spiked Amount 50.000			Recovery =	93.22%		
63) 4-Bromofluorobenzene	17.11	95	610134	48.79	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.58%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.52	85	186544	19.10	ug/l	96
3) Chloromethane	3.75	50	72316	19.43	ug/l	100
4) Vinyl Chloride	3.98	62	94216	20.77	ug/l	96
5) Bromomethane	4.50	94	100741	19.88	ug/l	96
6) Chloroethane	4.70	64	56885	20.58	ug/l #	43
7) ethanol	4.75	45	13344m	774.98	ug/l	
8) Trichlorofluoromethane(R11	5.51	101	311002	20.58	ug/l	96
9) Iodomethane	6.34	142	142350	26.73	ug/l #	83
10) tert-Butyl alcohol	6.38	59	42068	130.24	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.59	101	177111	15.67	ug/l #	92
12) 1,1-Dichloroethylene	6.30	96	132255	19.68	ug/l	90
13) Acetone	5.76	58	4342m	14.38	ug/l	
14) Methylene Chloride	6.52	84	453343	53.15	ug/l	95
15) Carbon Disulfide	6.82	76	376136	19.28	ug/l	98
16) trans-1,2-Dichloroethylene	7.49	96	169194	20.62	ug/l	85
17) Methyl-tert-Butyl-Ether (M	7.68	73	803474	53.82	ug/l	96
18) 1,1-Dichloroethane	7.86	63	280899	23.84	ug/l	97
19) Vinyl Acetate	8.09	43	226549	27.70	ug/l	98
20) 2-Butanone (MEK)	8.54	72	7561m	18.63	ug/l	
21) Diisopropyl ether (DIPE)	8.52	45	480040	25.64	ug/l	92
22) cis-1,2-Dichloroethylene	8.68	96	203987	22.29	ug/l	91
23) Bromochloromethane	8.91	128	93942	26.77	ug/l	96
24) Chloroform	8.98	83	372441	25.71	ug/l	99
25) 2,2-Dichloropropane	9.08	77	238109	22.57	ug/l	95
27) Ethyl-tert-Butyl Ether (ET	9.09	59	441972	27.67	ug/l	97
28) 1,2-Dichloroethane (EDC)	9.90	62	231177	28.62	ug/l #	93
29) 1,1,1-Trichloroethane	10.02	97	288066	22.98	ug/l	98
30) 1,1-Dichloropropylene	10.29	75	246878	21.25	ug/l	96
31) Carbon Tetrachloride	10.53	117	239899	21.97	ug/l	100
32) Benzene	10.59	78	656151	19.18	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	367594	24.66	ug/l	96
35) Dibromomethane	11.38	93	120192	30.56	ug/l	96
36) 1,2-Dichloropropane	11.43	63	171958	24.99	ug/l	98
37) Trichloroethylene (TCE)	11.48	95	197460	21.89	ug/l	94
38) Bromodichloromethane	11.55	83	279146	26.53	ug/l	99
39) 2-cleve	12.17	63	48432	23.40	ug/l	98
40) cis-1,3-Dichloropropylene	12.46	75	306529	24.87	ug/l	96
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	10653m	20.79	ug/l	
43) trans-1,3-Dichloropropylen	13.06	75	239088	22.56	ug/l	94
44) 1,1,2-Trichloroethane	13.27	83	130806	23.63	ug/l	97
46) Toluene	13.53	92	412792	19.29	ug/l	99
47) 1,3-Dichloropropane	13.60	76	266498	25.00	ug/l	96
48) 2-Hexanone	13.85	43	49189	21.24	ug/l	93

108

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211931.D Vial: 15
Acq On : 21 Jun 2019 11:08 pm Operator: LM/MS9
Sample : B9F2101-BSD1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:52 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
49)	Dibromochloromethane	13.95	129	188908	22.61	ug/L	98
50)	1,2-Dibromoethane(EDB)	14.29	107	151857	22.65	ug/L	96
51)	Tetrachloroethylene (PCE)	14.53	164	125127	16.80	ug/L	96
52)	1,1,1,2-Tetrachloroethane	15.36	131	182525	20.63	ug/L	99
53)	Chlorobenzene	15.46	112	477688	20.65	ug/L	95
54)	Ethylbenzene	15.74	91	803046	20.05	ug/L	99
55)	m,p-Xylenes	16.01	106	600213	40.21	ug/L	89
56)	Bromoform	16.15	173	81744	20.33	ug/L	97
57)	Styrene	16.46	104	478236	20.01	ug/L	93
58)	o-Xylene	16.56	106	298268	20.55	ug/L	89
59)	1,1,2,2-Tetrachloroethane	16.55	83	180774	26.53	ug/L	98
60)	1,2,3-Trichloropropane	16.76	75	121501	25.19	ug/L	98
62)	Isopropylbenzene	17.07	105	760299	18.44	ug/l	98
64)	Bromobenzene	17.40	156	192402	19.01	ug/l	94
65)	n-Propylbenzene	17.68	91	995555	18.54	ug/l	97
66)	2-Chlorotoluene	17.80	91	566395	18.89	ug/l	98
67)	4-Chlorotoluene	17.91	91	617823	19.78	ug/l	97
68)	1,3,5-Trimethylbenzene	18.10	105	654627	19.00	ug/l	97
69)	tert-Butylbenzene	18.48	119	552142	18.41	ug/l	96
70)	1,2,4-Trimethylbenzene	18.64	105	672710	19.29	ug/l	98
71)	sec-Butylbenzene	18.78	105	915653	19.00	ug/l	98
72)	1,3-Dichlorobenzene	18.88	146	379018	19.14	ug/l	99
73)	1,4-Dichlorobenzene	18.97	146	389945	19.81	ug/l	99
74)	4-Isopropyltoluene	19.04	119	712905	18.91	ug/l	98
75)	1,2-Dichlorobenzene	19.47	146	349841	19.78	ug/l	99
76)	n-Butylbenzene	19.62	91	764699	19.01	ug/l	97
77)	1,2-Dibromo-3-chloropropan	20.12	75	21919m	20.74	ug/l	
78)	1,2,4-Trichlorobenzene	22.04	180	199476	17.48	ug/l	99
79)	Naphthalene	22.39	128	423030	20.09	ug/l	100
80)	Hexachlorobutadiene	22.47	225	83521	17.38	ug/l	99
81)	1,2,3-Trichlorobenzene	22.66	180	173093	18.26	ug/l	99

leak in line;
removed LCSD
from bench sheet

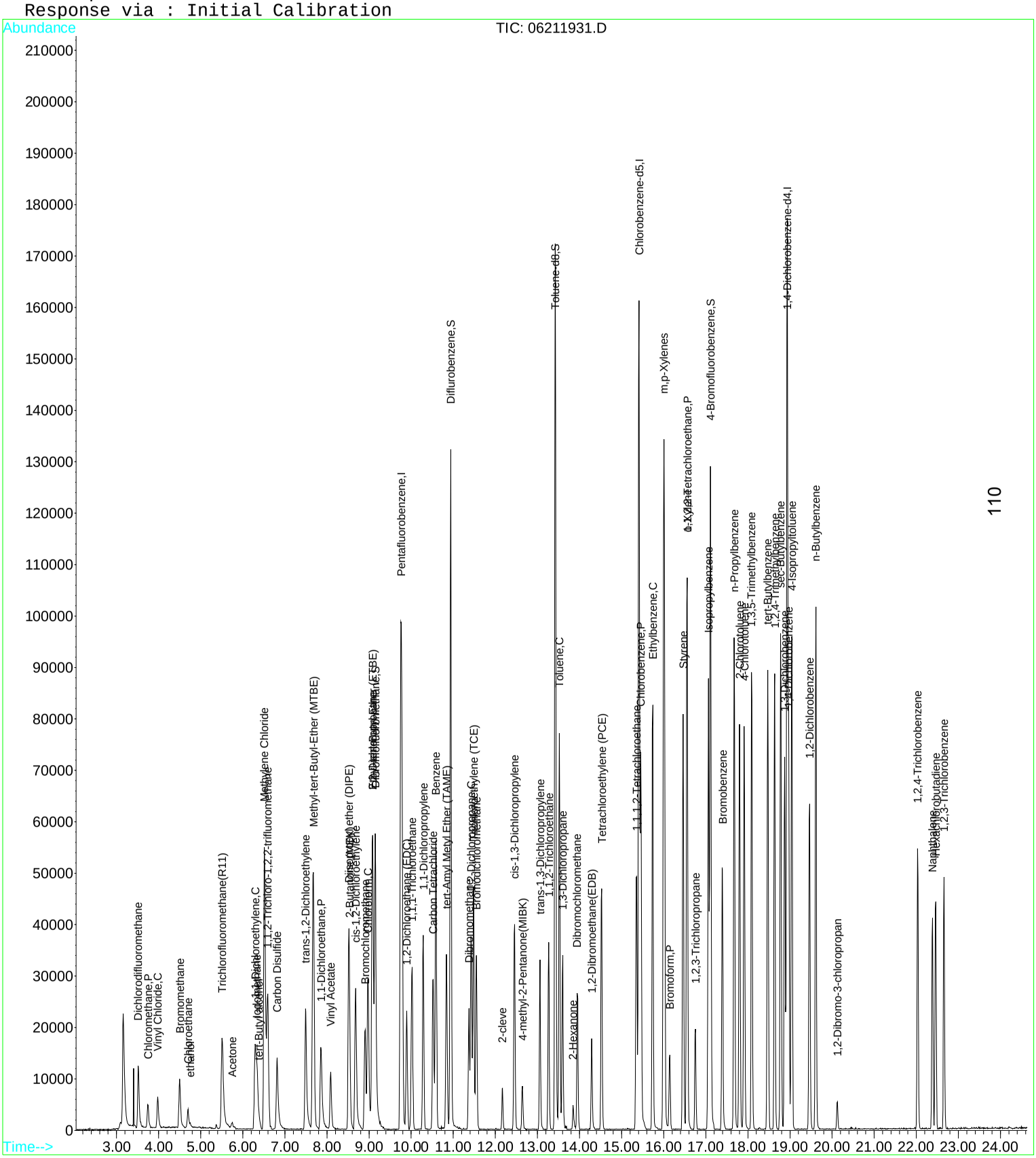
REVIEWED
By Lindsey Michel at 11:36 am, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration
06211931.D 061719.M Mon Jun 24 10:55:26 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211931.D Vial: 15
Acq On : 21 Jun 2019 11:08 pm Operator: LM/MS9
Sample : B9F2101-BSD1 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:52 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211914.D Vial: 12
Acq On : 21 Jun 2019 2:05 pm Operator: LM/MS9
Sample : B9F2101-MS1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:18 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2119951	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3371400	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1669220	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1316376	49.12	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.24%			
34) Diflurobenzene	10.94	114	3885802	50.79	ug/L	0.00
Spiked Amount 50.000			Recovery = 101.58%			
45) Toluene-d8	13.43	98	4141845	47.93	ug/L	0.00
Spiked Amount 50.000			Recovery = 95.86%			
63) 4-Bromofluorobenzene	17.11	95	1656244	47.53	ug/L	0.00
Spiked Amount 50.000			Recovery = 95.06%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	621466	20.20	ug/l	100
3) Chloromethane	3.78	50	243754	20.79	ug/l	100
4) Vinyl Chloride	3.98	62	313999	21.97	ug/l	96
5) Bromomethane	4.50	94	229243m	15.37	ug/l	
6) Chloroethane	4.70	64	370870	42.60	ug/l	98
7) ethanol	4.76	45	94476	1741.76	ug/l #	100
8) Trichlorofluoromethane(R11	5.52	101	890083	18.69	ug/l	95
9) Iodomethane	6.34	142	278033m	16.57	ug/l	
10) tert-Butyl alcohol	6.38	59	105678	103.86	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.60	101	552354m	15.51	ug/l	
12) 1,1-Dichloroethylene	6.31	96	430544	20.33	ug/l	88
13) Acetone	5.76	58	21299	22.39	ug/l #	100
14) Methylene Chloride	6.52	84	743597	24.67	ug/l	96
15) Carbon Disulfide	6.82	76	1261947	20.53	ug/l	99
16) trans-1,2-Dichloroethylene	7.51	96	551458	21.34	ug/L	94
17) Methyl-tert-Butyl-Ether (M	7.68	73	2105686	44.77	ug/L	97
18) 1,1-Dichloroethane	7.87	63	837895	22.57	ug/L	97
19) Vinyl Acetate	8.09	43	586703	22.77	ug/L	99
20) 2-Butanone (MEK)	8.53	72	26308	20.57	ug/l #	1
21) Diisopropyl ether (DIPE)	8.52	45	1807713	30.66	ug/l	97
22) cis-1,2-Dichloroethylene	8.69	96	881540	30.58	ug/l	93
23) Bromochloromethane	8.91	128	231705	20.96	ug/L	95
24) Chloroform	8.99	83	971580	21.29	ug/L	99
25) 2,2-Dichloropropane	9.09	77	616352	18.54	ug/L	98
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1159856	23.06	ug/l	97
28) 1,2-Dichloroethane (EDC)	9.90	62	646333m	25.40	ug/L	
29) 1,1,1-Trichloroethane	10.03	97	877688	22.23	ug/L	97
30) 1,1-Dichloropropylene	10.29	75	786550	21.49	ug/L	97
31) Carbon Tetrachloride	10.53	117	757488	22.03	ug/l	99
32) Benzene	10.59	78	1972066	18.30	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1037915	22.10	ug/l	99
35) Dibromomethane	11.38	93	268348	21.66	ug/L	89
36) 1,2-Dichloropropane	11.43	63	474516	21.89	ug/L	100
37) Trichloroethylene (TCE)	11.49	95	641184	22.56	ug/L	99
38) Bromodichloromethane	11.55	83	751550	22.67	ug/L	100
40) cis-1,3-Dichloropropylene	12.46	75	845737	21.78	ug/L	95
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	33831	20.96	ug/L	85
43) trans-1,3-Dichloropropylen	13.06	75	651524	21.47	ug/L	96
44) 1,1,2-Trichloroethane	13.27	83	339398	21.41	ug/L	96
46) Toluene	13.52	92	1194002	19.49	ug/L	97
47) 1,3-Dichloropropane	13.60	76	650701	21.31	ug/L	98
48) 2-Hexanone	13.84	43	148306	22.36	ug/L	94
49) Dibromochloromethane	13.95	129	498583	20.84	ug/L	99

m = MH

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211914.D Vial: 12
Acq On : 21 Jun 2019 2:05 pm Operator: LM/MS9
Sample : B9F2101-MS1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:18 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
50)	1,2-Dibromoethane(EDB)	14.29	107	405344	21.12 ug/L	97
51)	Tetrachloroethylene (PCE)	14.53	164	403299	18.91 ug/L	95
52)	1,1,1,2-Tetrachloroethane	15.35	131	495983	19.57 ug/L	99
53)	Chlorobenzene	15.46	112	1288805	19.46 ug/L	93
54)	Ethylbenzene	15.74	91	2340083	20.41 ug/L	97
55)	m,p-Xylenes	16.01	106	1746535	40.85 ug/L	95
56)	Bromoform	16.14	173	219026	19.06 ug/L	99
57)	Styrene	16.46	104	1389222	20.30 ug/L	95
58)	o-Xylene	16.56	106	855103	20.57 ug/L	97
59)	1,1,2,2-Tetrachloroethane	16.55	83	456823	23.41 ug/L	100
60)	1,2,3-Trichloropropane	16.75	75	321270	23.22 ug/L	97
62)	Isopropylbenzene	17.06	105	2246652	19.56 ug/l	100
64)	Bromobenzene	17.39	156	543188	19.26 ug/l	96
65)	n-Propylbenzene	17.68	91	2975983	19.88 ug/l	99
66)	2-Chlorotoluene	17.80	91	1640761	19.63 ug/l	99
67)	4-Chlorotoluene	17.91	91	1721681	19.78 ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	1897899	19.77 ug/l	99
69)	tert-Butylbenzene	18.47	119	1618842	19.37 ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	1934293	19.90 ug/l	98
71)	sec-Butylbenzene	18.78	105	2624176	19.54 ug/l	99
72)	1,3-Dichlorobenzene	18.88	146	1050992	19.04 ug/l	99
73)	1,4-Dichlorobenzene	18.97	146	1032738	18.82 ug/l	98
74)	4-Isopropyltoluene	19.04	119	2078079	19.78 ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	973804	19.76 ug/l	99
76)	n-Butylbenzene	19.61	91	2272694	20.27 ug/l	98
77)	1,2-Dibromo-3-chloropropan	20.12	75	65697	22.24 ug/l	89
78)	1,2,4-Trichlorobenzene	22.04	180	606462	19.07 ug/l	99
79)	Naphthalene	22.38	128	1210899	20.63 ug/l	100
80)	Hexachlorobutadiene	22.46	225	246029	18.37 ug/l	99
81)	1,2,3-Trichlorobenzene	22.66	180	501657	18.99 ug/l	99

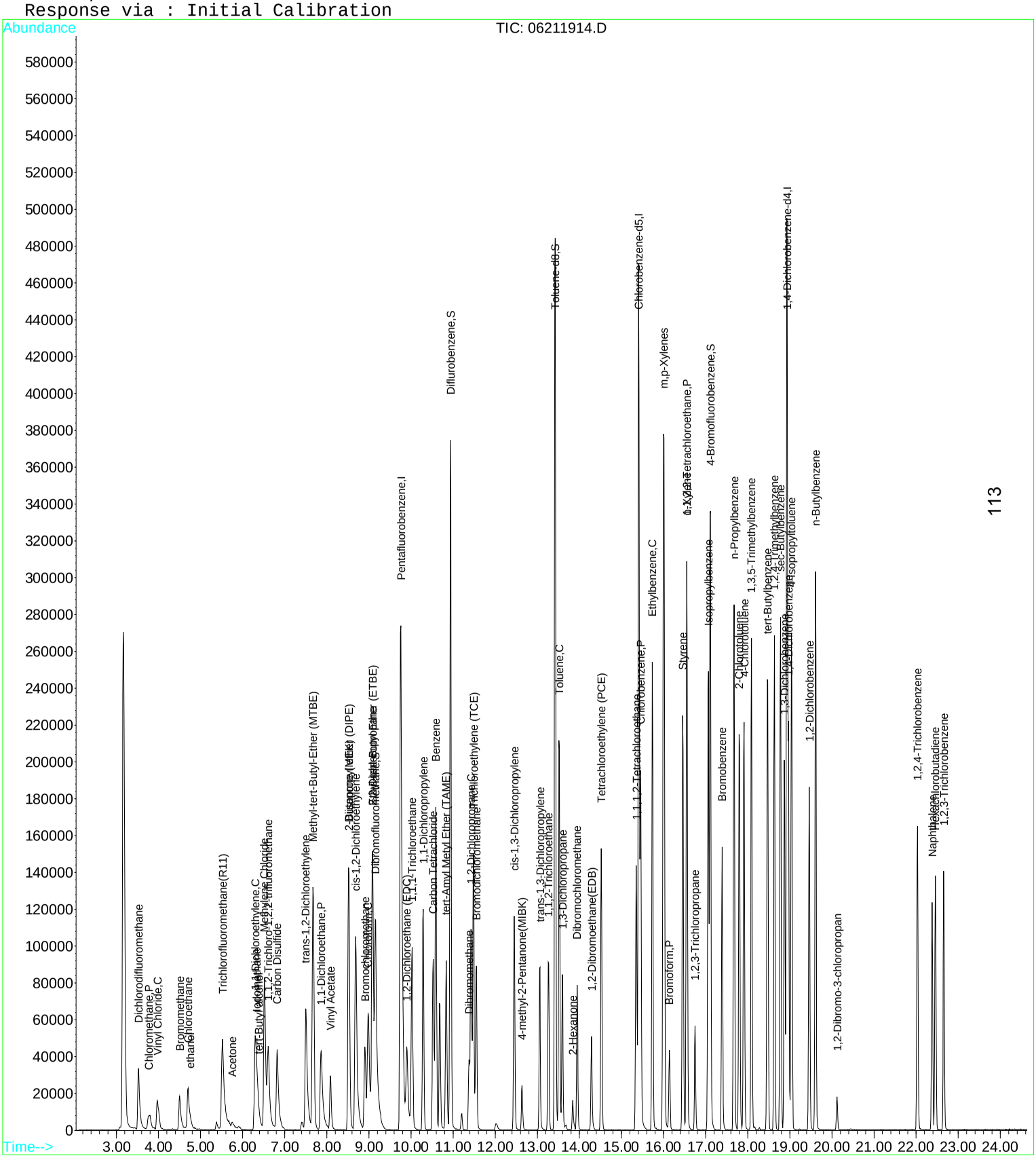
REVIEWED
By Lindsey Michel at 11:39 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:08 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211914.D Vial: 12
Acq On : 21 Jun 2019 2:05 pm Operator: LM/MS9
Sample : B9F2101-MS1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:18 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211915.D Vial: 13
Acq On : 21 Jun 2019 2:37 pm Operator: LM/MS9
Sample : B9F2101-MSD1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:19 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2241135	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3511869	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1716172	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1389716	49.05	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.10%			
34) Diflurobenzene	10.94	114	4067153	50.28	ug/L	0.00
Spiked Amount 50.000			Recovery = 100.56%			
45) Toluene-d8	13.43	98	4311001	47.90	ug/L	0.00
Spiked Amount 50.000			Recovery = 95.80%			
63) 4-Bromofluorobenzene	17.11	95	1695280	47.32	ug/L	0.00
Spiked Amount 50.000			Recovery = 94.64%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.53	85	604542	18.59	ug/l	98
3) Chloromethane	3.79	50	253319	20.44	ug/l	98
4) Vinyl Chloride	3.98	62	334923	22.17	ug/l	99
5) Bromomethane	4.51	94	444349	25.15	ug/l	89
6) Chloroethane	4.71	64	427849	46.48	ug/l	98
7) ethanol	4.77	45	99868	1741.61	ug/l #	100
8) Trichlorofluoromethane(R11	5.53	101	892270	17.73	ug/l	96
9) Iodomethane	6.35	142	295326	16.65	ug/l	95
10) tert-Butyl alcohol	6.38	59	108477	100.85	ug/l	100
11) 1,1,2-Trichloro-1,2,2-trif	6.61	101	553691m	14.71	ug/l	
12) 1,1-Dichloroethylene	6.31	96	458438	20.48	ug/l	93
13) Acetone	5.78	58	24466	24.33	ug/l #	100
14) Methylene Chloride	6.53	84	768616	23.99	ug/l	98
15) Carbon Disulfide	6.83	76	1312291	20.20	ug/l	99
16) trans-1,2-Dichloroethylene	7.51	96	579808	21.22	ug/l	95
17) Methyl-tert-Butyl-Ether (M	7.68	73	2225195	44.76	ug/l	99
18) 1,1-Dichloroethane	7.87	63	884475	22.54	ug/l	97
19) Vinyl Acetate	8.09	43	612537	22.49	ug/l	98
20) 2-Butanone (MEK)	8.53	72	27470	20.32	ug/l #	1
21) Diisopropyl ether (DIPE)	8.52	45	1898885	30.46	ug/l	97
22) cis-1,2-Dichloroethylene	8.69	96	922334	30.26	ug/l	95
23) Bromochloromethane	8.91	128	240526	20.58	ug/l	97
24) Chloroform	8.99	83	992908	20.58	ug/l	98
25) 2,2-Dichloropropane	9.09	77	598481	17.03	ug/l	97
27) Ethyl-tert-Butyl Ether (ET	9.09	59	1226056	23.05	ug/l	98
28) 1,2-Dichloroethane (EDC)	9.90	62	640574m	23.81	ug/l	
29) 1,1,1-Trichloroethane	10.03	97	894926	21.44	ug/l	99
30) 1,1-Dichloropropylene	10.29	75	829494	21.44	ug/l	99
31) Carbon Tetrachloride	10.53	117	797238	21.93	ug/l	99
32) Benzene	10.59	78	2114935	18.57	ug/l	100
33) tert-Amyl Metyl Ether (TAM	10.84	73	1105822	22.27	ug/l	100
35) Dibromomethane	11.38	93	276812	21.14	ug/l	93
36) 1,2-Dichloropropane	11.43	63	499603	21.80	ug/l	100
37) Trichloroethylene (TCE)	11.49	95	668839	22.26	ug/l	97
38) Bromodichloromethane	11.55	83	777353	22.18	ug/l	98
40) cis-1,3-Dichloropropylene	12.46	75	902640	21.99	ug/l	97
41) 4-methyl-2-Pentanone(MIBK)	12.64	100	37145	21.77	ug/l #	68
43) trans-1,3-Dichloropropylen	13.06	75	688945	21.79	ug/l	96
44) 1,1,2-Trichloroethane	13.27	83	366986	22.22	ug/l	98
46) Toluene	13.53	92	1277596	20.02	ug/l	98
47) 1,3-Dichloropropane	13.60	76	706793	22.22	ug/l	100
48) 2-Hexanone	13.84	43	160784	23.27	ug/l	99
49) Dibromochloromethane	13.95	129	536570	21.53	ug/l	99

m = MH

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211915.D Vial: 13
Acq On : 21 Jun 2019 2:37 pm Operator: LM/MS9
Sample : B9F2101-MSD1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:19 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
50)	1,2-Dibromoethane(EDB)	14.29	107	439139	21.96	ug/L	98
51)	Tetrachloroethylene (PCE)	14.53	164	438061	19.72	ug/L	99
52)	1,1,1,2-Tetrachloroethane	15.36	131	532467	20.17	ug/L	98
53)	Chlorobenzene	15.46	112	1389289	20.14	ug/L	97
54)	Ethylbenzene	15.74	91	2487939	20.83	ug/L	98
55)	m,p-Xylenes	16.01	106	1848594	41.51	ug/L	99
56)	Bromoform	16.14	173	236173	19.71	ug/L	98
57)	Styrene	16.46	104	1478384	20.74	ug/L	95
58)	o-Xylene	16.56	106	909383	21.01	ug/L	98
59)	1,1,2,2-Tetrachloroethane	16.55	83	488862	24.05	ug/L	97
60)	1,2,3-Trichloropropane	16.75	75	344110	23.89	ug/L	99
62)	Isopropylbenzene	17.07	105	2398115	20.31	ug/l	99
64)	Bromobenzene	17.40	156	566161	19.53	ug/l	95
65)	n-Propylbenzene	17.68	91	3117766	20.26	ug/l	99
66)	2-Chlorotoluene	17.80	91	1704805	19.84	ug/l	99
67)	4-Chlorotoluene	17.91	91	1800864	20.13	ug/l	99
68)	1,3,5-Trimethylbenzene	18.09	105	1970606	19.96	ug/l	99
69)	tert-Butylbenzene	18.47	119	1703298	19.82	ug/l	98
70)	1,2,4-Trimethylbenzene	18.64	105	2008834	20.10	ug/l	99
71)	sec-Butylbenzene	18.78	105	2734928	19.81	ug/l	99
72)	1,3-Dichlorobenzene	18.88	146	1083046	19.09	ug/l	100
73)	1,4-Dichlorobenzene	18.97	146	1071082	18.99	ug/l	97
74)	4-Isopropyltoluene	19.04	119	2136273	19.78	ug/l	99
75)	1,2-Dichlorobenzene	19.47	146	1029068	20.31	ug/l	100
76)	n-Butylbenzene	19.61	91	2376537	20.62	ug/l	98
77)	1,2-Dibromo-3-chloropropan	20.12	75	68696	22.60	ug/l	95
78)	1,2,4-Trichlorobenzene	22.04	180	644093	19.70	ug/l	99
79)	Naphthalene	22.38	128	1286386	21.32	ug/l	100
80)	Hexachlorobutadiene	22.47	225	265786	19.30	ug/l	99
81)	1,2,3-Trichlorobenzene	22.66	180	527977	19.44	ug/l	99

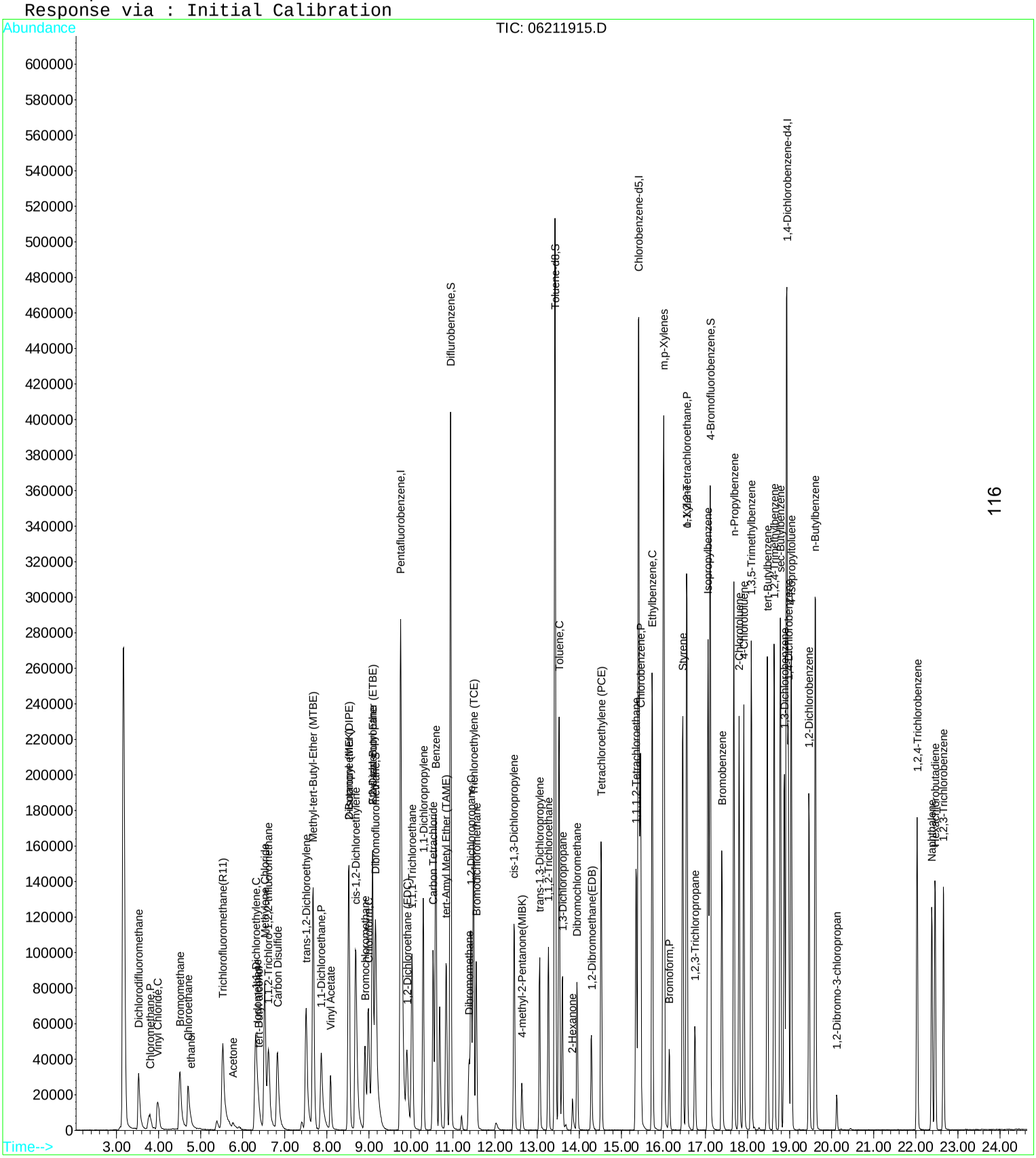
REVIEWED
By Lindsey Michel at 11:42 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:09 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211915.D Vial: 13
Acq On : 21 Jun 2019 2:37 pm Operator: LM/MS9
Sample : B9F2101-MSD1@9F14005-11 Inst : GC/MS Ins
Misc : STDS.9040401,9060501,9053102 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:19 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration



PREPARATION BENCH SHEET

B9F2101

American Analytics, Inc.

Matrix: Water **Prepared using: VOCGCMS - EPA 5030B** **Printed: 7/1/2019 2:23:41PM**

Lab Number	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments	
9F13001-16 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F13001-17 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F13001-19 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F13001-20 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F14004-01 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-02 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-03 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-04 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-05 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-06 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-07 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14005-04 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F14005-05 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	
9F14005-06 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;CindJ-flags; High profile!!!; Level 4!;Cindy only	

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

PREPARATION BENCH SHEET

B9F2101

American Analytics, Inc.

Matrix: Water **Prepared using: VOCGCMS - EPA 5030B** **Printed: 7/1/2019 2:23:41PM**

Lab Number	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments	
9F14005-08 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;Cind	J-flags; High profile!!!; Level 4!;Cindy only
9F14005-09 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;Cind	J-flags; High profile!!!; Level 4!;Cindy only
9F14005-10 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;Cind	J-flags; High profile!!!; Level 4!;Cindy only
9F14005-11 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			USE FOR MS/MSD	USE FOR MS/MSD
9F14005-12 *8260B*	06/21/19 07:13	10	10	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!;Cind	J-flags; High profile!!!; Level 4!;Cindy only
B9F2101-BLK1	06/21/19 07:13	10	10					
B9F2101-BS1	06/21/19 07:13	10	10	9040401		2.5		
B9F2101-MS1	06/21/19 07:13	10	10	9040401	9F14005-11	2.5		
B9F2101-MSD1	06/21/19 07:13	10	10	9040401	9F14005-11	2.5		

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

Injection Log

Directory: C:\HPCHEM\1\DATA\062119

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	14	06211901.d	1.	BFB tune 50ng/GCMS9	BFB 9040205	21 Jun 2019 07:07
2	15	06211902.d	1.	CCV 8260 20PPB	STDS.9040401,9060...	21 Jun 2019 07:39
3	16	06211903.d	1.	B9F2101-BS1	STDS.9040401,9060...	21 Jun 2019 08:11
4	12	06211904.d	1.	CCV GASOLINE 500PPB	STD. 9022703	21 Jun 2019 08:43
5	2	06211905.d	1.	B9F2101-BLK1	IS/SS 9053001 @SW...	21 Jun 2019 09:15
6	3	06211906.d	1.	9F13001-16	1	21 Jun 2019 09:49
7	4	06211907.d	1.	9F13001-17	1	21 Jun 2019 10:21
8	5	06211908.d	1.	9F13001-19	1	21 Jun 2019 10:53
9	6	06211909.d	1.	9F14004-01	1	21 Jun 2019 11:25
10	8	06211910.d	1.	9F14004-02	1	21 Jun 2019 11:58
11	9	06211911.d	1.	9F14004-03	1	21 Jun 2019 12:29
12	10	06211912.d	1.	9F14004-04	1	21 Jun 2019 13:01
13	11	06211913.d	1.	9F14004-05	1	21 Jun 2019 13:34
14	12	06211914.d	1.	B9F2101-MS1@9F14005-11	STDS.9040401,9060...	21 Jun 2019 14:05
15	13	06211915.d	1.	B9F2101-MSD1@9F14005-11	STDS.9040401,9060...	21 Jun 2019 14:37
16	14	06211916.d	1.	BFB tune 50ng/GCMS9	BFB 9040205	21 Jun 2019 15:09
17	15	06211917.d	1.	CCV 8260 20PPB	STDS.9040401,9060...	21 Jun 2019 15:41
18	16	06211918.d	1.	CCV GASOLINE 500PPB	STD. 9022703	21 Jun 2019 16:13
19	2	06211919.d	1.	9F14004-07	1	21 Jun 2019 16:45
20	3	06211920.d	1.	9F14005-06	1	21 Jun 2019 17:16
21	4	06211921.d	1.	9F14005-07	4	21 Jun 2019 17:48
22	5	06211922.d	1.	9F14005-09	1	21 Jun 2019 18:20
23	6	06211923.d	1.	9F14005-11	1	21 Jun 2019 18:52
24	8	06211924.d	1.	9F13001-20	1	21 Jun 2019 19:24
25	9	06211925.d	1.	9F14004-06	1	21 Jun 2019 19:56
26	10	06211926.d	1.	9F14005-08	1	21 Jun 2019 20:28
27	11	06211927.d	1.	9F14005-10	1	21 Jun 2019 21:00
28	12	06211928.d	1.	9F14005-12	1	21 Jun 2019 21:32
29	13	06211929.d	1.	9F14005-04	1	21 Jun 2019 22:04
30	14	06211930.d	1.	9F14005-05	1	21 Jun 2019 22:36
31	15	06211931.d	1.	B9F2101-BSD1	STDS.9040401,9060...	21 Jun 2019 23:08
32	1	06211932.d	1.	WASH/AIR BLANK	1	21 Jun 2019 23:40

REVIEWED
By Lindsey Michel at 11:48 am, Jun 24, 2019

APPROVED
By Stuart Sigman at 8:37 am, Jul 01, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211909.D Vial: 6
Acq On : 21 Jun 2019 11:25 am Operator: LM/MS9
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:37 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2224221	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3513834	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1664190	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1406940	50.04	ug/L	0.00
Spiked Amount 50.000			Recovery =	100.08%		
34) Diflurobenzene	10.94	114	4098387	51.05	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.10%		
45) Toluene-d8	13.43	98	4375265	48.58	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.16%		
63) 4-Bromofluorobenzene	17.11	95	1683162	48.45	ug/L	0.00
Spiked Amount 50.000			Recovery =	96.90%		
Target Compounds						Qvalue
4) Vinyl Chloride	3.99	62	42196	2.81	ug/l #	43
7) ethanol	4.75	45	58100	1020.92	ug/l #	100
12) 1,1-Dichloroethylene	6.31	96	26840	1.21	ug/l #	77
13) Acetone	5.77	58	10364m	10.39	ug/l	
14) Methylene Chloride	6.53	84	31186	Below Cal	#	64
16) trans-1,2-Dichloroethylene	7.50	96	172197m	6.35	ug/L	
18) 1,1-Dichloroethane	7.87	63	142869m	3.67	ug/L	
21) Diisopropyl ether (DIPE)	8.52	45	1304187	21.08	ug/l	96
22) cis-1,2-Dichloroethylene	8.69	96	1508307m	49.87	ug/l	
28) 1,2-Dichloroethane (EDC)	9.91	62	86231	3.23	ug/L	99
32) Benzene	10.59	78	255844	2.26	ug/l	100
37) Trichloroethylene (TCE)	11.49	95	18208m	0.61	ug/L	

m = MH

REVIEWED
By Lindsey Michel at 11:48 am, Jun 24, 2019

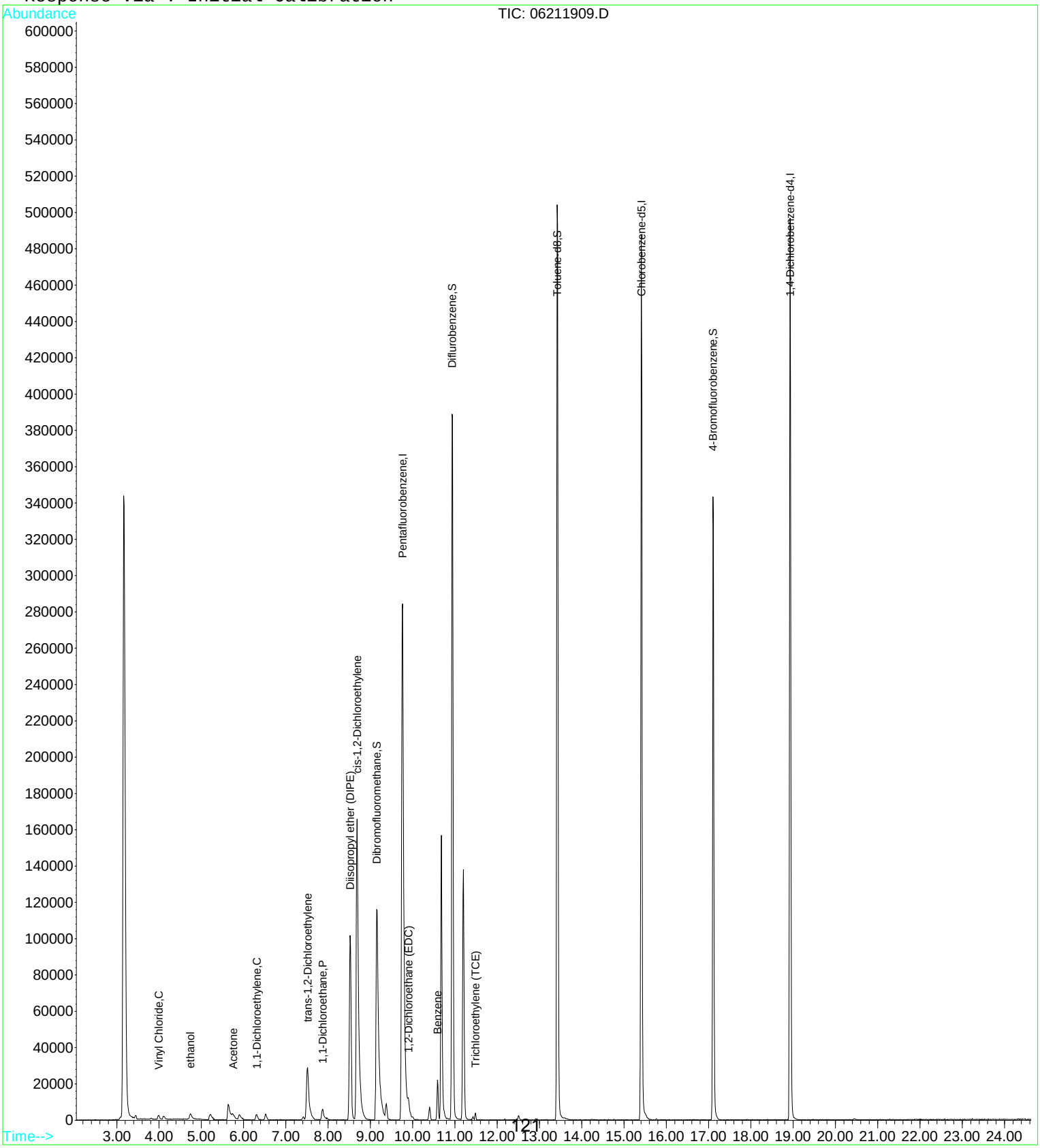
APPROVED
By Stuart Sigman at 8:40 am, Jul 01, 2019

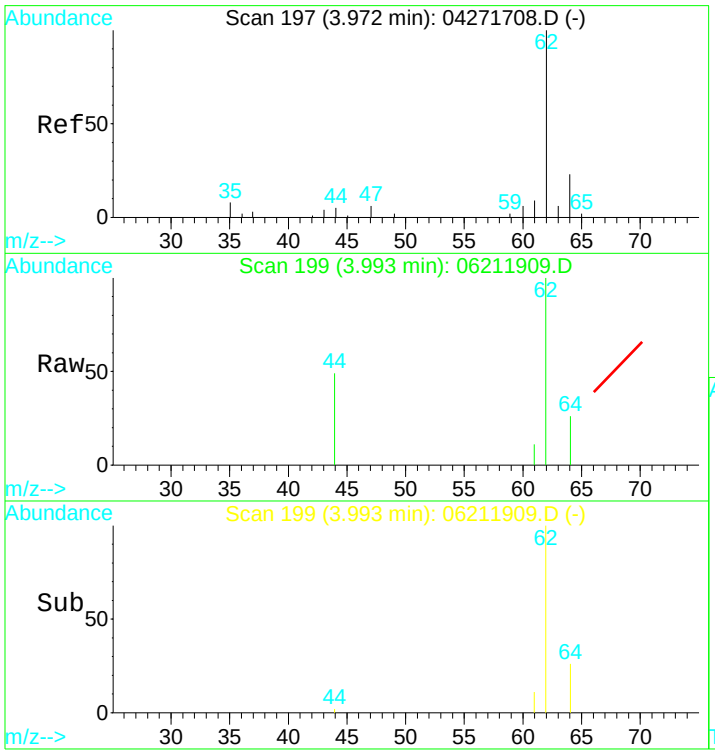
(#) = qualifier out of range (m) = manual integration
06211909.D 061719.M Mon Jun 24 11:00:58 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211909.D Vial: 6
Acq On : 21 Jun 2019 11:25 am Operator: LM/MS9
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:37 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

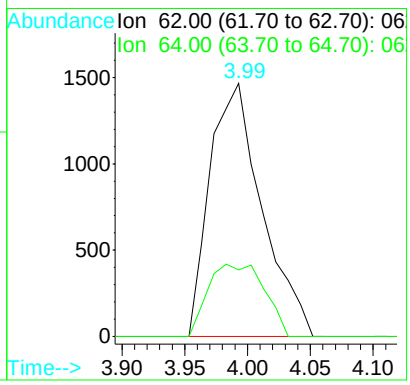


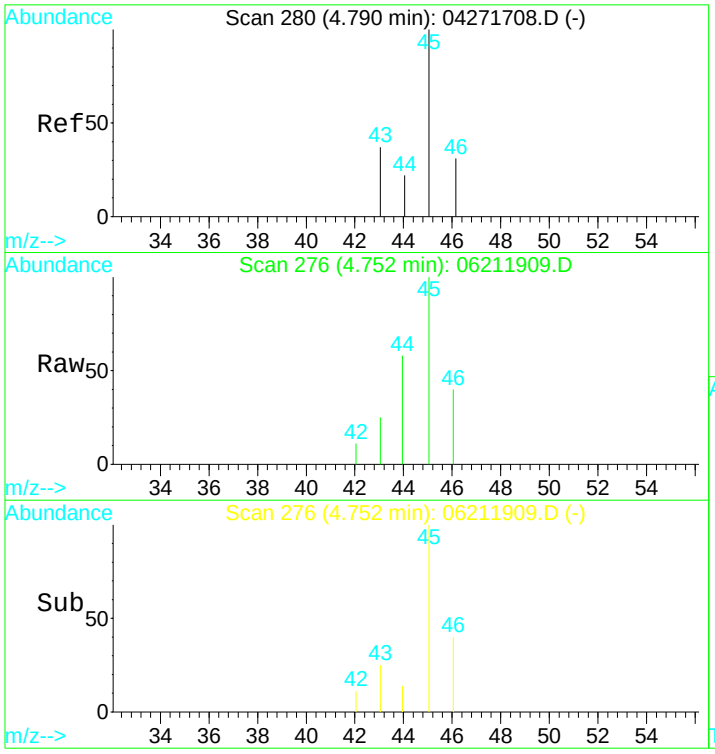


#4
Vinyl Chloride
Concen: 2.81 ug/l
RT: 3.99 min Scan# 199
Delta R.T. 0.02 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 62 Resp: 42196

Ion	Ratio	Lower	Upper
62	100		
64	0.0	25.7	38.5#

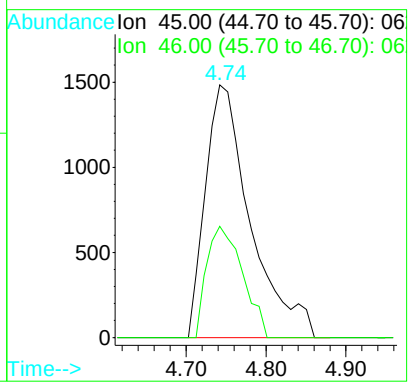


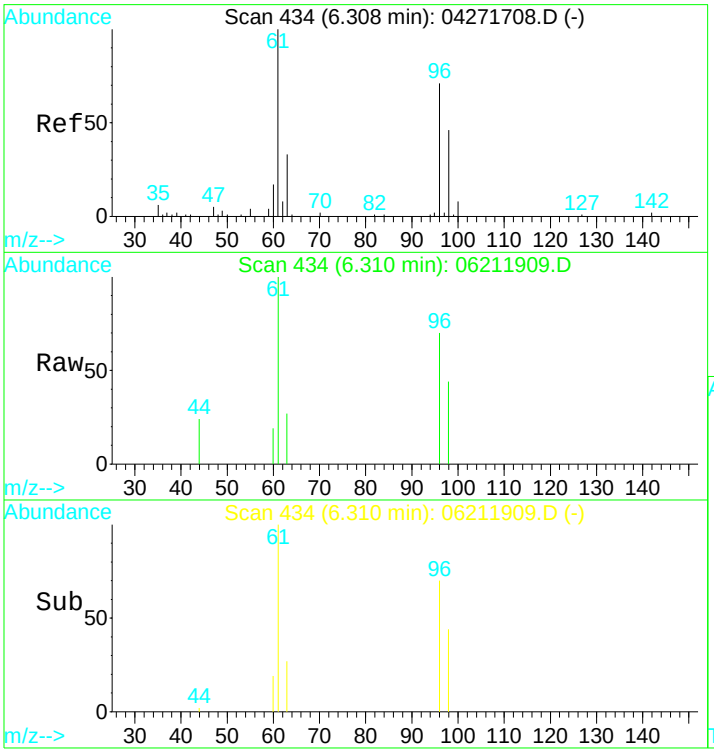


#7
ethanol
Concen: 1020.92 ug/l
RT: 4.75 min Scan# 276
Delta R.T. -0.01 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 45 Resp: 58100

Ion	Ratio	Lower	Upper
45	100		
46	0.0	0.0	0.0

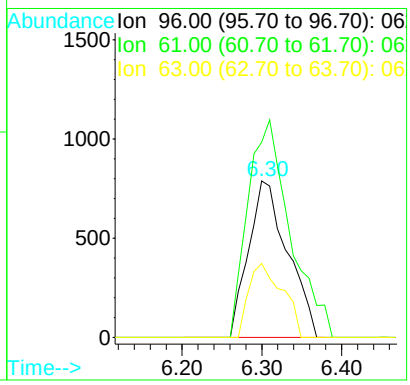


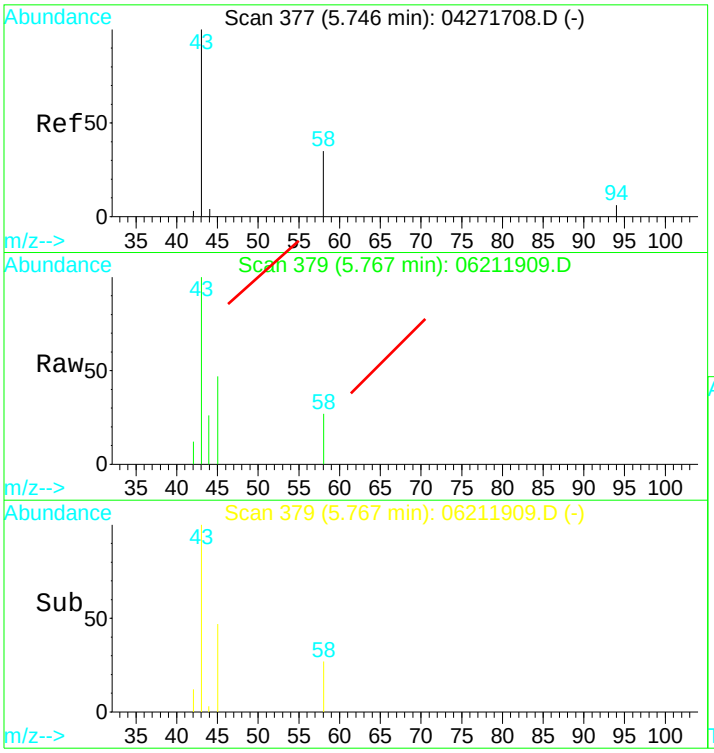


#12
1,1-Dichloroethylene
Concen: 1.21 ug/l
RT: 6.31 min Scan# 434
Delta R.T. 0.01 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 96 Resp: 26840

Ion	Ratio	Lower	Upper
96	100		
61	150.2	113.7	170.5
63	0.0	37.9	56.9#

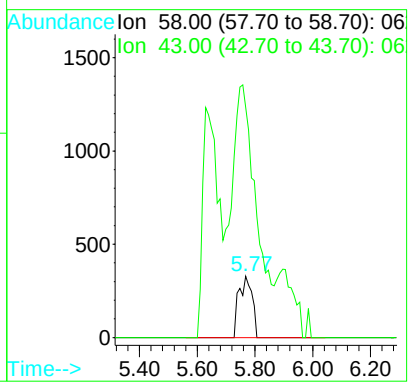


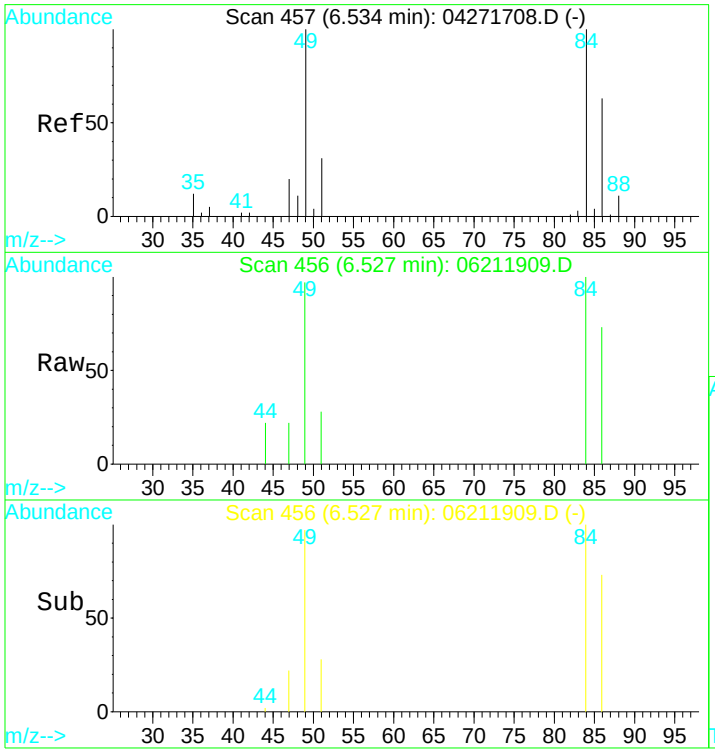


#13
Acetone
Concen: 10.39 ug/l m
RT: 5.77 min Scan# 379
Delta R.T. 0.02 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 58 Resp: 10364

Ion	Ratio	Lower	Upper
58	100		
43	0.0	0.0	0.0

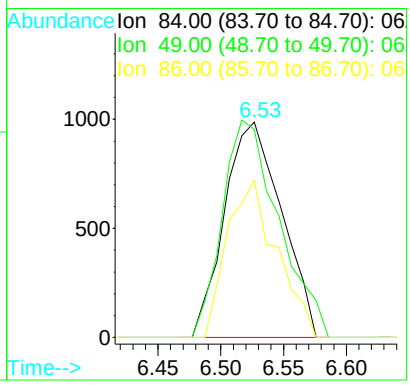


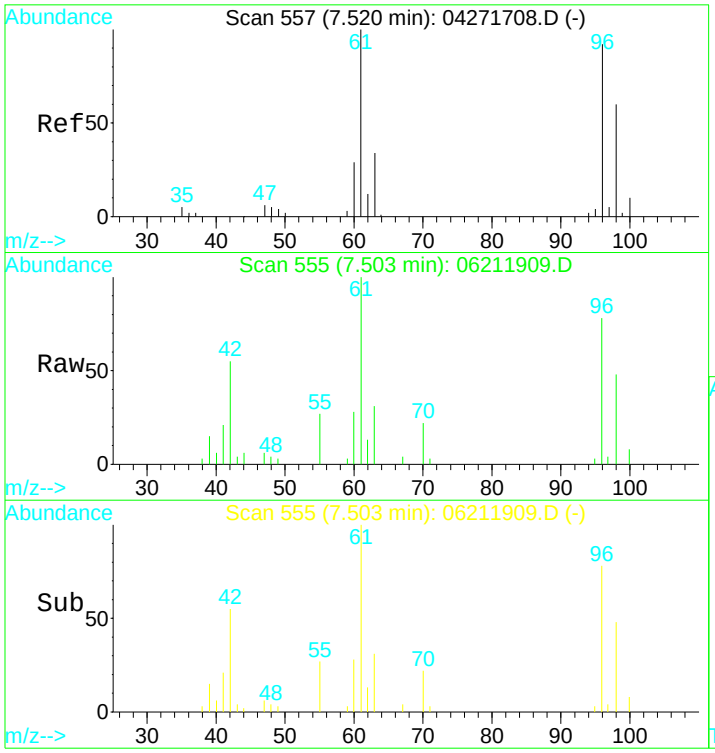


#14
Methylene Chloride
Concen: Below Cal
RT: 6.53 min Scan# 456
Delta R.T. 0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 84 Resp: 31186

Ion	Ratio	Lower	Upper
84	100		
49	99.8	76.6	114.8
86	0.0	51.8	77.8#

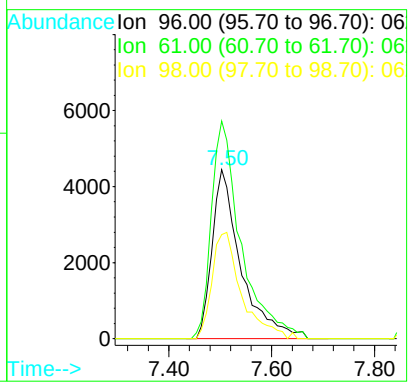


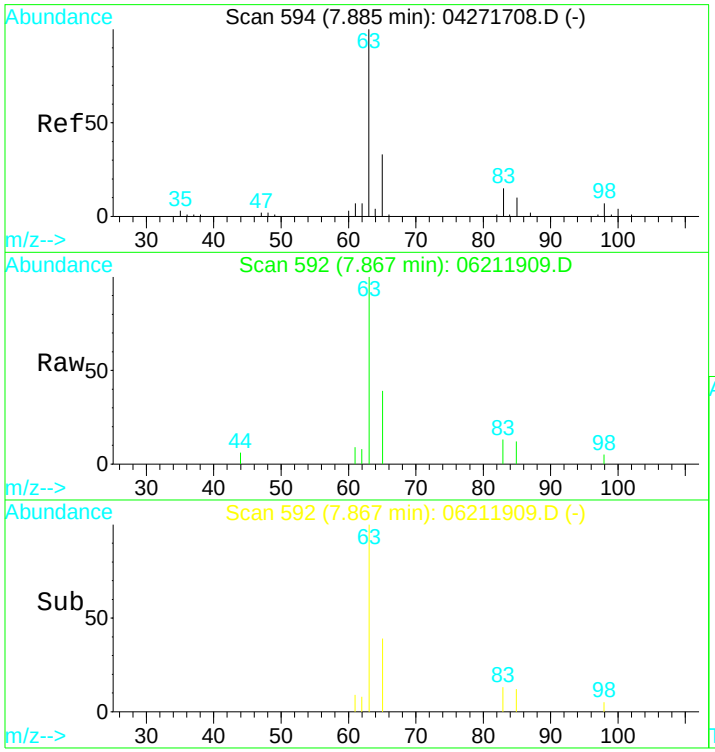


#16
trans-1,2-Dichloroethylene
Concen: 6.35 ug/L m
RT: 7.50 min Scan# 555
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 96 Resp: 172197

Ion	Ratio	Lower	Upper
96	100		
61	128.6	97.1	145.7
98	61.5	51.4	77.0

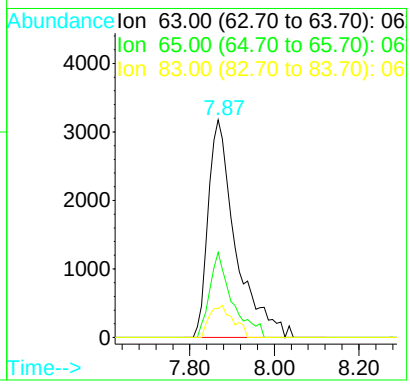


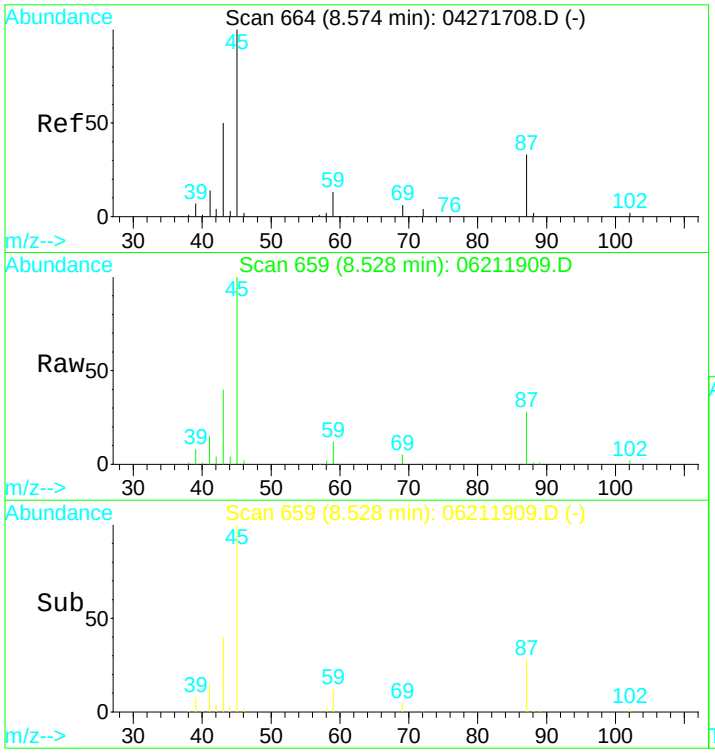


#18
1,1-Dichloroethane
Concen: 3.67 ug/L m
RT: 7.87 min Scan# 592
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 63 Resp: 142869

Ion	Ratio	Lower	Upper
63	100		
65	39.1	27.0	40.4
83	13.3	12.7	19.1

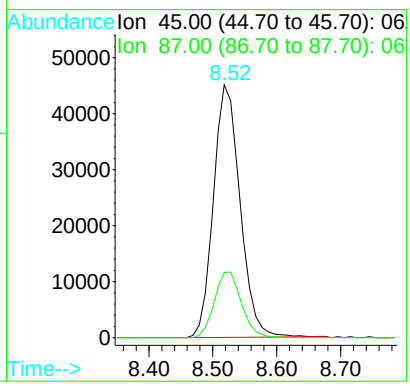


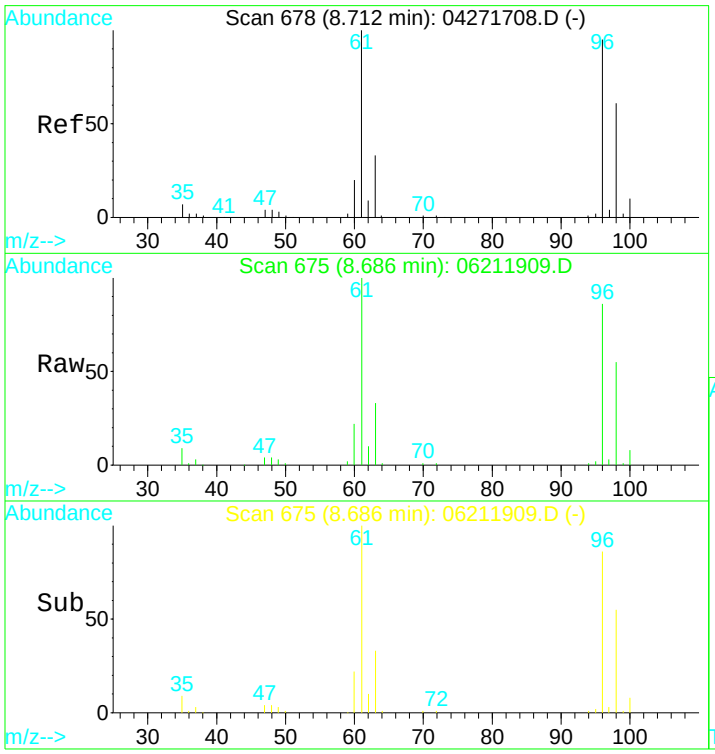


#21
Diisopropyl ether (DIPE)
Concen: 21.08 ug/l
RT: 8.52 min Scan# 659
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 45 Resp: 1304187

Ion	Ratio	Lower	Upper
45	100		
87	27.7	23.7	35.5

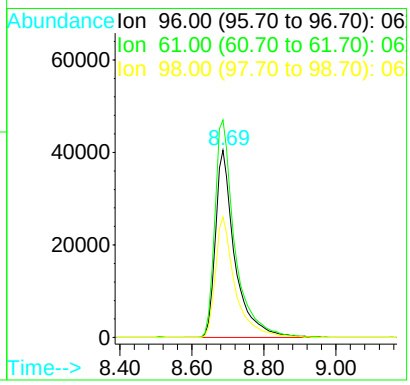


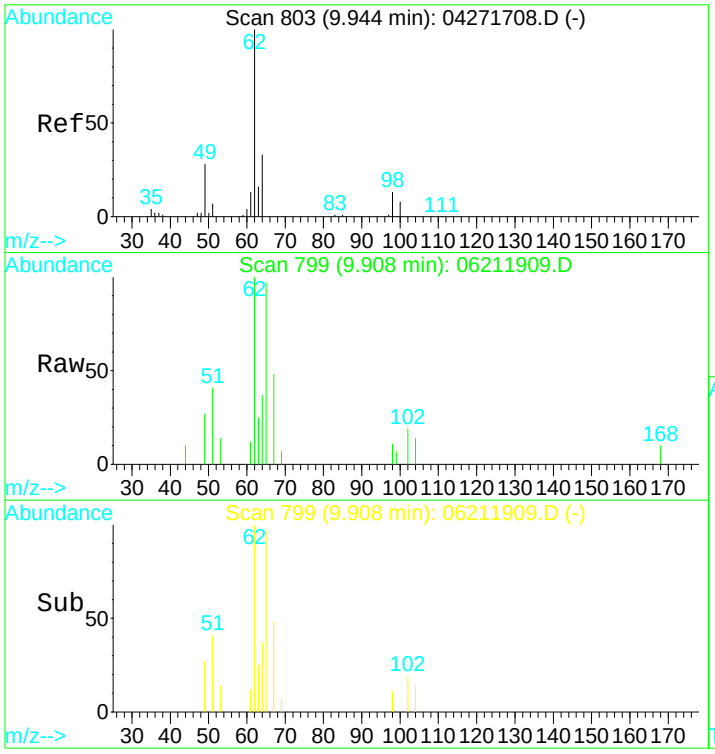


#22
cis-1,2-Dichloroethylene
Concen: 49.87 ug/l m
RT: 8.69 min Scan# 675
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 96 Resp: 1508307

Ion	Ratio	Lower	Upper
96	100		
61	112.4	88.8	133.2
98	60.9	51.4	77.0

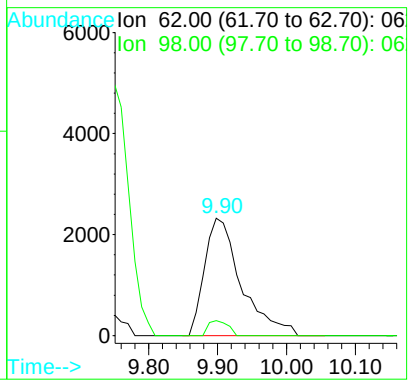


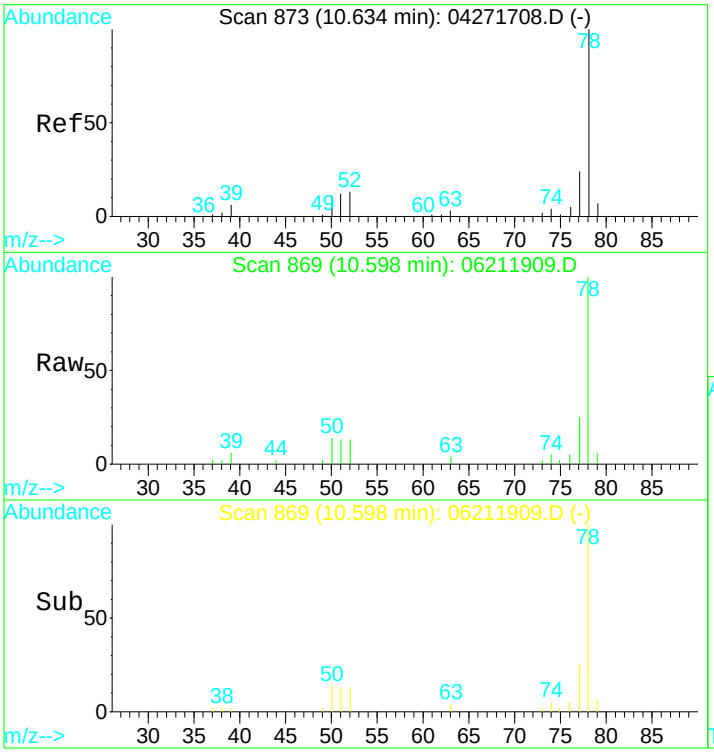


#28
1,2-Dichloroethane (EDC)
Concen: 3.23 ug/L
RT: 9.91 min Scan# 799
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 62 Resp: 86231

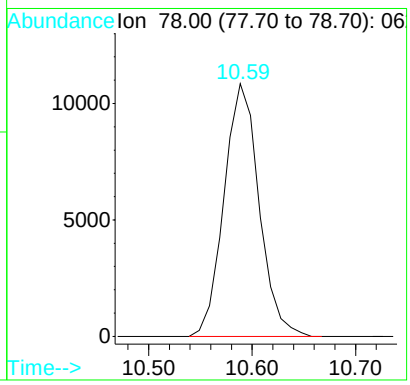
Ion	Ratio	Lower	Upper
62	100		
98	11.3	9.4	14.0

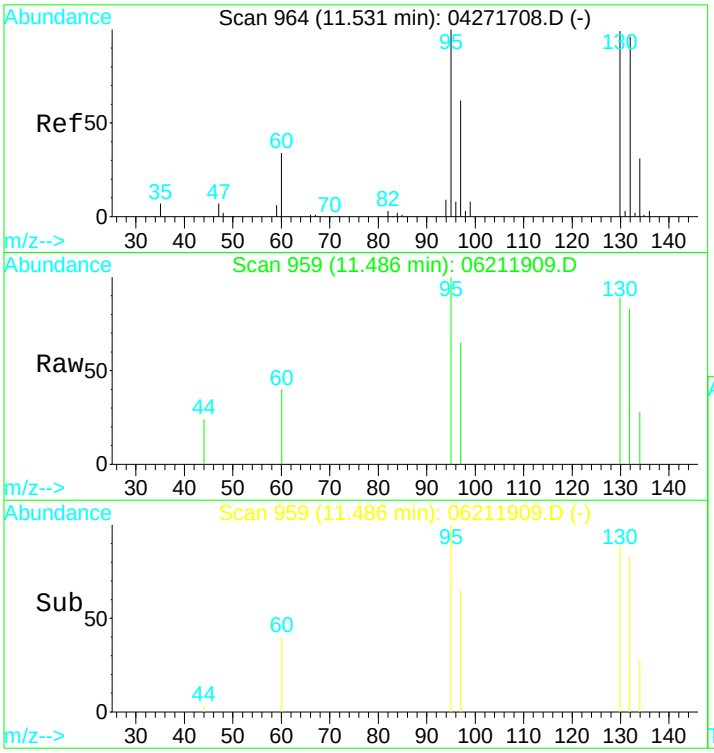




#32
Benzene
Concen: 2.26 ug/l
RT: 10.59 min Scan# 869
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 78 Resp: 255844

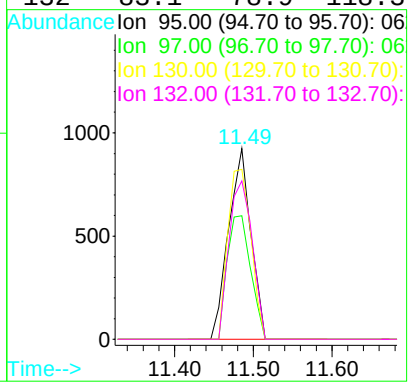




#37
Trichloroethylene (TCE)
Concen: 0.61 ug/L m
RT: 11.49 min Scan# 959
Delta R.T. -0.00 min
Lab File: 06211909.D
Acq: 21 Jun 2019 11:25 am

Tgt Ion: 95 Resp: 18208

Ion	Ratio	Lower	Upper
95	100		
97	64.7	51.2	76.8
130	89.1	80.3	120.5
132	83.1	78.9	118.3



REVIEWED
By Lindsey Michel at 11:49 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211910.D Vial: 8
Acq On : 21 Jun 2019 11:58 am Operator: LM/MS9
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:12 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2207399	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3514311	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1668233	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.15	113	1489337	53.37	ug/L	0.00
Spiked Amount 50.000			Recovery =	106.74%		
34) Diflurobenzene	10.94	114	4183387	52.51	ug/L	0.00
Spiked Amount 50.000			Recovery =	105.02%		
45) Toluene-d8	13.43	98	4323177	48.00	ug/L	0.00
Spiked Amount 50.000			Recovery =	96.00%		
63) 4-Bromofluorobenzene	17.11	95	1696364	48.71	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.42%		
Target Compounds						Qvalue
12) 1,1-Dichloroethylene	6.30	96	61609	2.79	ug/l	89
13) Acetone	5.74	58	9896m	9.99	ug/l	
14) Methylene Chloride	6.52	84	32275	Below Cal	#	64
16) trans-1,2-Dichloroethylene	7.50	96	37540	1.40	ug/L	91
18) 1,1-Dichloroethane	7.87	63	48078	1.24	ug/L	95
22) cis-1,2-Dichloroethylene	8.68	96	1026909m	34.21	ug/l	
37) Trichloroethylene (TCE)	11.49	95	48764	1.65	ug/L	96

m = MH

REVIEWED
By Lindsey Michel at 11:49 am, Jun 24, 2019

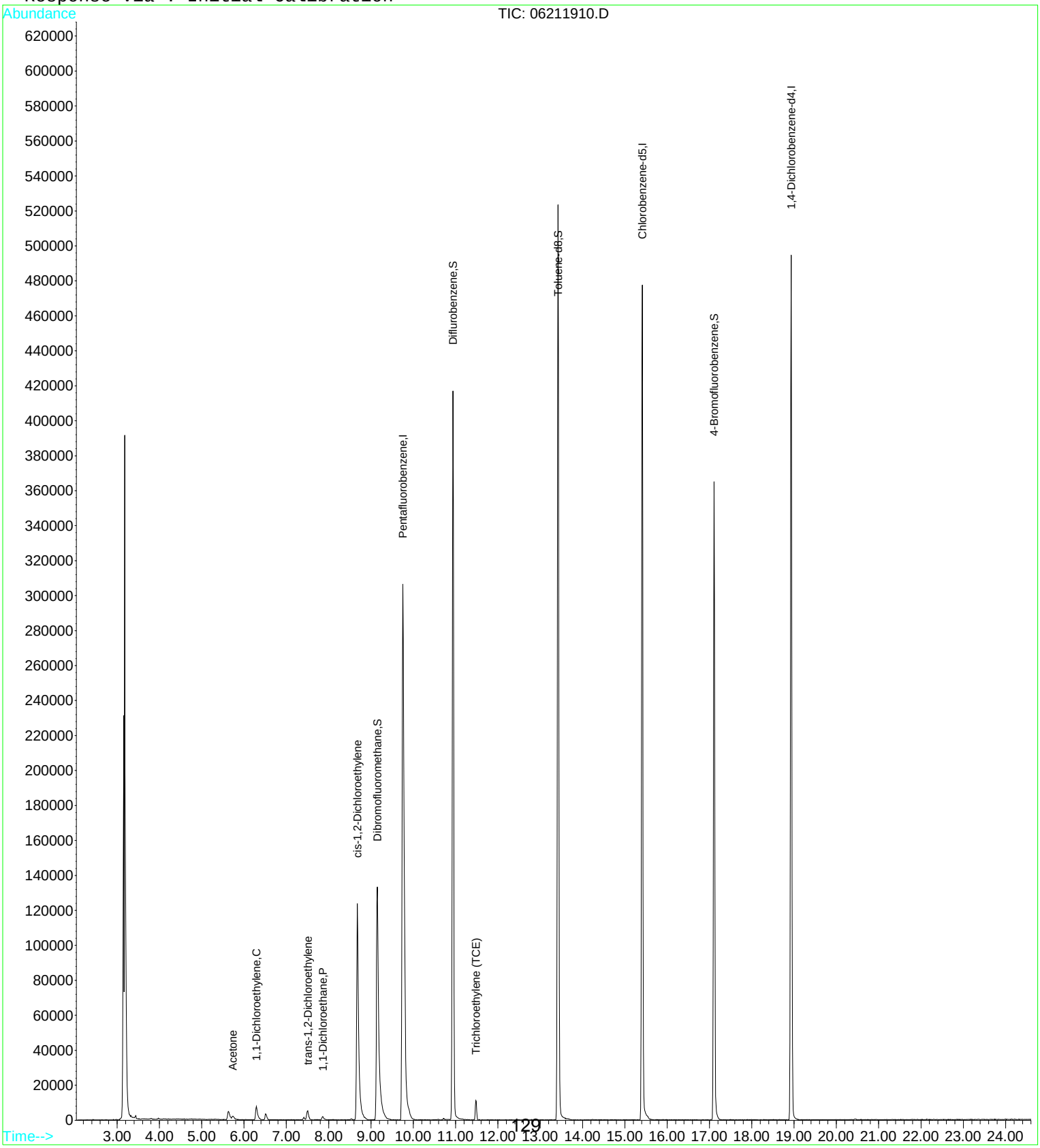
APPROVED
By Stuart Sigman at 8:47 am, Jul 01, 2019

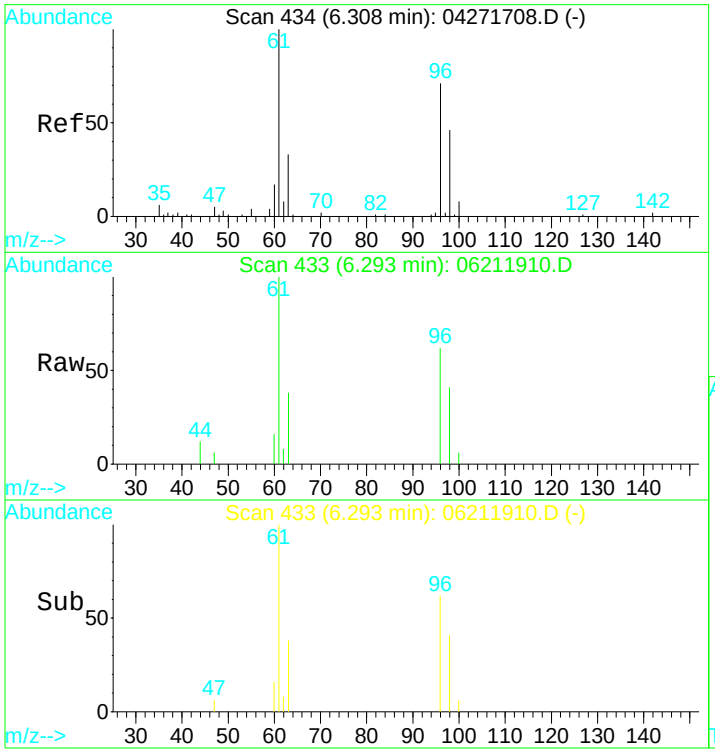
(#) = qualifier out of range (m) = manual integration
06211910.D 061719.M Mon Jun 24 11:01:04 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211910.D Vial: 8
Acq On : 21 Jun 2019 11:58 am Operator: LM/MS9
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:12 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

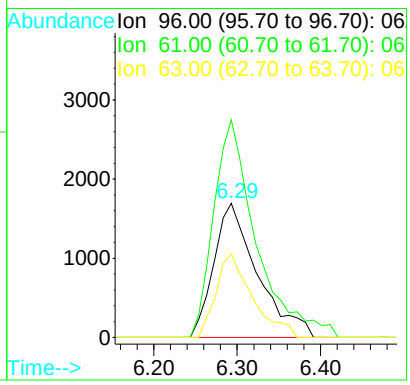


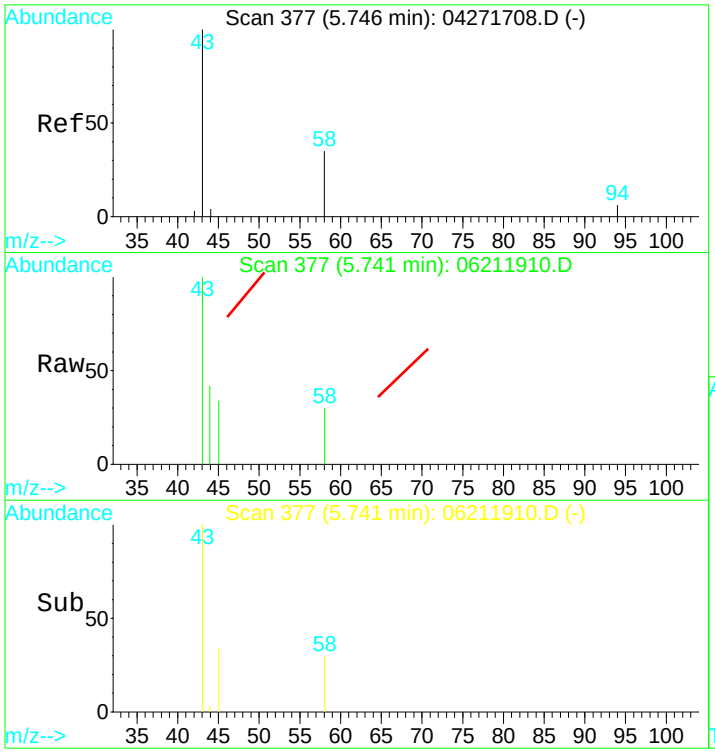


#12
1,1-Dichloroethylene
Concen: 2.79 ug/l
RT: 6.30 min Scan# 433
Delta R.T. -0.01 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 96 Resp: 61609

Ion	Ratio	Lower	Upper
96	100		
61	157.9	113.7	170.5
63	52.1	37.9	56.9

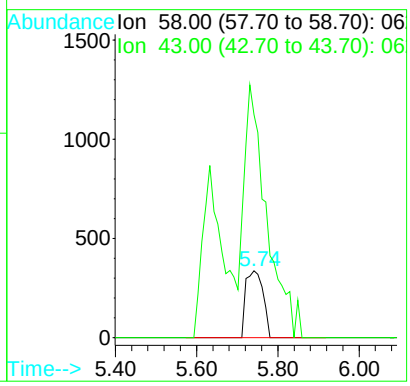


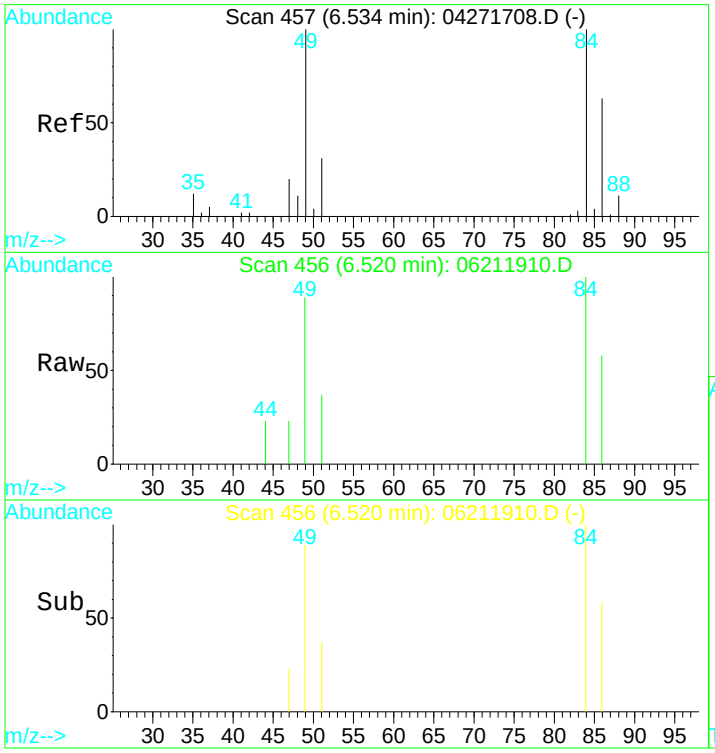


#13
Acetone
Concen: 9.99 ug/l m
RT: 5.74 min Scan# 377
Delta R.T. -0.01 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 58 Resp: 9896

Ion	Ratio	Lower	Upper
58	100		
43	0.0	0.0	0.0

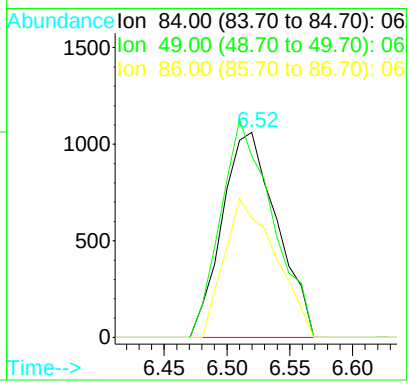


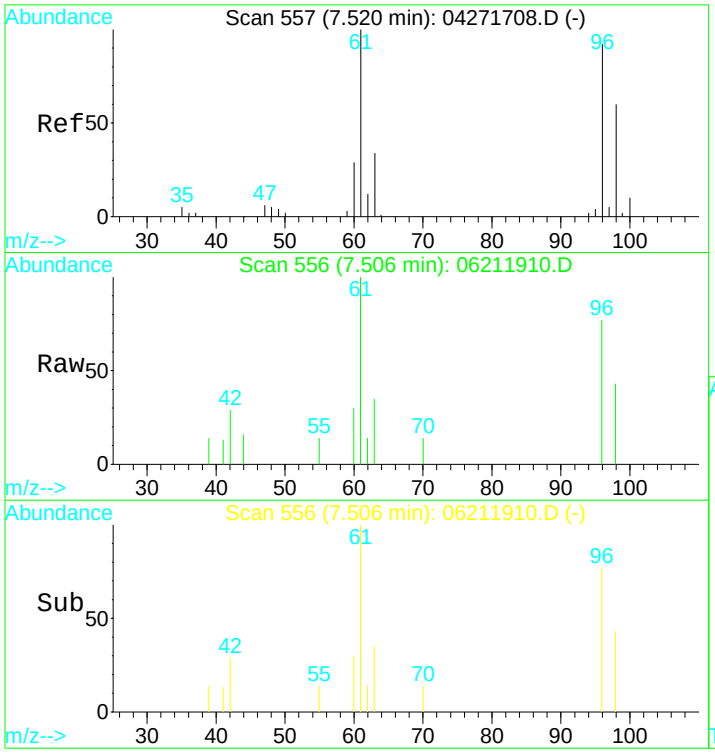


#14
Methylene Chloride
Concen: Below Cal
RT: 6.52 min Scan# 456
Delta R.T. -0.00 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 84 Resp: 32275

Ion	Ratio	Lower	Upper
84	100		
49	100.5	76.6	114.8
86	0.0	51.8	77.8#

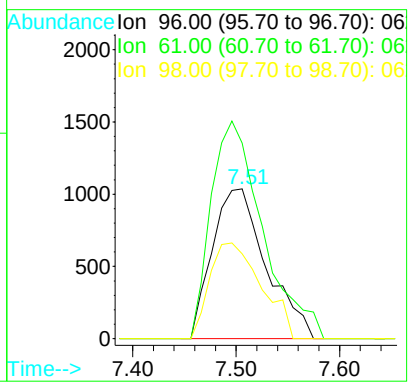


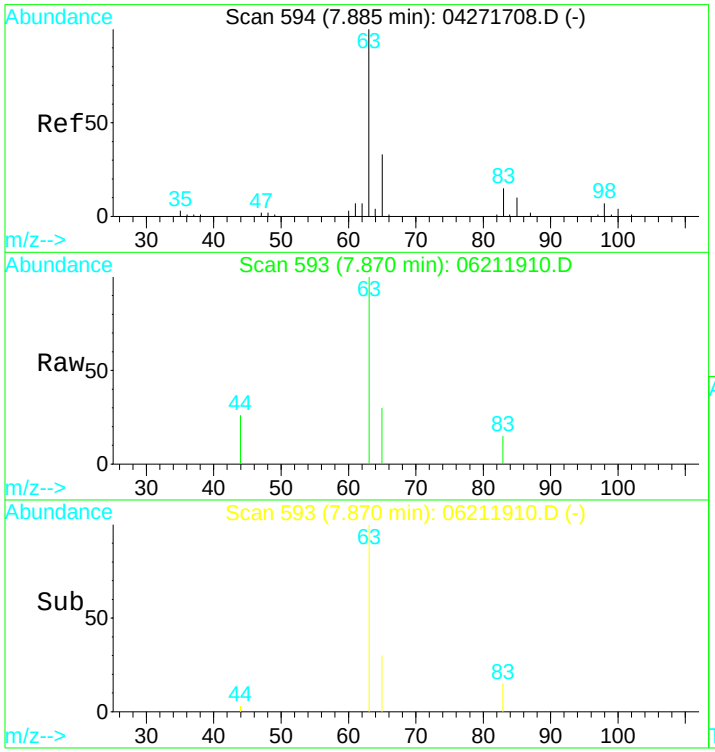


#16
trans-1,2-Dichloroethylene
Concen: 1.40 ug/L
RT: 7.50 min Scan# 556
Delta R.T. -0.00 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 96 Resp: 37540

Ion	Ratio	Lower	Upper
96	100		
61	130.4	97.1	145.7
98	56.6	51.4	77.0

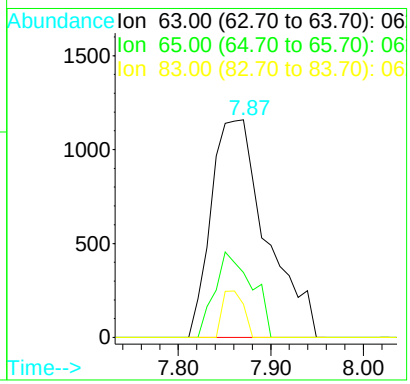


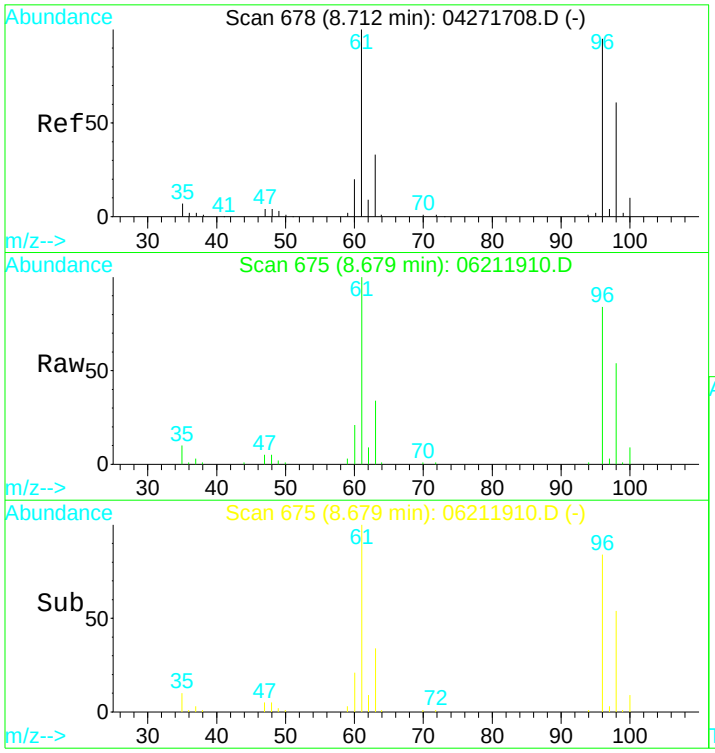


#18
1,1-Dichloroethane
Concen: 1.24 ug/L
RT: 7.87 min Scan# 593
Delta R.T. -0.00 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 63 Resp: 48078

Ion	Ratio	Lower	Upper
63	100		
65	29.9	27.0	40.4
83	15.3	12.7	19.1

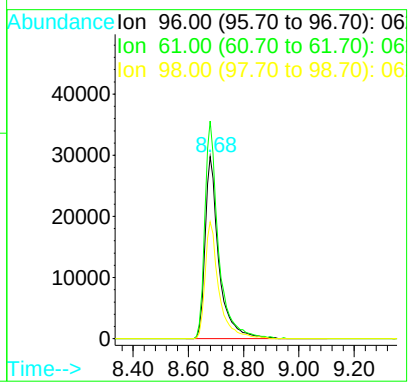


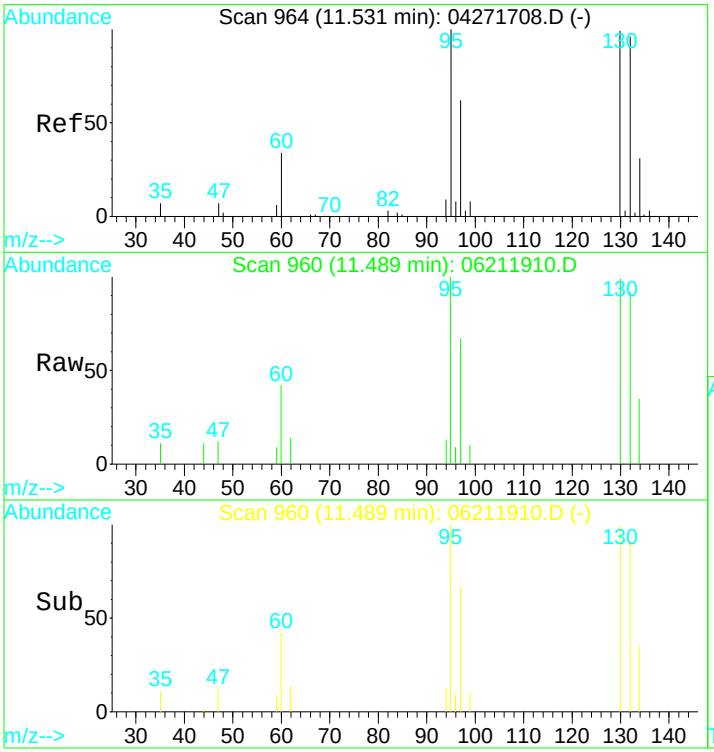


#22
cis-1,2-Dichloroethylene
Concen: 34.21 ug/l m
RT: 8.68 min Scan# 675
Delta R.T. -0.01 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 96 Resp: 1026909

Ion	Ratio	Lower	Upper
96	100		
61	113.4	88.8	133.2
98	61.6	51.4	77.0

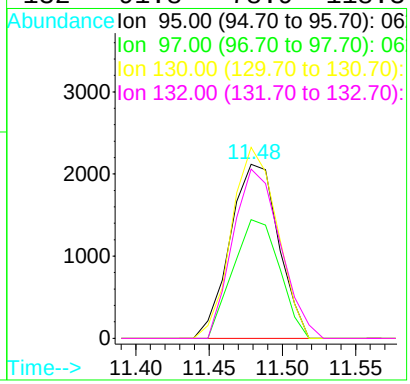




#37
Trichloroethylene (TCE)
Concen: 1.65 ug/L
RT: 11.49 min Scan# 960
Delta R.T. -0.00 min
Lab File: 06211910.D
Acq: 21 Jun 2019 11:58 am

Tgt Ion: 95 Resp: 48764

Ion	Ratio	Lower	Upper
95	100		
97	67.0	51.2	76.8
130	98.8	80.3	120.5
132	91.8	78.9	118.3



REVIEWED
By Lindsey Michel at 11:50 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211911.D Vial: 9
Acq On : 21 Jun 2019 12:29 pm Operator: LM/MS9
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:13 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2227812	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3462835	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1621361	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1447143	51.38	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.76%		
34) Diflurobenzene	10.94	114	4109056	51.10	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.20%		
45) Toluene-d8	13.43	98	4276244	48.18	ug/L	0.00
Spiked Amount 50.000			Recovery =	96.36%		
63) 4-Bromofluorobenzene	17.11	95	1656912	48.95	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.90%		
Target Compounds						Qvalue
12) 1,1-Dichloroethylene	6.31	96	47062	2.12	ug/l	89
13) Acetone	5.76	58	13592m	13.60	ug/l	
14) Methylene Chloride	6.52	84	31484	Below Cal	#	63
18) 1,1-Dichloroethane	7.87	63	44529	1.14	ug/L	93
22) cis-1,2-Dichloroethylene	8.69	96	204043	6.74	ug/l	94
37) Trichloroethylene (TCE)	11.49	95	477874	16.00	ug/L	98

m = MH

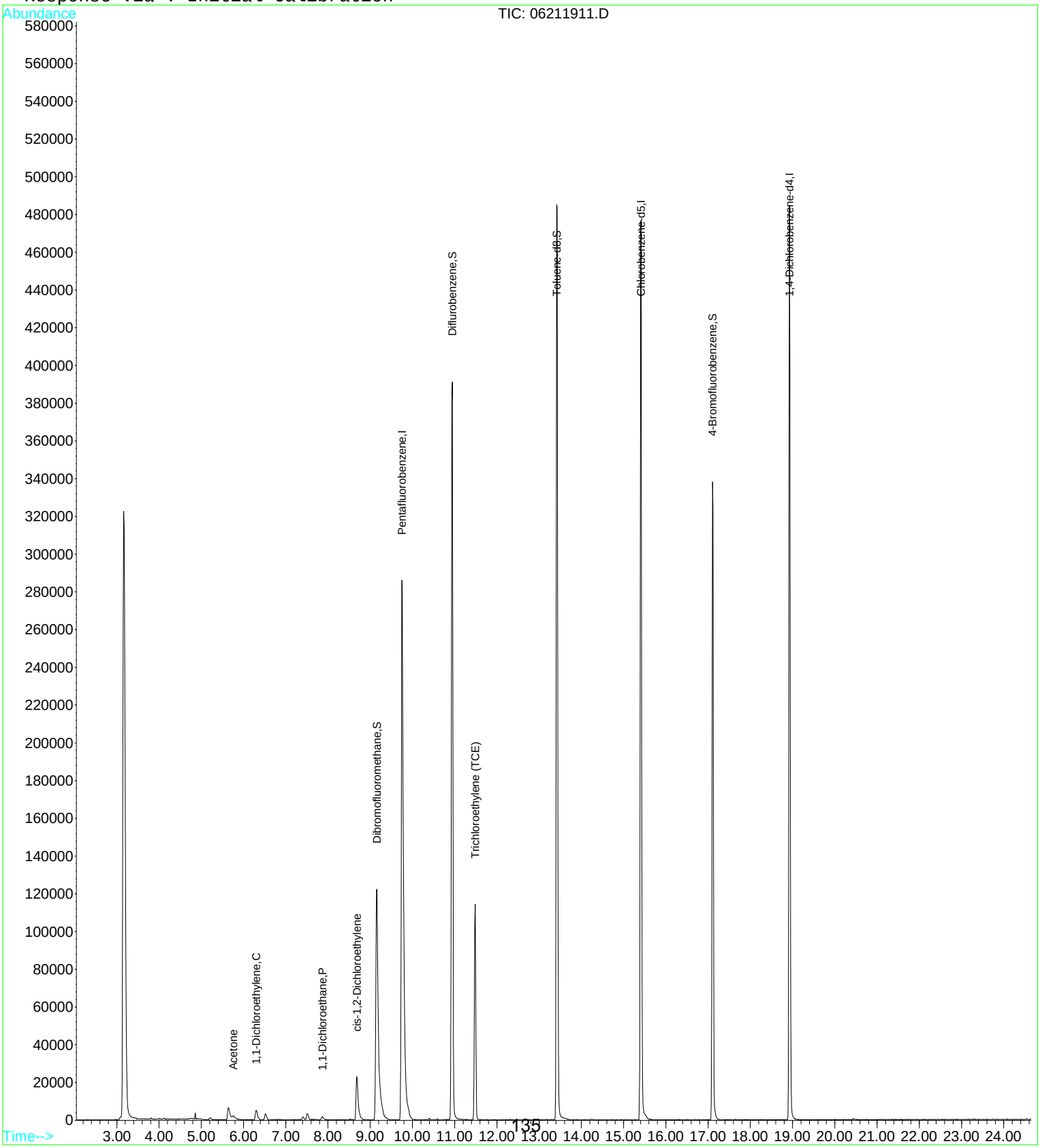
APPROVED
By Stuart Sigman at 7:54 am, Jul 01, 2019

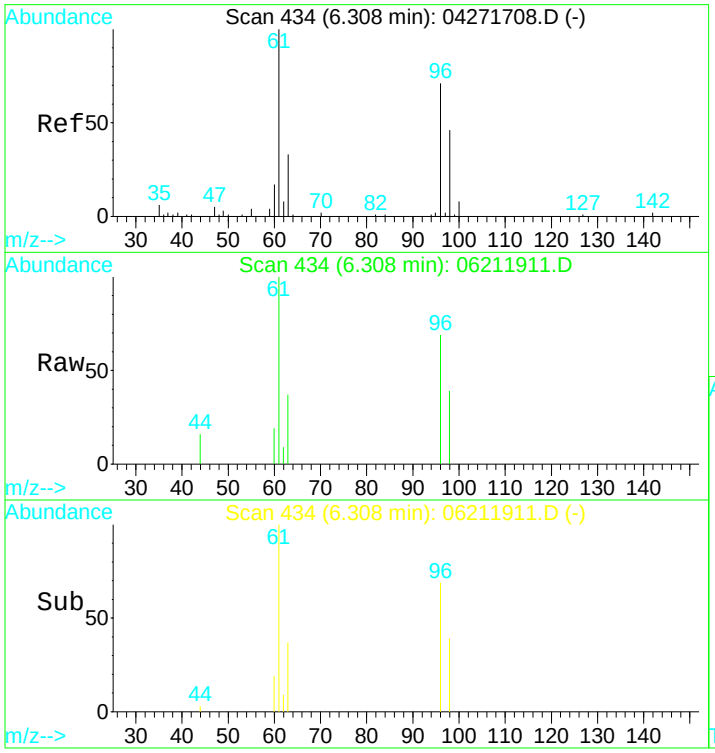
REVIEWED
By Lindsey Michel at 11:50 am, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211911.D Vial: 9
Acq On : 21 Jun 2019 12:29 pm Operator: LM/MS9
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:13 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

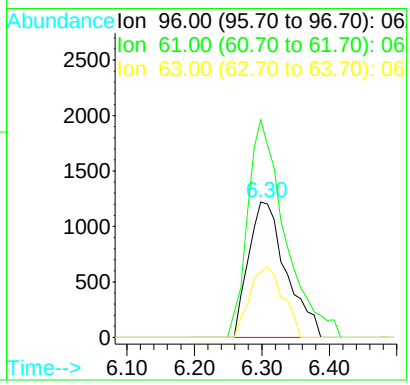


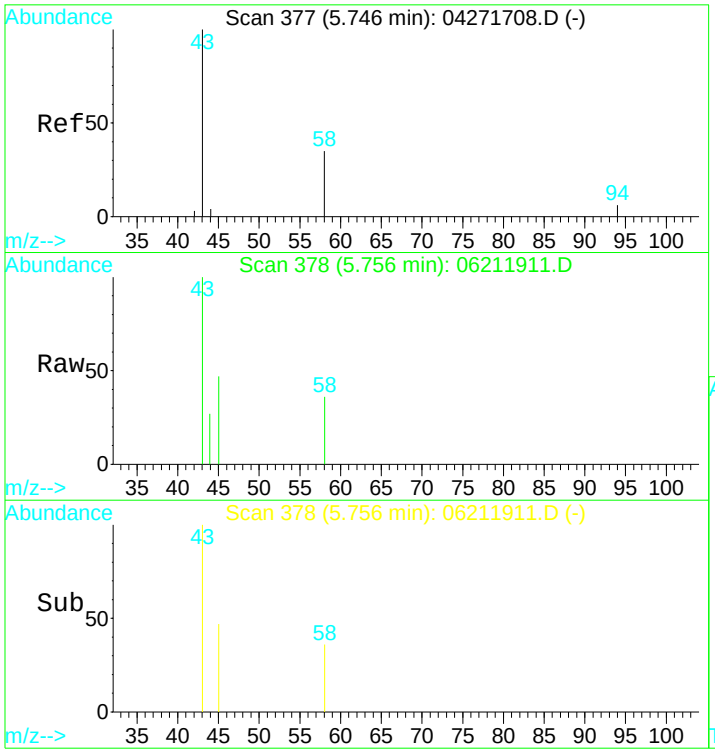


#12
1,1-Dichloroethylene
Concen: 2.12 ug/l
RT: 6.31 min Scan# 434
Delta R.T. 0.01 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 96 Resp: 47062

Ion	Ratio	Lower	Upper
96	100		
61	160.4	113.7	170.5
63	46.5	37.9	56.9

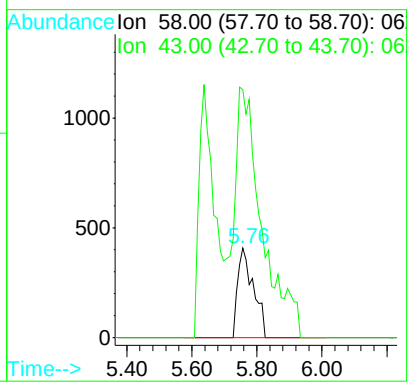


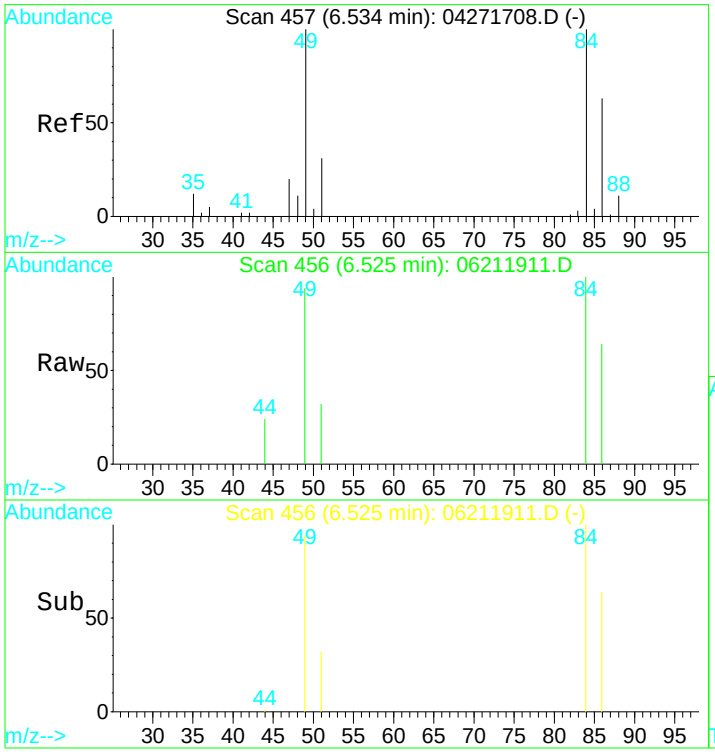


#13
Acetone
Concen: 13.60 ug/l m
RT: 5.76 min Scan# 378
Delta R.T. 0.01 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 58 Resp: 13592

Ion	Ratio	Lower	Upper
58	100		
43	0.0	0.0	0.0

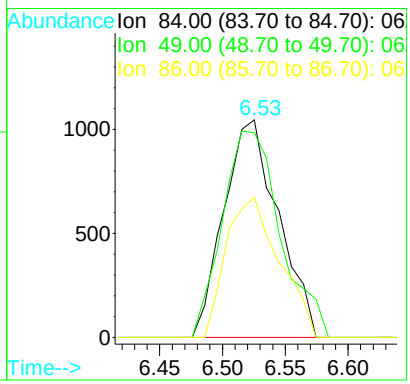


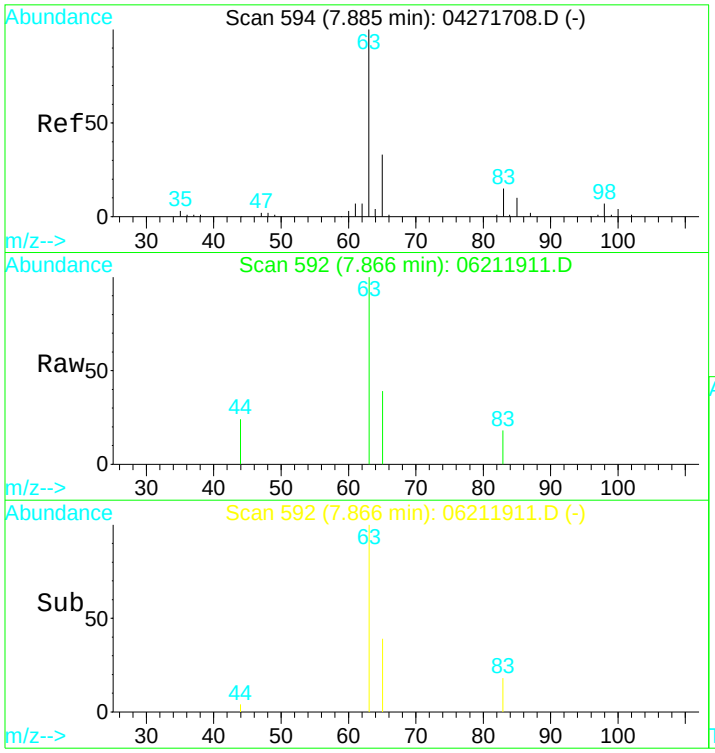


#14
Methylene Chloride
Concen: Below Cal
RT: 6.52 min Scan# 456
Delta R.T. 0.00 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 84 Resp: 31484

Ion	Ratio	Lower	Upper
84	100		
49	101.5	76.6	114.8
86	0.0	51.8	77.8#

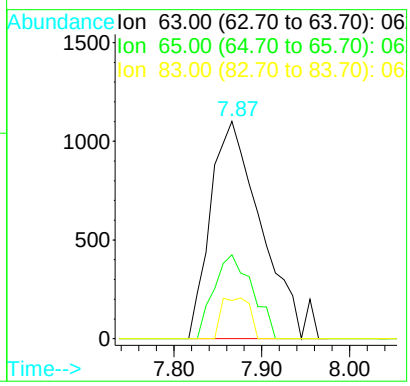


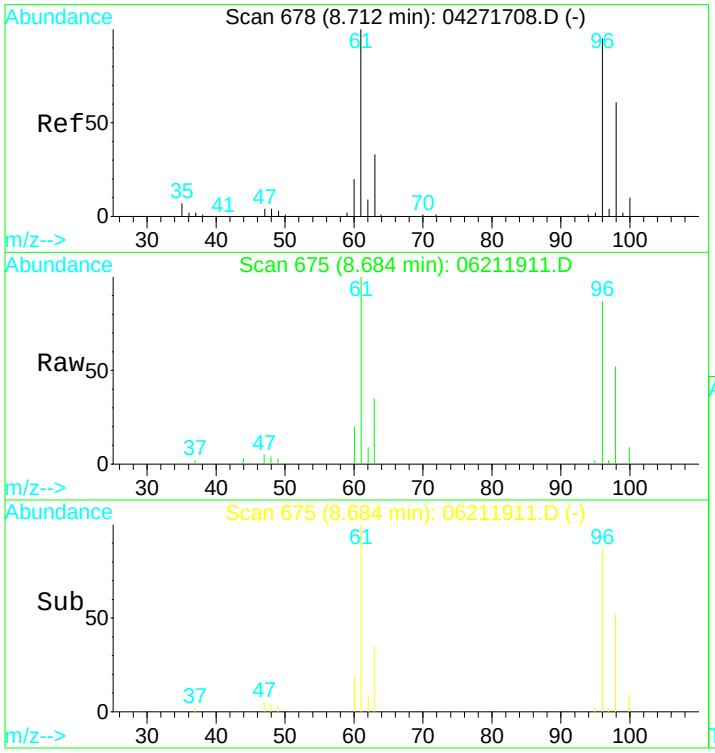


#18
1,1-Dichloroethane
Concen: 1.14 ug/L
RT: 7.87 min Scan# 592
Delta R.T. 0.00 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 63 Resp: 44529

Ion	Ratio	Lower	Upper
63	100		
65	38.6	27.0	40.4
83	17.5	12.7	19.1

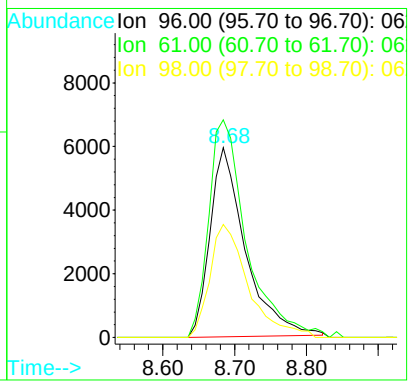


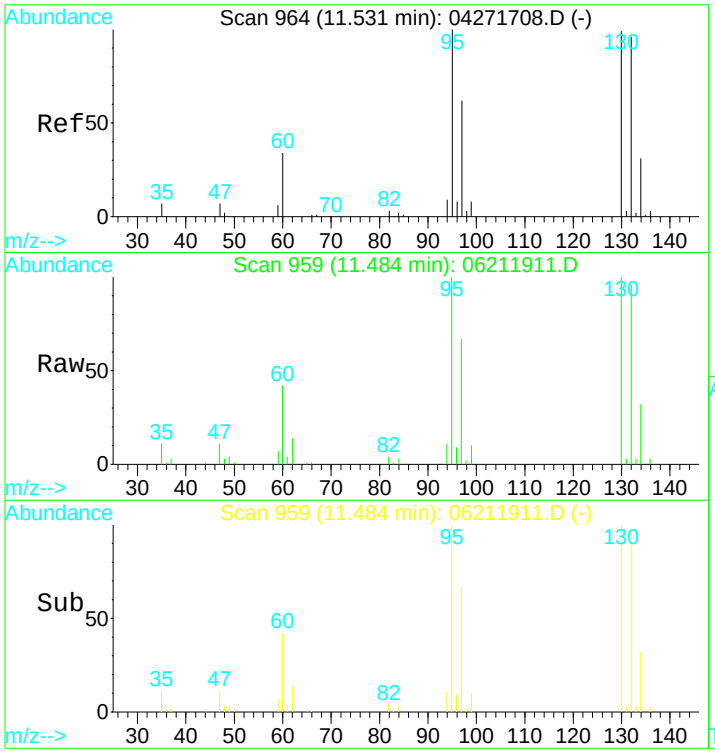


#22
cis-1,2-Dichloroethylene
Concen: 6.74 ug/l
RT: 8.69 min Scan# 675
Delta R.T. -0.00 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 96 Resp: 204043

Ion	Ratio	Lower	Upper
96	100		
61	120.7	88.8	133.2
98	64.6	51.4	77.0

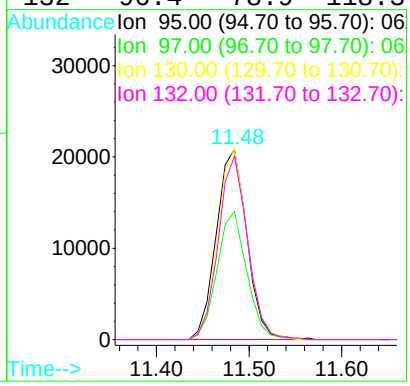




#37
Trichloroethylene (TCE)
Concen: 16.00 ug/L
RT: 11.49 min Scan# 959
Delta R.T. -0.00 min
Lab File: 06211911.D
Acq: 21 Jun 2019 12:29 pm

Tgt Ion: 95 Resp: 477874

Ion	Ratio	Lower	Upper
95	100		
97	67.3	51.2	76.8
130	100.3	80.3	120.5
132	96.4	78.9	118.3



REVIEWED
By Lindsey Michel at 11:52 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211912.D Vial: 10
Acq On : 21 Jun 2019 1:01 pm Operator: LM/MS9
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:14 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2228059	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3443990	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1626868	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1464657	52.00	ug/L	0.00
Spiked Amount 50.000			Recovery =	104.00%		
34) Diflurobenzene	10.94	114	4084984	50.80	ug/L	0.00
Spiked Amount 50.000			Recovery =	101.60%		
45) Toluene-d8	13.43	98	4313899	48.87	ug/L	0.00
Spiked Amount 50.000			Recovery =	97.74%		
63) 4-Bromofluorobenzene	17.11	95	1644228	48.41	ug/L	0.00
Spiked Amount 50.000			Recovery =	96.82%		
Target Compounds						Qvalue
12) 1,1-Dichloroethylene	6.31	96	48590	2.18	ug/l	84
13) Acetone	5.76	58	7240m	7.24	ug/l	
14) Methylene Chloride	6.53	84	29461	Below Cal	#	63
21) Diisopropyl ether (DIPE)	8.53	45	70916	1.14	ug/l	89
22) cis-1,2-Dichloroethylene	8.69	96	29870	0.99	ug/l #	62
37) Trichloroethylene (TCE)	11.49	95	29904	1.00	ug/L	93

m = MH

APPROVED
By Stuart Sigman at 7:58 am, Jul 01, 2019

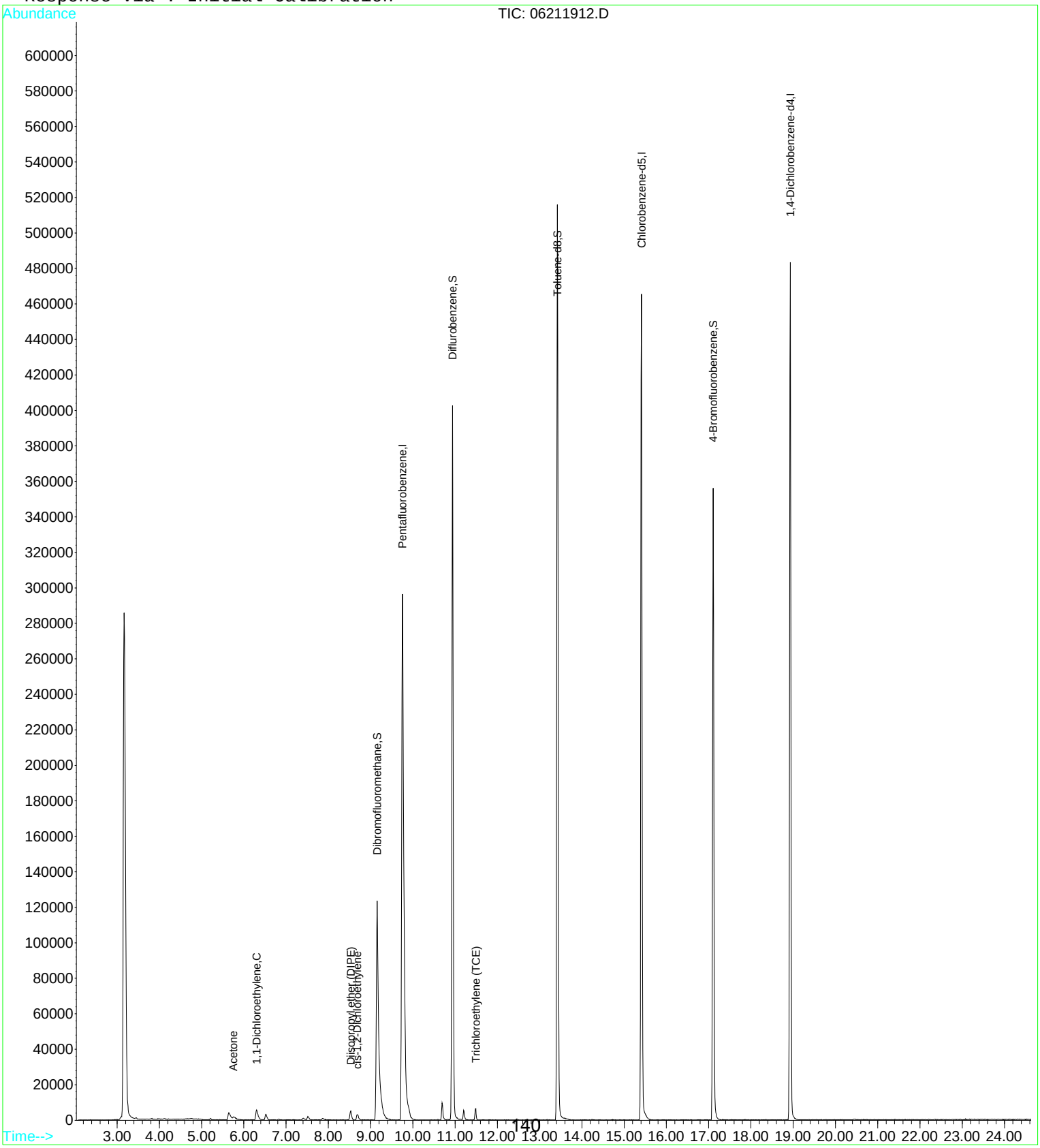
REVIEWED
By Lindsey Michel at 11:53 am, Jun 24, 2019

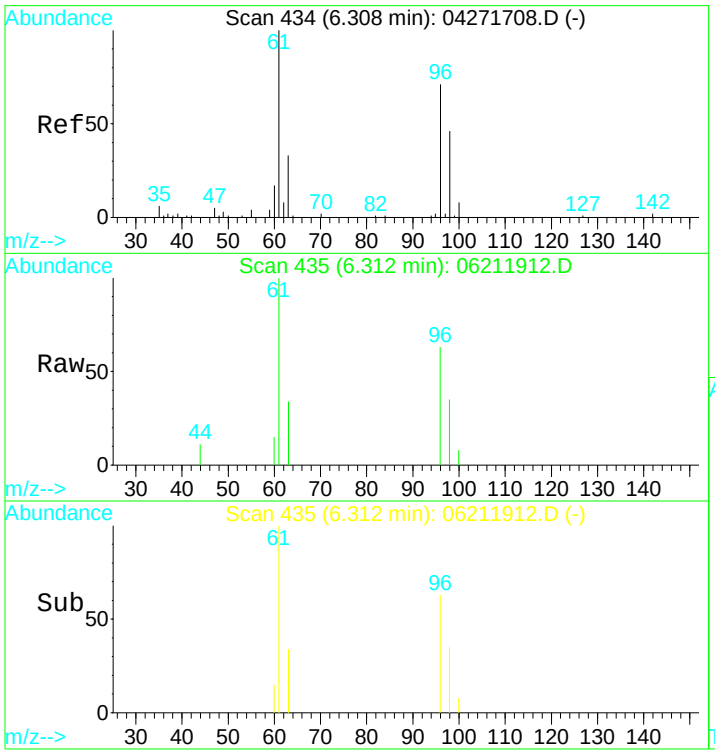
(#) = qualifier out of range (m) = manual integration
06211912.D 061719.M Mon Jun 24 11:01:16 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211912.D Vial: 10
Acq On : 21 Jun 2019 1:01 pm Operator: LM/MS9
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:14 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

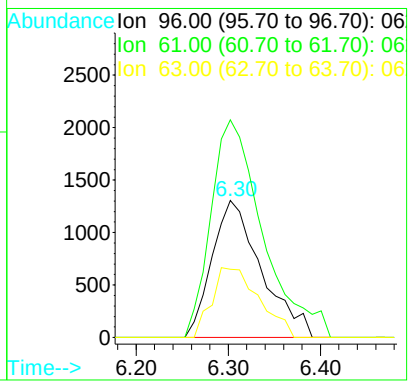


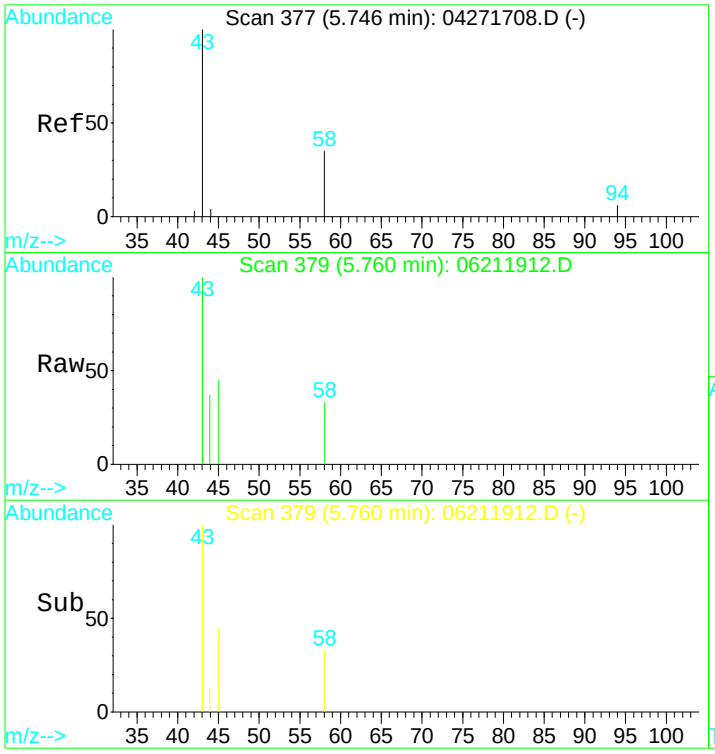


#12
1,1-Dichloroethylene
Concen: 2.18 ug/l
RT: 6.31 min Scan# 435
Delta R.T. 0.01 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 96 Resp: 48590

Ion	Ratio	Lower	Upper
96	100		
61	166.9	113.7	170.5
63	48.9	37.9	56.9

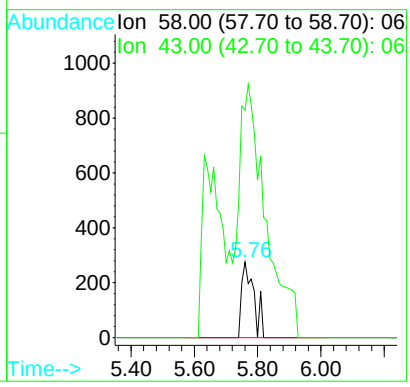


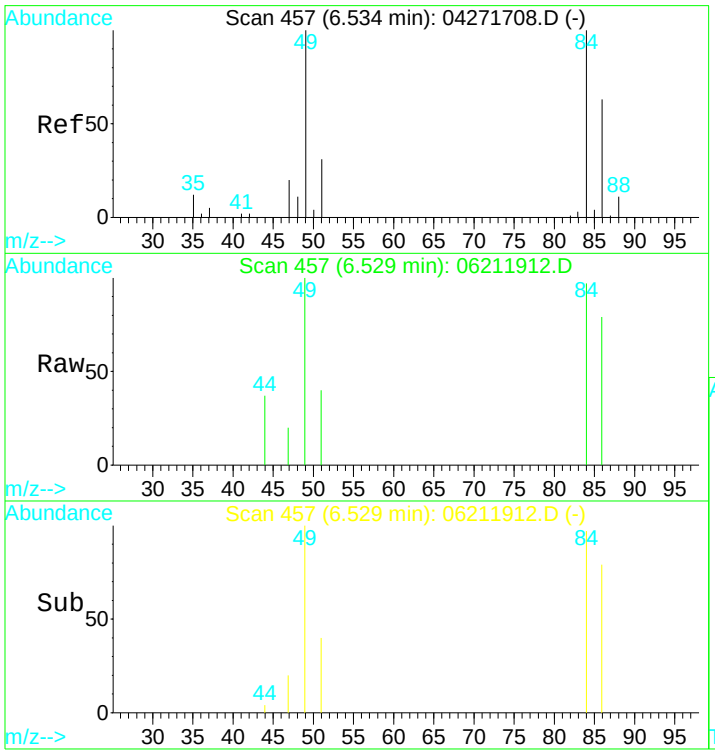


#13
Acetone
Concen: 7.24 ug/l m
RT: 5.76 min Scan# 379
Delta R.T. 0.01 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 58 Resp: 7240

Ion	Ratio	Lower	Upper
58	100		
43	0.0	0.0	0.0

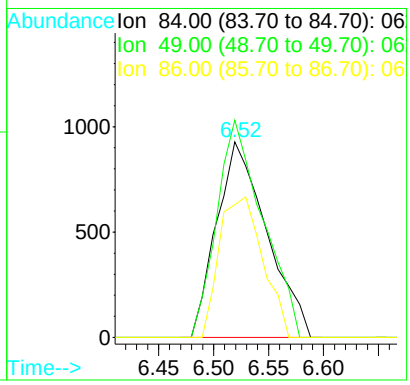


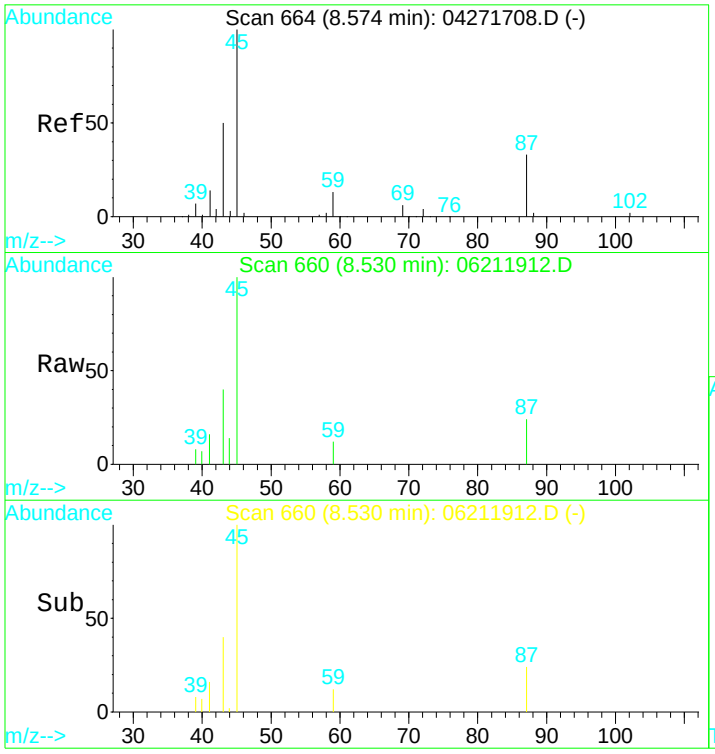


#14
Methylene Chloride
Concen: Below Cal
RT: 6.53 min Scan# 457
Delta R.T. 0.00 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 84 Resp: 29461

Ion	Ratio	Lower	Upper
84	100		
49	101.6	76.6	114.8
86	0.0	51.8	77.8#

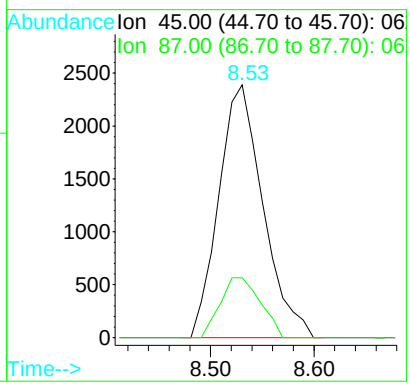


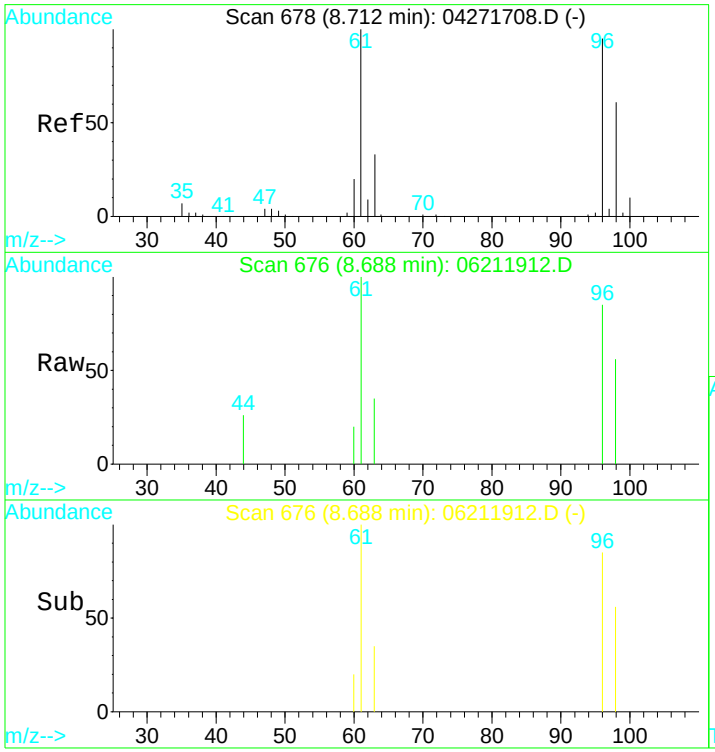


#21
Diisopropyl ether (DIPE)
Concen: 1.14 ug/l
RT: 8.53 min Scan# 660
Delta R.T. 0.00 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 45 Resp: 70916

Ion	Ratio	Lower	Upper
45	100		
87	23.7	23.7	35.5

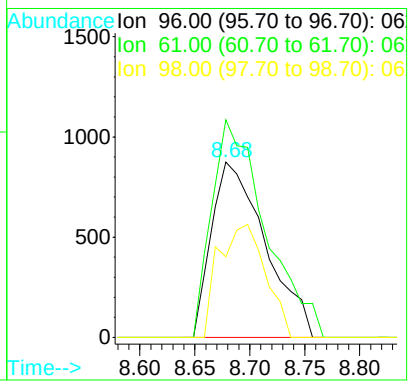


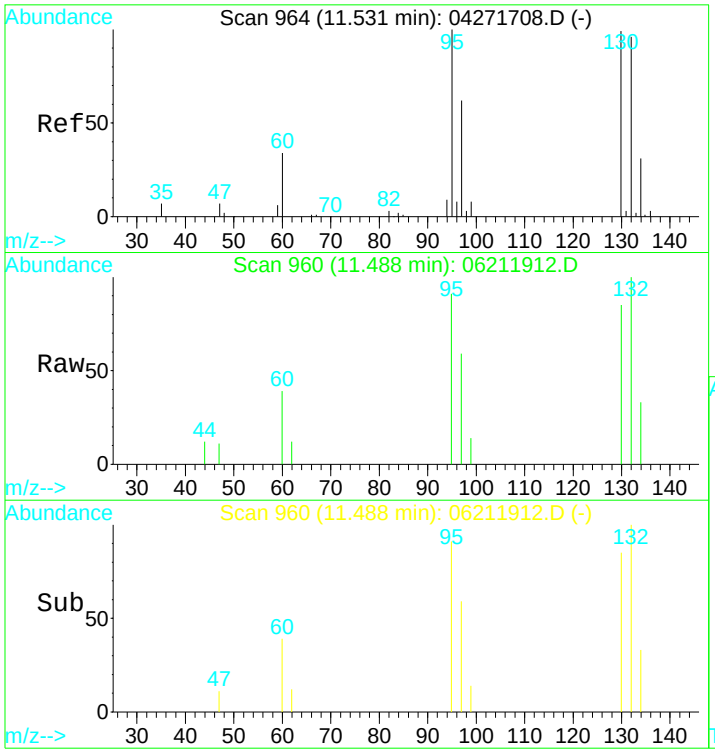


#22
cis-1,2-Dichloroethylene
Concen: 0.99 ug/l
RT: 8.69 min Scan# 676
Delta R.T. -0.00 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 96 Resp: 29870

Ion	Ratio	Lower	Upper
96	100		
61	124.0	88.8	133.2
98	0.0	51.4	77.0#

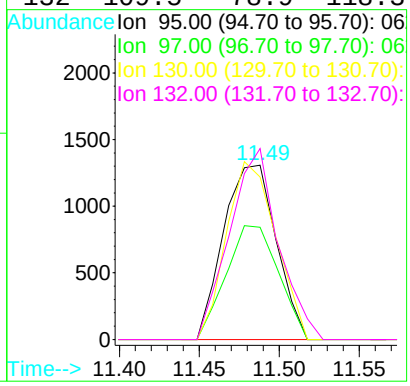




#37
Trichloroethylene (TCE)
Concen: 1.00 ug/L
RT: 11.49 min Scan# 960
Delta R.T. -0.00 min
Lab File: 06211912.D
Acq: 21 Jun 2019 1:01 pm

Tgt Ion: 95 Resp: 29904

Ion	Ratio	Lower	Upper
95	100		
97	64.4	51.2	76.8
130	93.1	80.3	120.5
132	109.5	78.9	118.3



REVIEWED
By Lindsey Michel at 11:54 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211913.D Vial: 11
Acq On : 21 Jun 2019 1:34 pm Operator: LM/MS9
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:39 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2138721	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.41	117	3359498	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.93	152	1529768	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1329830	49.18	ug/L	0.00
Spiked Amount 50.000			Recovery = 98.36%			
34) Diflurobenzene	10.94	114	3952691	51.21	ug/L	0.00
Spiked Amount 50.000			Recovery = 102.42%			
45) Toluene-d8	13.43	98	4207015	48.86	ug/L	0.00
Spiked Amount 50.000			Recovery = 97.72%			
63) 4-Bromofluorobenzene	17.11	95	1580846	49.50	ug/L	0.00
Spiked Amount 50.000			Recovery = 99.00%			
Target Compounds						Qvalue
4) Vinyl Chloride	4.00	62	115842	8.04	ug/l	91
7) ethanol	4.76	45	87369	1596.62	ug/l #	100
13) Acetone	5.78	58	13677m	14.25	ug/l	
14) Methylene Chloride	6.52	84	24699	Below Cal	#	65
16) trans-1,2-Dichloroethylene	7.51	96	613515	23.53	ug/L	97
21) Diisopropyl ether (DIPE)	8.52	45	1623820	27.30	ug/l	94
22) cis-1,2-Dichloroethylene	8.69	96	1607653m	55.28	ug/l	
28) 1,2-Dichloroethane (EDC)	9.91	62	117734	4.59	ug/L	94
32) Benzene	10.59	78	723378	6.65	ug/l	100
37) Trichloroethylene (TCE)	11.49	95	31558	1.10	ug/L	100

m = MH

APPROVED
By Stuart Sigman at 8:01 am, Jul 01, 2019

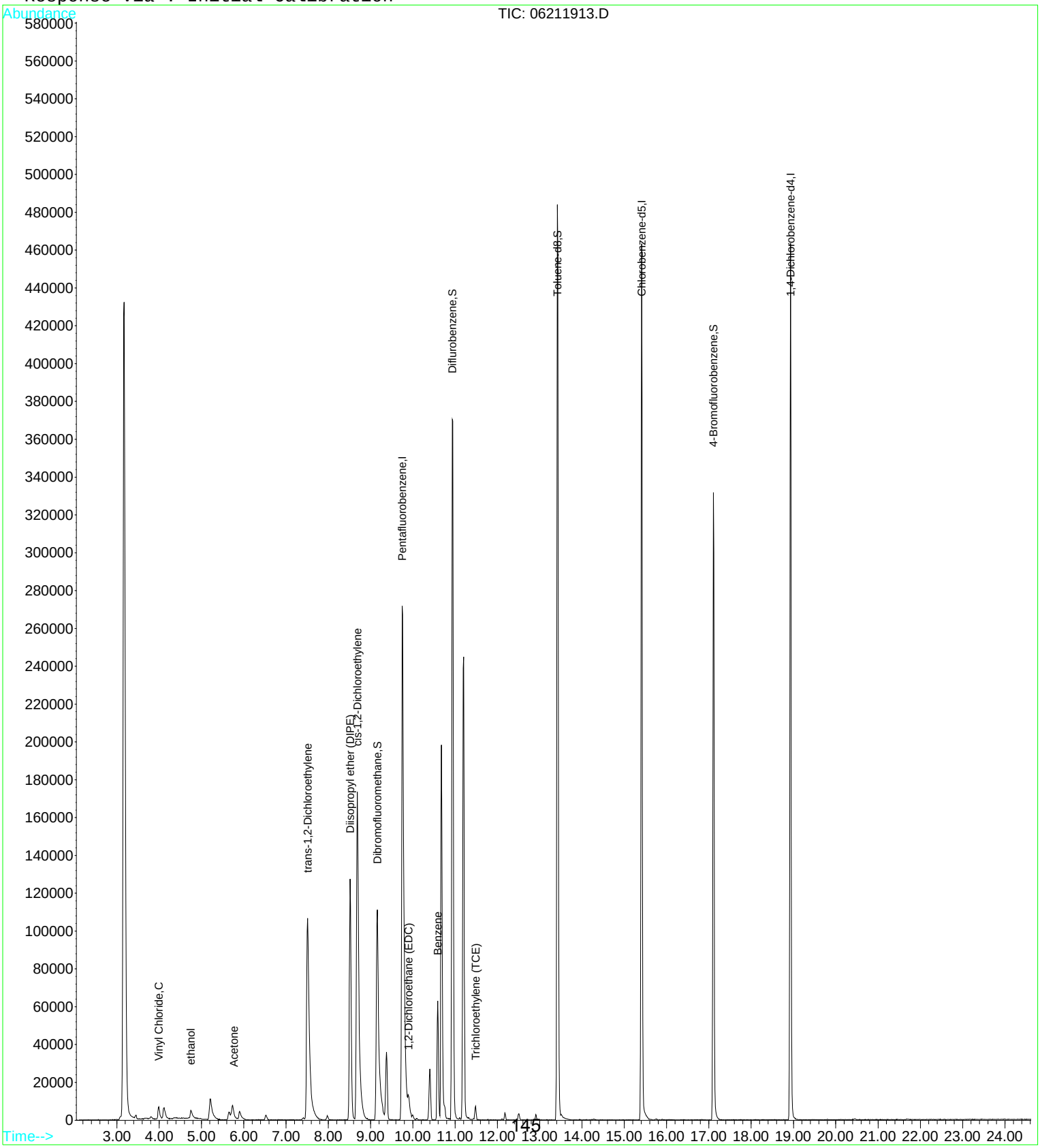
REVIEWED
By Lindsey Michel at 11:54 am, Jun 24, 2019

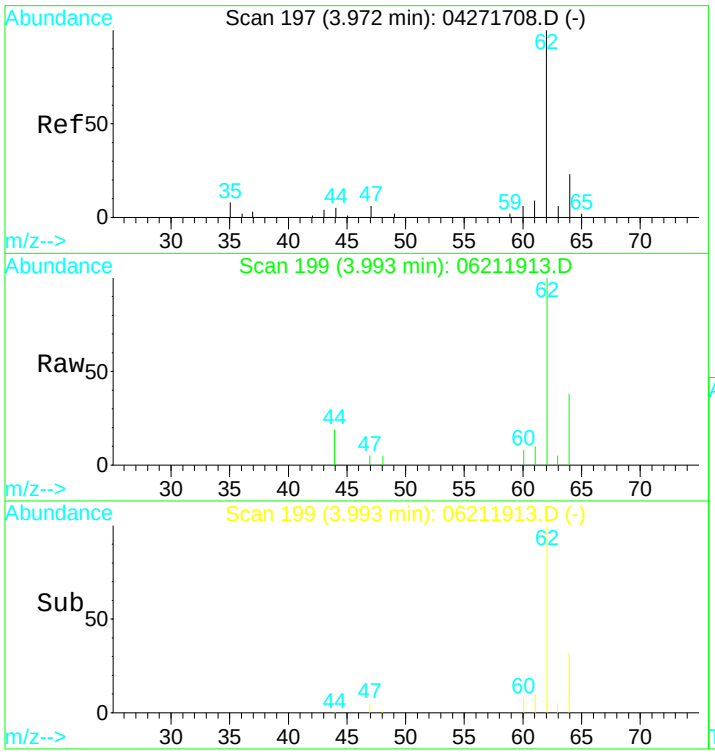
(#) = qualifier out of range (m) = manual integration
06211913.D 061719.M Mon Jun 24 11:01:23 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211913.D Vial: 11
Acq On : 21 Jun 2019 1:34 pm Operator: LM/MS9
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:39 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

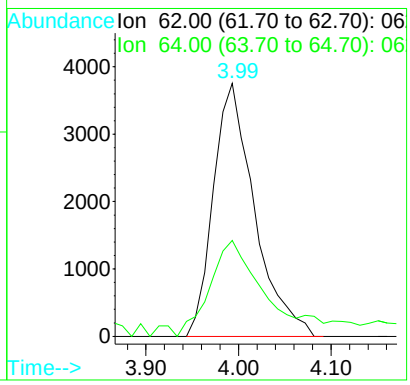


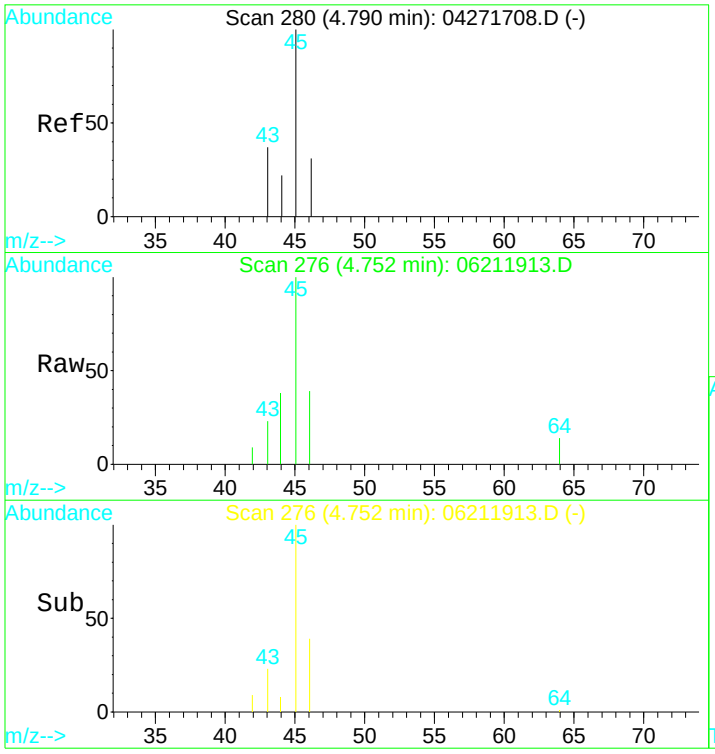


#4
Vinyl Chloride
Concen: 8.04 ug/l
RT: 4.00 min Scan# 199
Delta R.T. 0.02 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 62 Resp: 115842

Ion	Ratio	Lower	Upper
62	100		
64	37.4	25.7	38.5

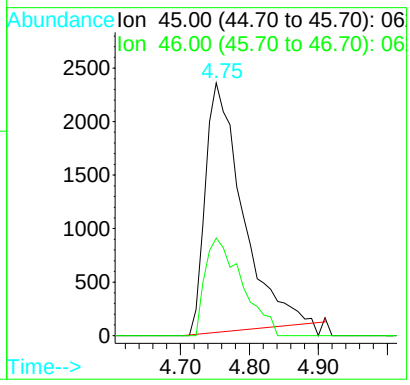


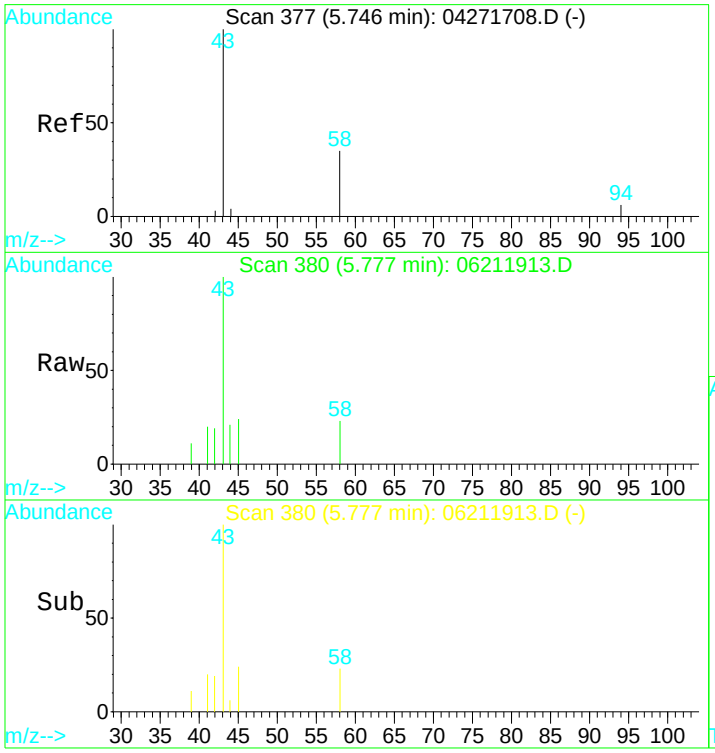


#7
ethanol
Concen: 1596.62 ug/l
RT: 4.76 min Scan# 276
Delta R.T. -0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 45 Resp: 87369

Ion	Ratio	Lower	Upper
45	100		
46	38.8	0.0	0.0#

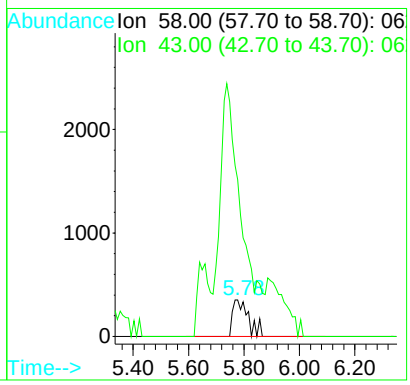


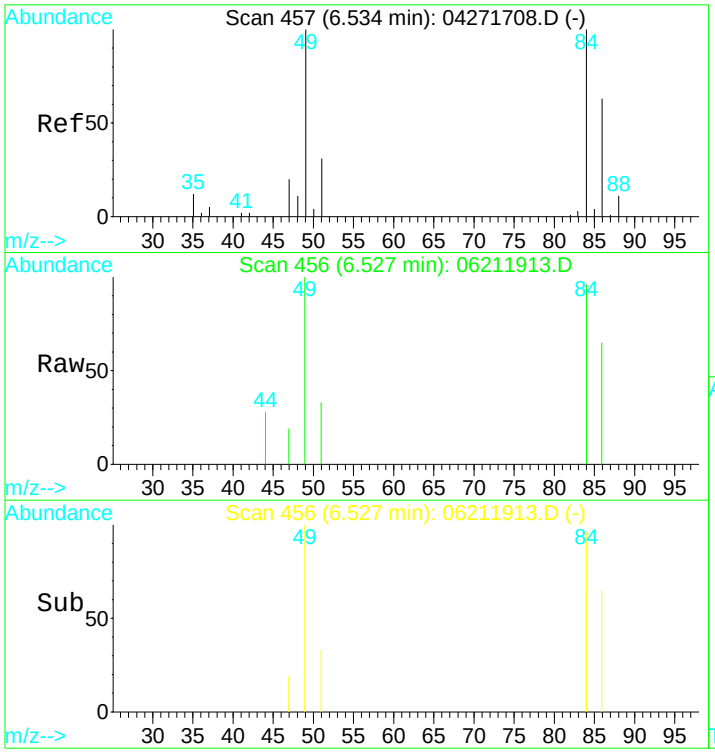


#13
Acetone
Concen: 14.25 ug/l m
RT: 5.78 min Scan# 380
Delta R.T. 0.03 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 58 Resp: 13677

Ion	Ratio	Lower	Upper
58	100		
43	0.0	0.0	0.0

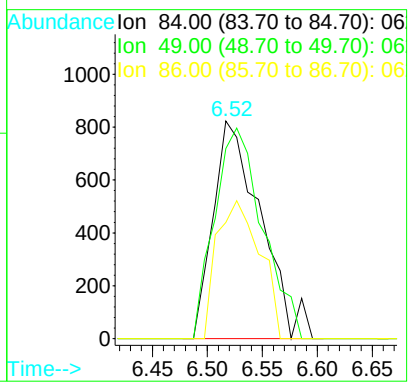


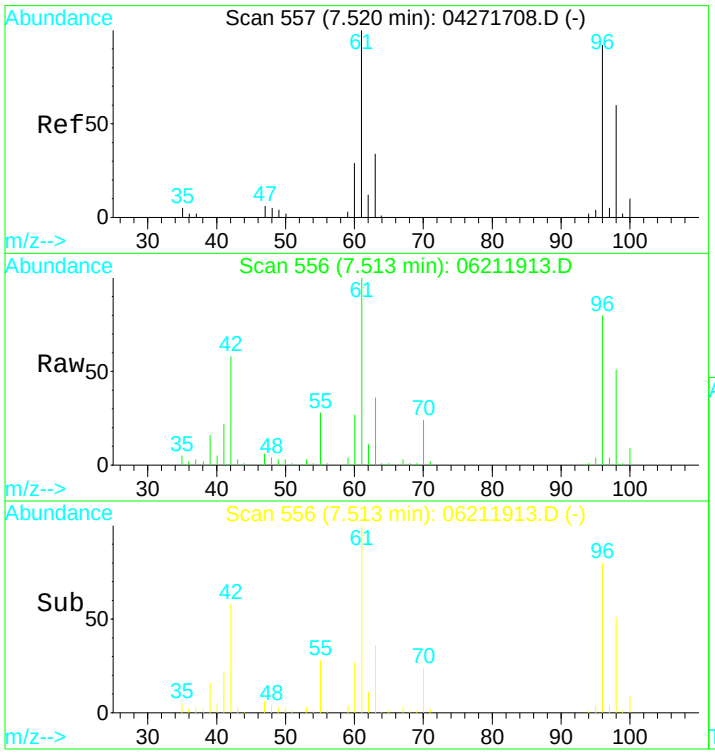


#14
Methylene Chloride
Concen: Below Cal
RT: 6.52 min Scan# 456
Delta R.T. 0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 84 Resp: 24699

Ion	Ratio	Lower	Upper
84	100		
49	98.6	76.6	114.8
86	0.0	51.8	77.8#

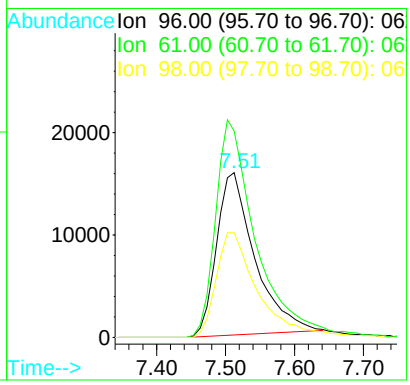


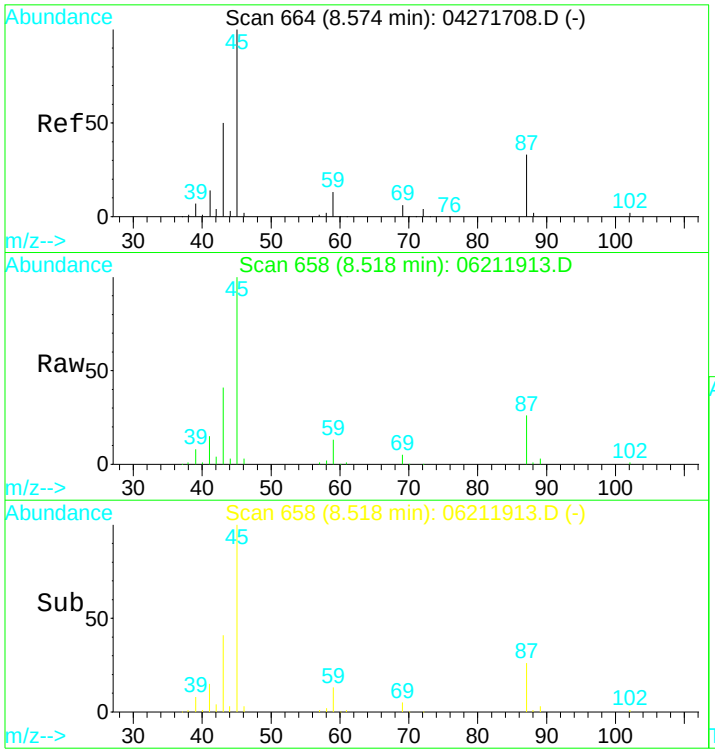


#16
trans-1,2-Dichloroethylene
Concen: 23.53 ug/L
RT: 7.51 min Scan# 556
Delta R.T. 0.01 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 96 Resp: 613515

Ion	Ratio	Lower	Upper
96	100		
61	125.3	97.1	145.7
98	63.5	51.4	77.0

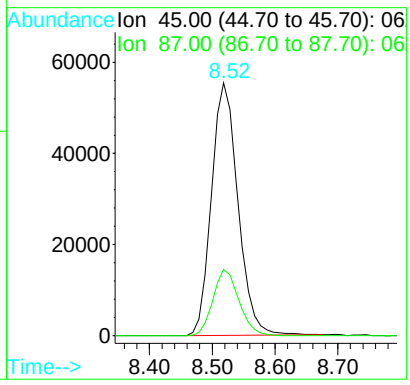


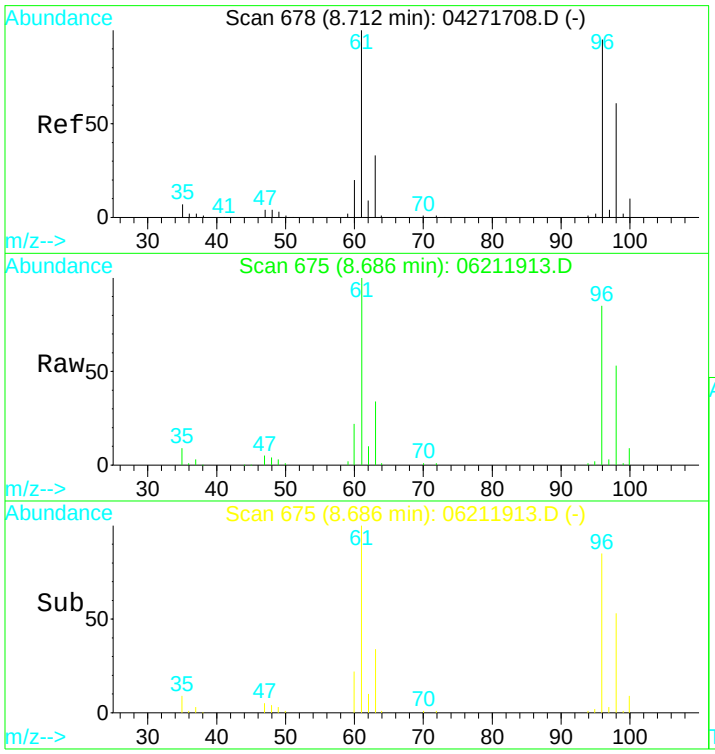


#21
Diisopropyl ether (DIPE)
Concen: 27.30 ug/l
RT: 8.52 min Scan# 658
Delta R.T. -0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 45 Resp: 1623820

Ion	Ratio	Lower	Upper
45	100		
87	26.2	23.7	35.5

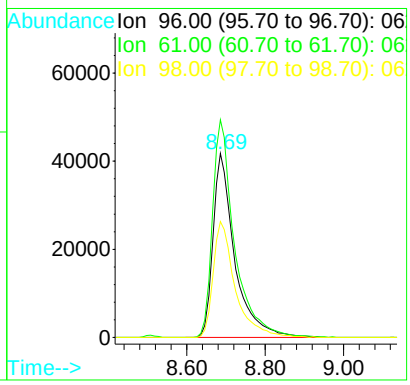


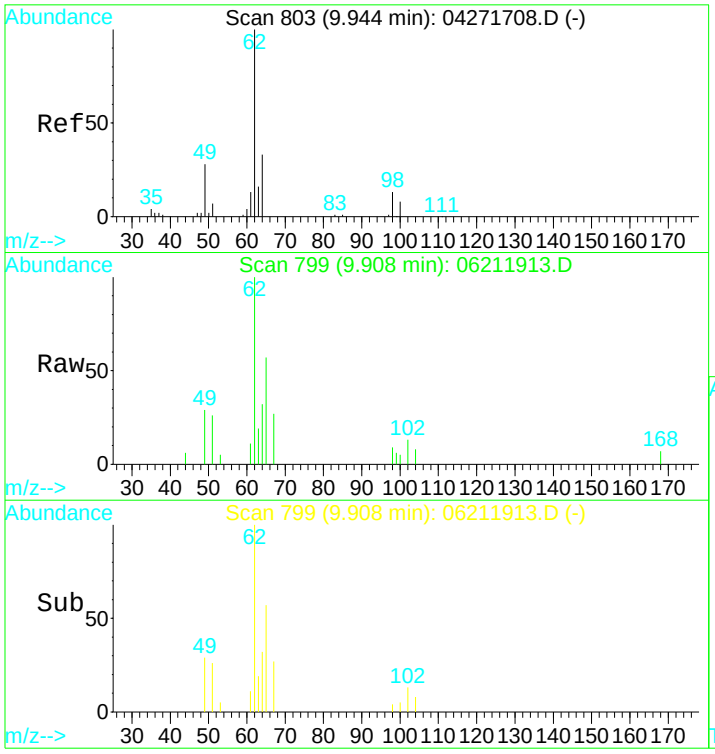


#22
cis-1,2-Dichloroethylene
Concen: 55.28 ug/l m
RT: 8.69 min Scan# 675
Delta R.T. -0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 96 Resp: 1607653

Ion	Ratio	Lower	Upper
96	100		
61	112.6	88.8	133.2
98	60.1	51.4	77.0

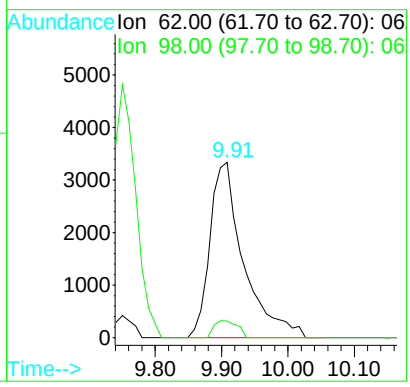


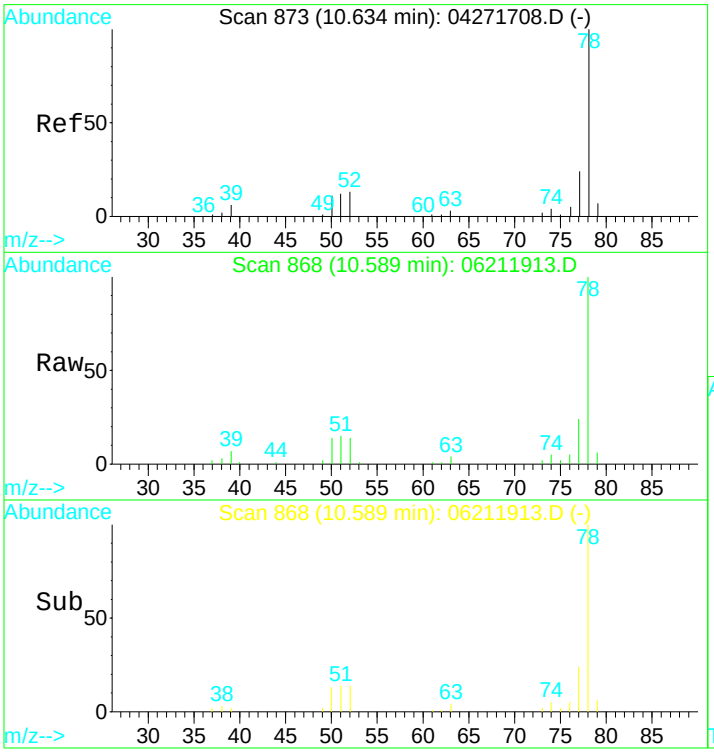


#28
1,2-Dichloroethane (EDC)
Concen: 4.59 ug/L
RT: 9.91 min Scan# 799
Delta R.T. 0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 62 Resp: 117734

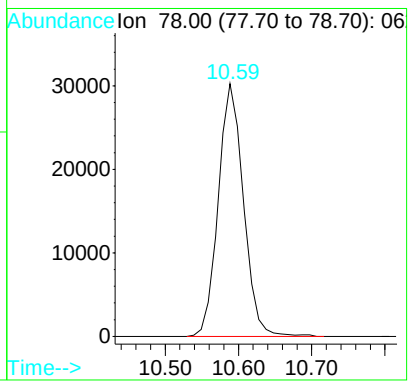
Ion	Ratio	Lower	Upper
62	100		
98	9.4	9.4	14.0

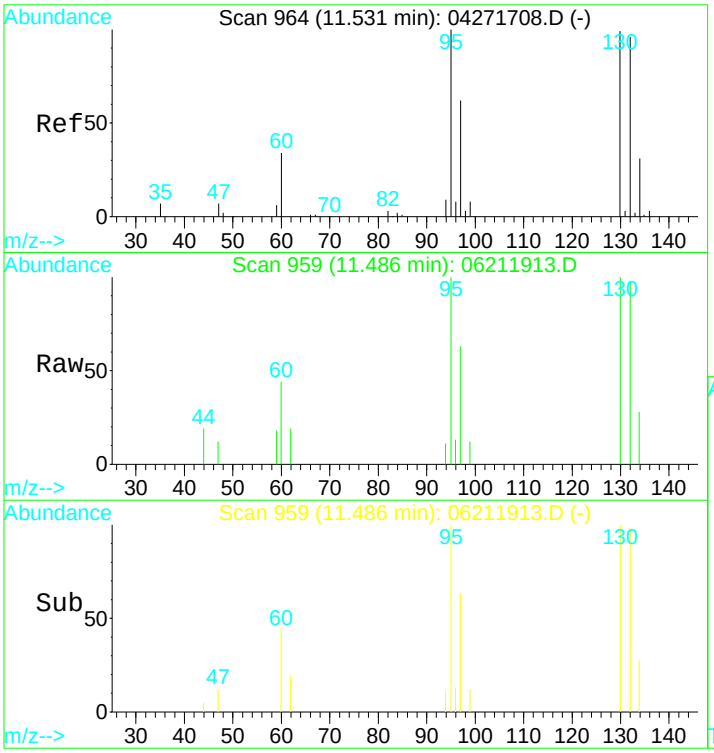




#32
Benzene
Concen: 6.65 ug/l
RT: 10.59 min Scan# 868
Delta R.T. -0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 78 Resp: 723378

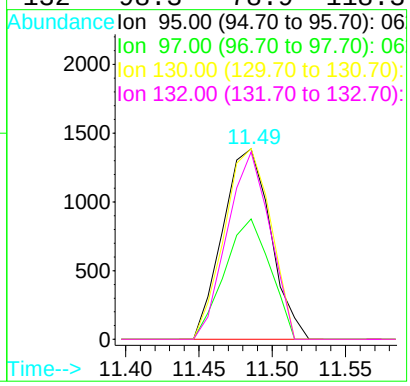




#37
Trichloroethylene (TCE)
Concen: 1.10 ug/L
RT: 11.49 min Scan# 959
Delta R.T. -0.00 min
Lab File: 06211913.D
Acq: 21 Jun 2019 1:34 pm

Tgt Ion: 95 Resp: 31558

Ion	Ratio	Lower	Upper
95	100		
97	63.2	51.2	76.8
130	100.1	80.3	120.5
132	98.3	78.9	118.3



REVIEWED
By Lindsey Michel at 11:54 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211925.D Vial: 9
Acq On : 21 Jun 2019 7:56 pm Operator: LM/MS9
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:43 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2178745	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3452423	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1595374	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.17	113	1362806	49.48	ug/L	0.00
Spiked Amount 50.000			Recovery =	98.96%		
34) Diflurobenzene	10.95	114	4038190	51.35	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.70%		
45) Toluene-d8	13.43	98	4253598	48.07	ug/L	0.00
Spiked Amount 50.000			Recovery =	96.14%		
63) 4-Bromofluorobenzene	17.12	95	1638732	49.20	ug/L	0.00
Spiked Amount 50.000			Recovery =	98.40%		
Target Compounds						Qvalue
4) Vinyl Chloride	4.00	62	115019	7.83	ug/l	# 83
7) ethanol	4.76	45	93947	1685.27	ug/l	# 100
16) trans-1,2-Dichloroethylene	7.51	96	664870m	25.03	ug/L	
21) Diisopropyl ether (DIPE)	8.53	45	1709414	28.21	ug/l	95
22) cis-1,2-Dichloroethylene	8.69	96	1625370m	54.86	ug/l	
28) 1,2-Dichloroethane (EDC)	9.91	62	123680	4.73	ug/L	99
32) Benzene	10.60	78	730851	6.60	ug/l	100
37) Trichloroethylene (TCE)	11.49	95	30257	1.04	ug/L	97

m = MH

APPROVED
By Stuart Sigman at 8:02 am, Jul 01, 2019

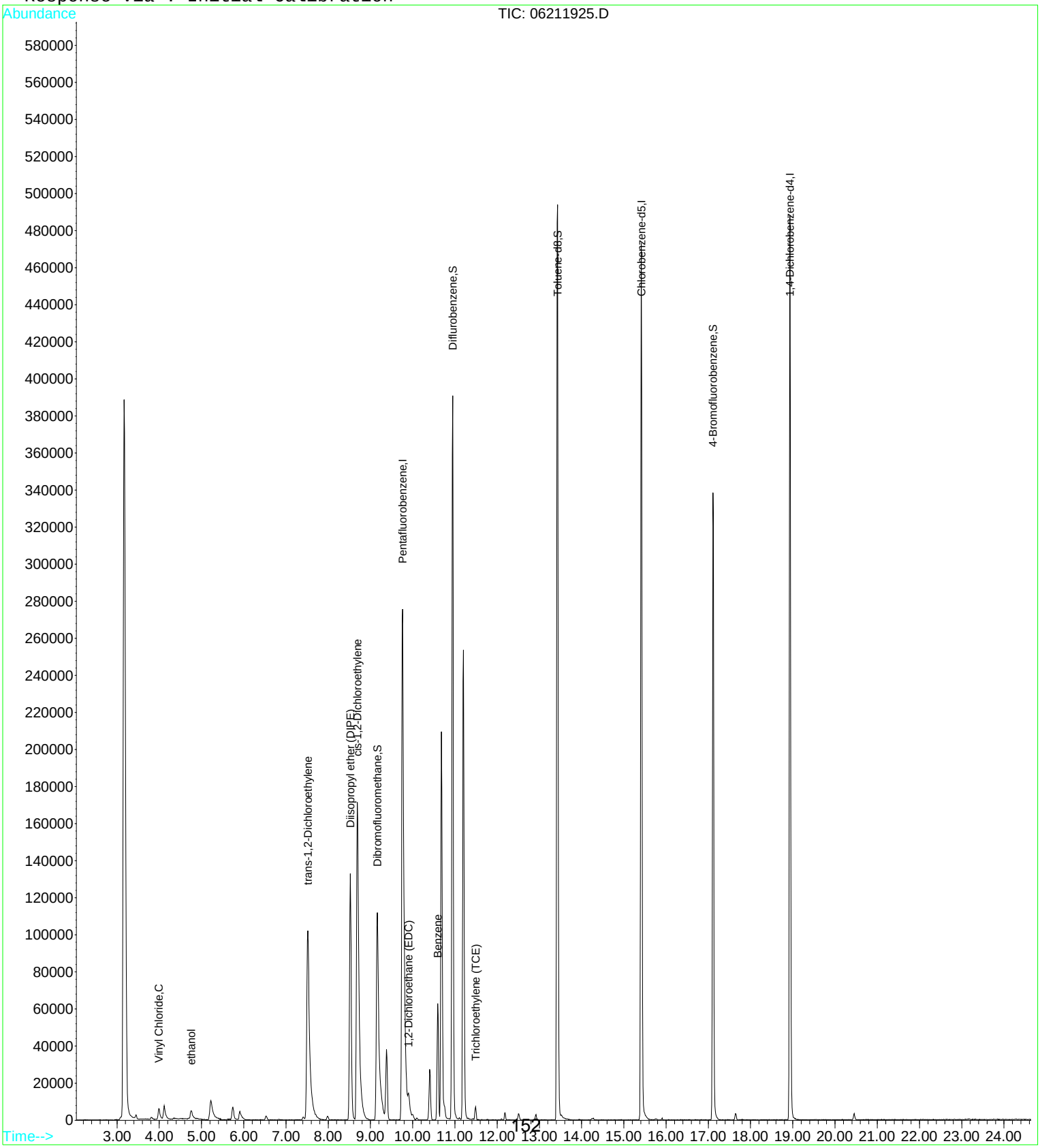
REVIEWED
By Lindsey Michel at 11:55 am, Jun 24, 2019

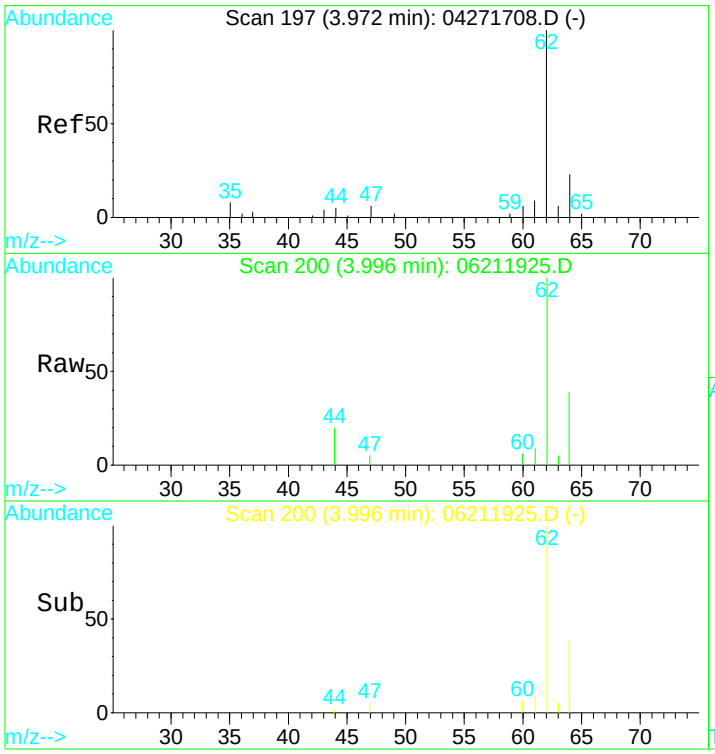
(#) = qualifier out of range (m) = manual integration
06211925.D 061719.M Mon Jun 24 11:01:44 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211925.D Vial: 9
Acq On : 21 Jun 2019 7:56 pm Operator: LM/MS9
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:43 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

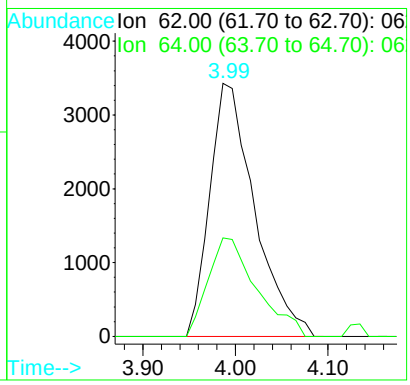


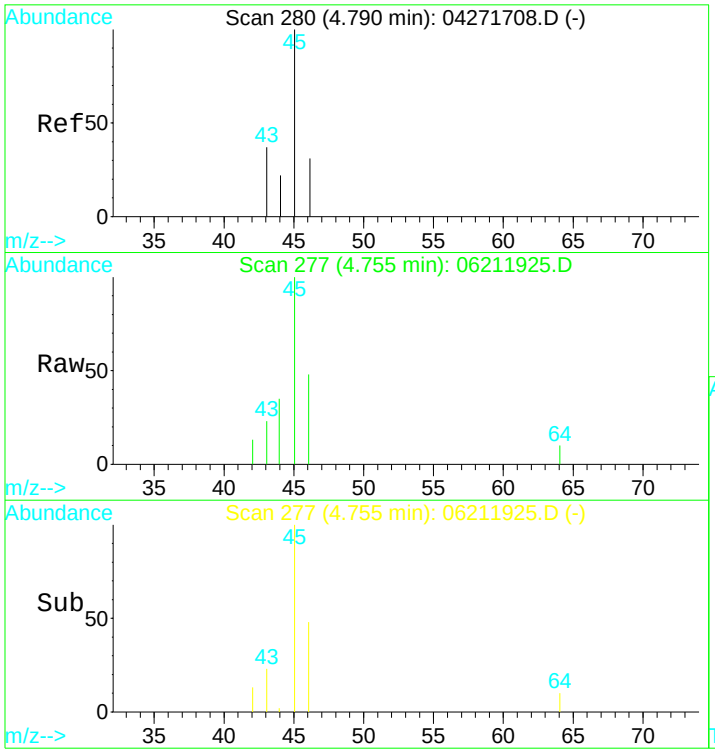


#4
Vinyl Chloride
Concen: 7.83 ug/l
RT: 4.00 min Scan# 200
Delta R.T. 0.02 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 62 Resp: 115019

Ion	Ratio	Lower	Upper
62	100		
64	41.9	25.7	38.5#

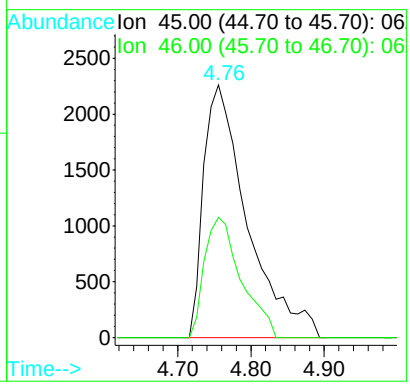


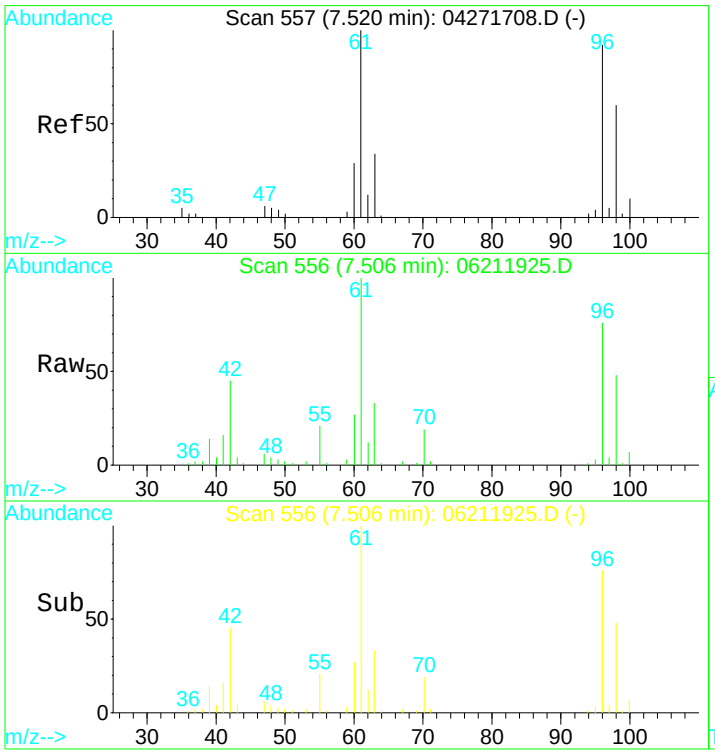


#7
ethanol
Concen: 1685.27 ug/l
RT: 4.76 min Scan# 277
Delta R.T. -0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 45 Resp: 93947

Ion	Ratio	Lower	Upper
45	100		
46	39.8	0.0	0.0#

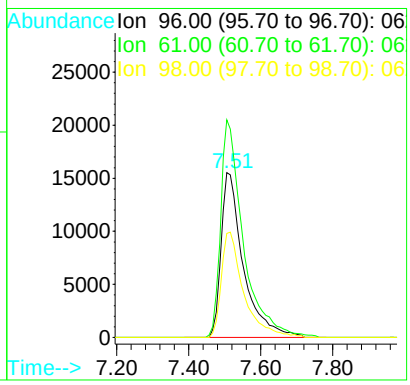


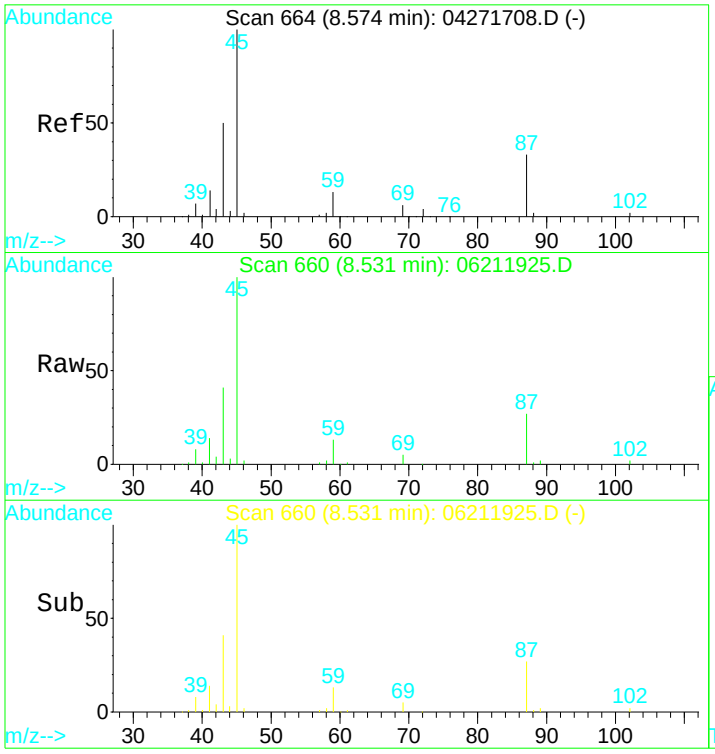


#16
trans-1,2-Dichloroethylene
Concen: 25.03 ug/L m
RT: 7.51 min Scan# 556
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 96 Resp: 664870

Ion	Ratio	Lower	Upper
96	100		
61	132.0	97.1	145.7
98	63.1	51.4	77.0

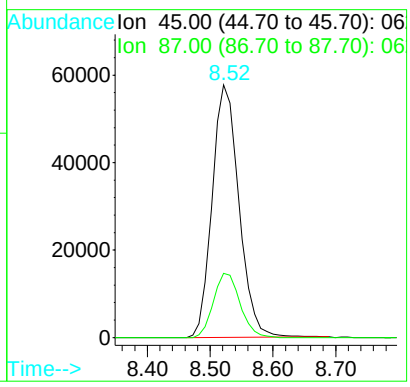


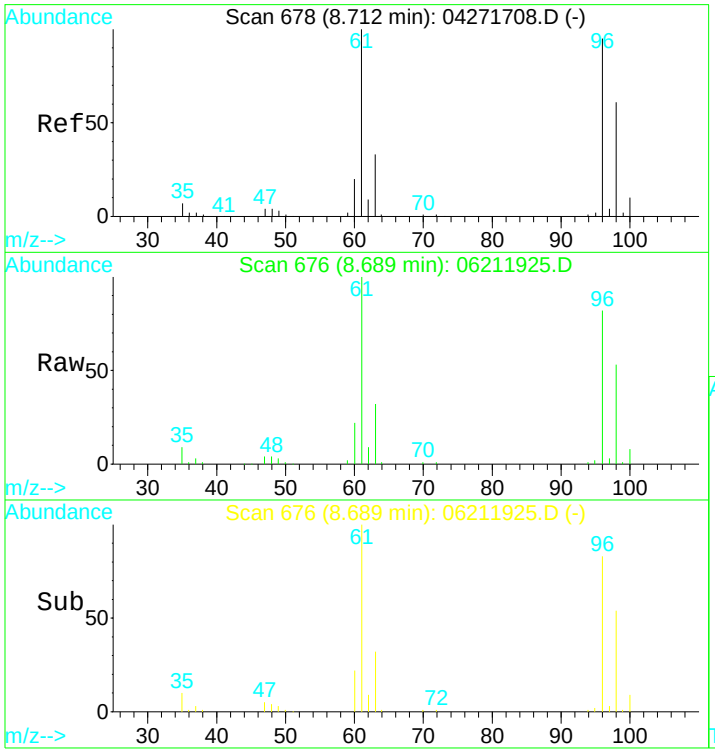


#21
Diisopropyl ether (DIPE)
Concen: 28.21 ug/l
RT: 8.53 min Scan# 660
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 45 Resp: 1709414

Ion	Ratio	Lower	Upper
45	100		
87	26.7	23.7	35.5

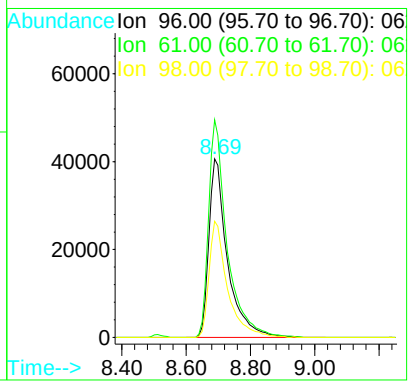


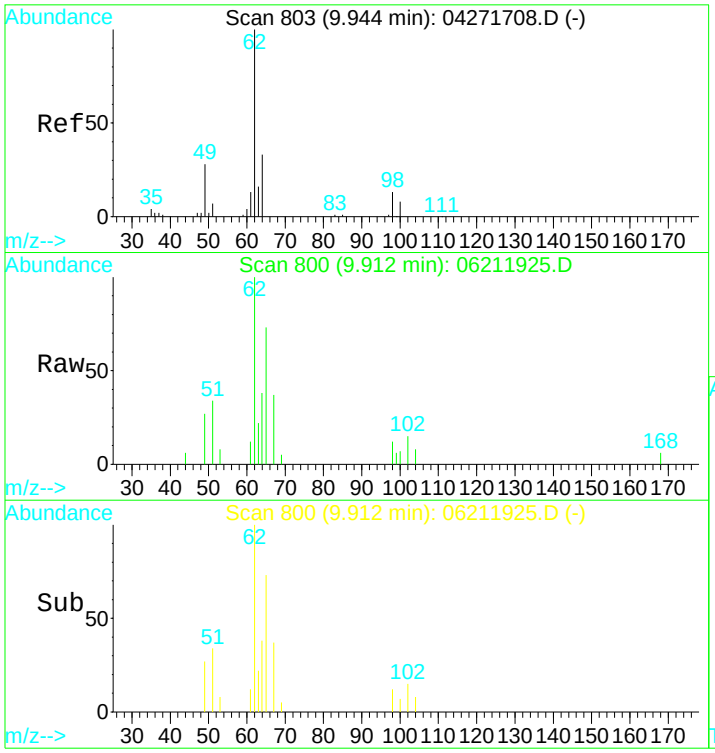


#22
cis-1,2-Dichloroethylene
Concen: 54.86 ug/l m
RT: 8.69 min Scan# 676
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 96 Resp: 1625370

Ion	Ratio	Lower	Upper
96	100		
61	112.4	88.8	133.2
98	59.6	51.4	77.0

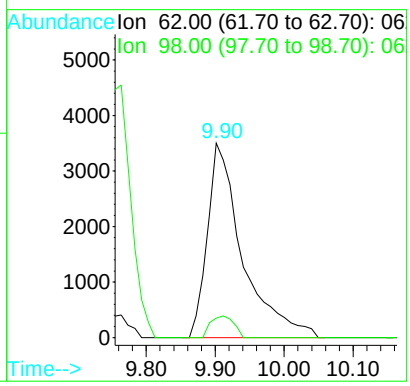


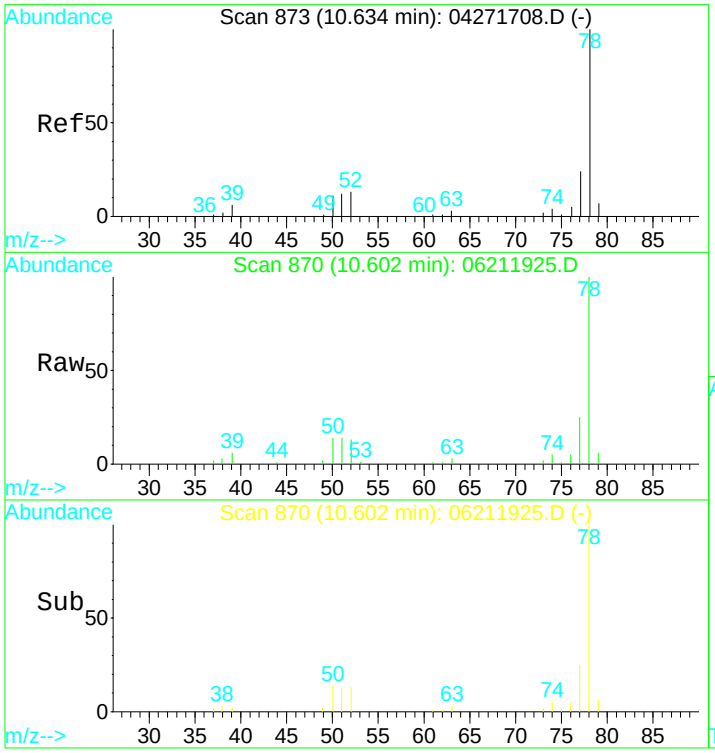


#28
1,2-Dichloroethane (EDC)
Concen: 4.73 ug/L
RT: 9.91 min Scan# 800
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 62 Resp: 123680

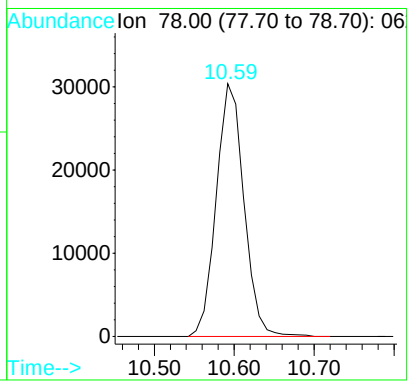
Ion	Ratio	Lower	Upper
62	100		
98	12.2	9.4	14.0

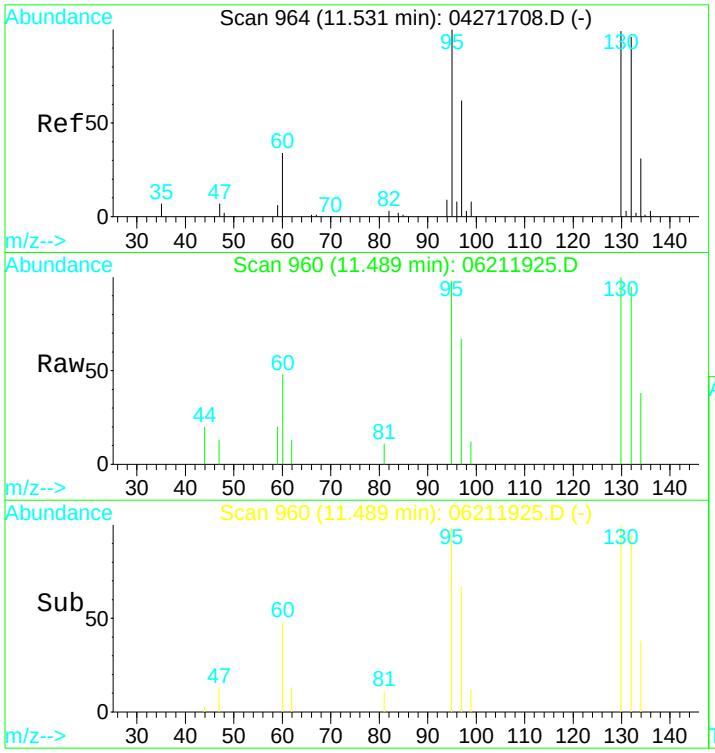




#32
Benzene
Concen: 6.60 ug/l
RT: 10.60 min Scan# 870
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 78 Resp: 730851

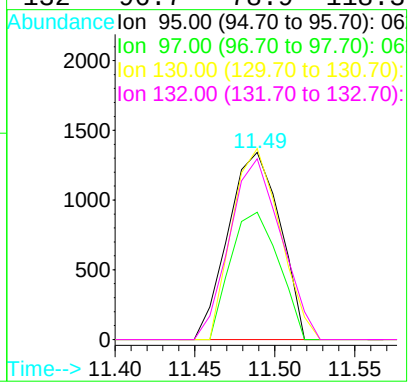




#37
Trichloroethylene (TCE)
Concen: 1.04 ug/L
RT: 11.49 min Scan# 960
Delta R.T. 0.00 min
Lab File: 06211925.D
Acq: 21 Jun 2019 7:56 pm

Tgt Ion: 95 Resp: 30257

Ion	Ratio	Lower	Upper
95	100		
97	68.0	51.2	76.8
130	102.1	80.3	120.5
132	96.7	78.9	118.3



REVIEWED
By Lindsey Michel at 11:56 am, Jun 24, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\062119\06211919.D Vial: 2
Acq On : 21 Jun 2019 4:45 pm Operator: LM/MS9
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:26 2019 Quant Results File: 061719.RES

Quant Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration
DataAcq Meth : 061719

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	9.76	168	2478165	50.00	ug/L	0.00
42) Chlorobenzene-d5	15.42	117	3828614	50.00	ug/L	0.00
61) 1,4-Dichlorobenzene-d4	18.94	152	1806945	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane	9.16	113	1605099	51.23	ug/L	0.00
Spiked Amount 50.000			Recovery =	102.46%		
34) Diflurobenzene	10.95	114	4460291	49.87	ug/L	0.00
Spiked Amount 50.000			Recovery =	99.74%		
45) Toluene-d8	13.43	98	4669745	47.59	ug/L	0.00
Spiked Amount 50.000			Recovery =	95.18%		
63) 4-Bromofluorobenzene	17.11	95	1802790	47.79	ug/L	0.00
Spiked Amount 50.000			Recovery =	95.58%		
Target Compounds						Qvalue
12) 1,1-Dichloroethylene	6.30	96	35290	1.43	ug/l #	81
14) Methylene Chloride	6.53	84	95909	Below Cal		97
21) Diisopropyl ether (DIPE)	8.53	45	659403	9.57	ug/l	94
22) cis-1,2-Dichloroethylene	8.69	96	247432	7.34	ug/l	100
32) Benzene	10.60	78	302527	2.40	ug/l	100
37) Trichloroethylene (TCE)	11.48	95	15953m	0.48	ug/L	

m = MH

APPROVED
By Stuart Sigman at 8:04 am, Jul 01, 2019

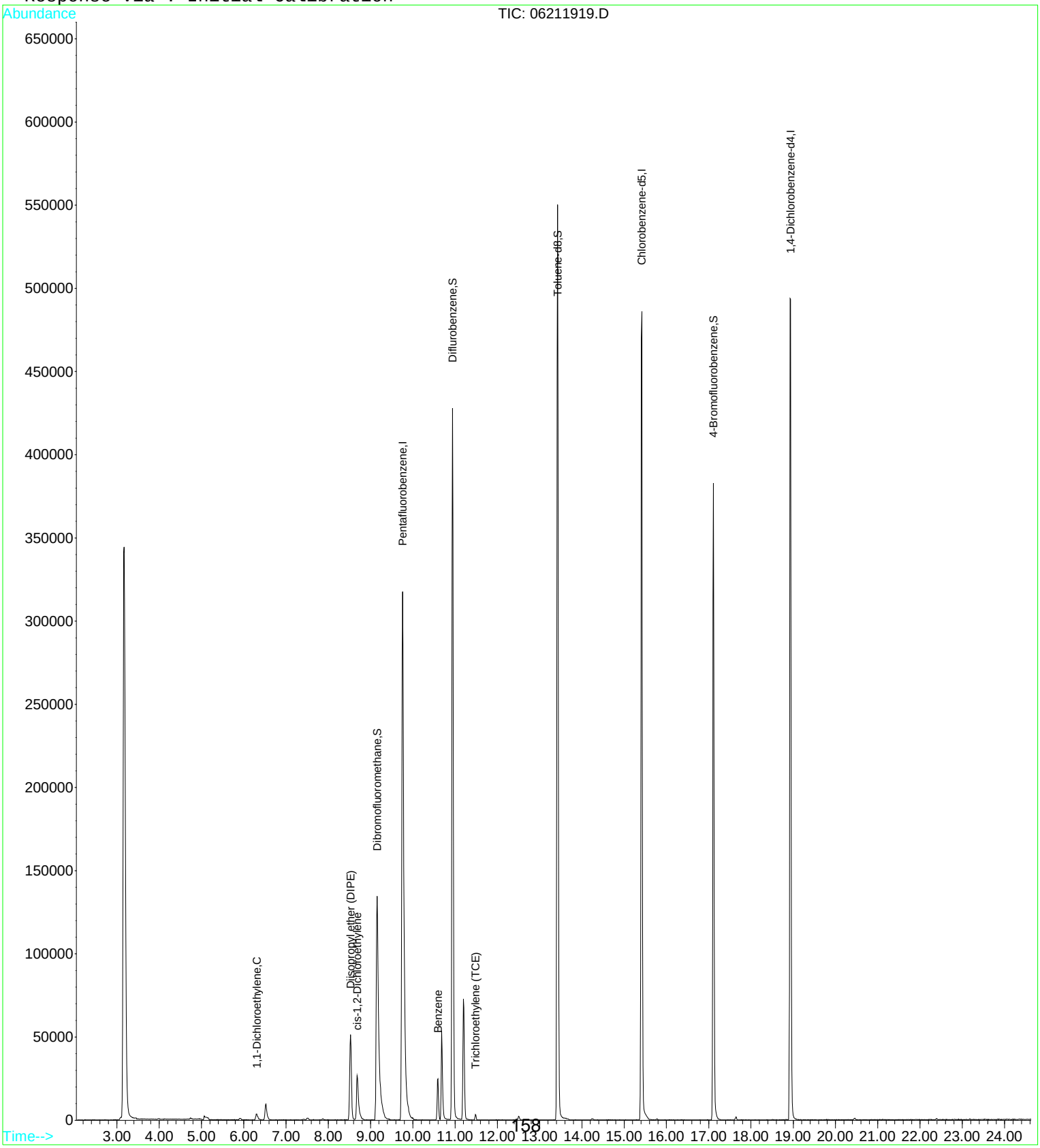
REVIEWED
By Lindsey Michel at 11:56 am, Jun 24, 2019

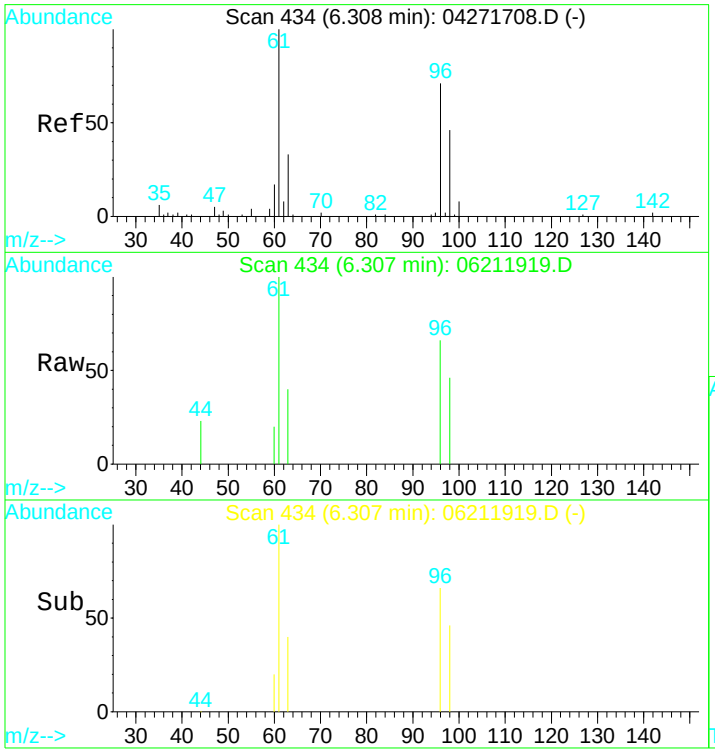
(#) = qualifier out of range (m) = manual integration
06211919.D 061719.M Mon Jun 24 11:01:52 2019 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\062119\06211919.D Vial: 2
Acq On : 21 Jun 2019 4:45 pm Operator: LM/MS9
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 1 Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 10:26 2019 Quant Results File: 061719.RES

Method : C:\HPCHEM\1\METHODS\061719.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 19 14:50:13 2019
Response via : Initial Calibration

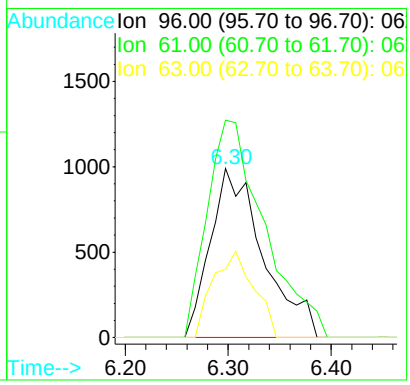


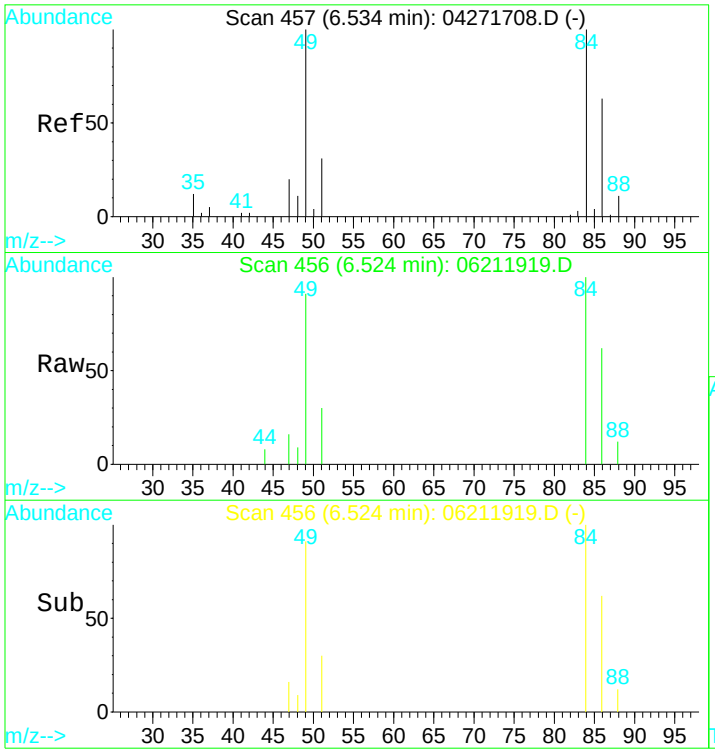


#12
1,1-Dichloroethylene
Concen: 1.43 ug/l
RT: 6.30 min Scan# 434
Delta R.T. 0.00 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 96 Resp: 35290

Ion	Ratio	Lower	Upper
96	100		
61	139.3	113.7	170.5
63	0.0	37.9	56.9#

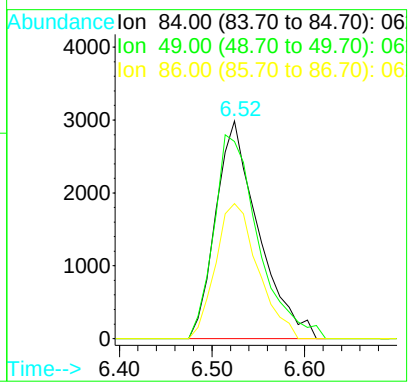


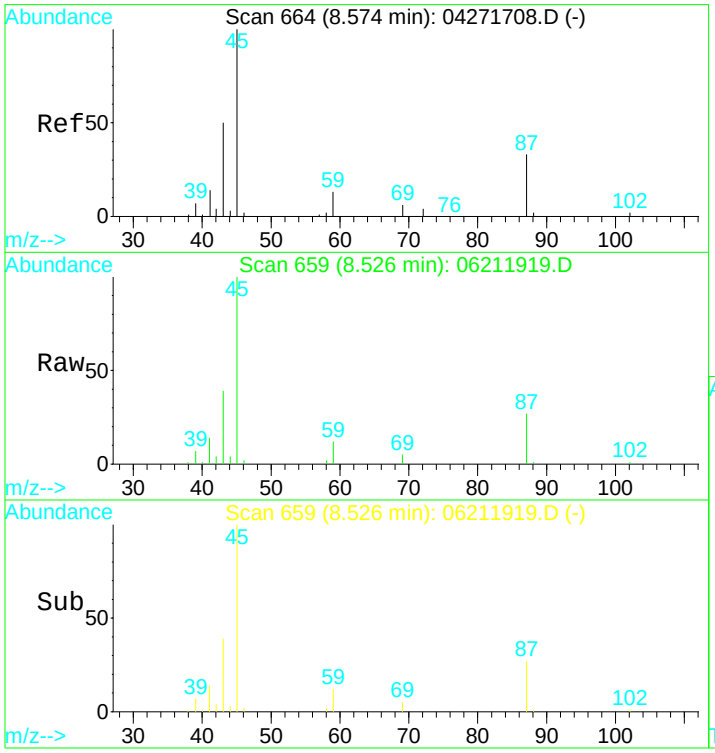


#14
Methylene Chloride
Concen: Below Cal
RT: 6.53 min Scan# 456
Delta R.T. 0.00 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 84 Resp: 95909

Ion	Ratio	Lower	Upper
84	100		
49	97.0	76.6	114.8
86	61.5	51.8	77.8

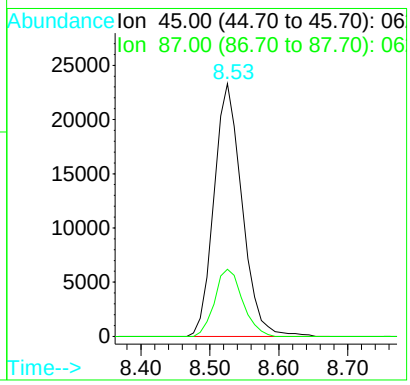


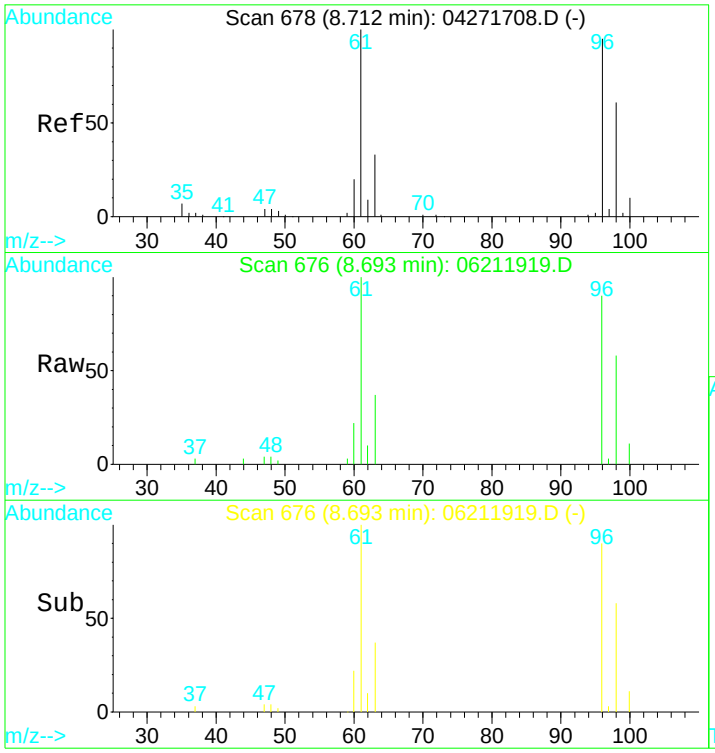


#21
Diisopropyl ether (DIPE)
Concen: 9.57 ug/l
RT: 8.53 min Scan# 659
Delta R.T. 0.00 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 45 Resp: 659403

Ion	Ratio	Lower	Upper
45	100		
87	26.6	23.7	35.5

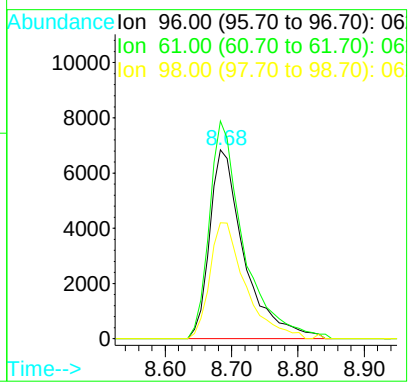


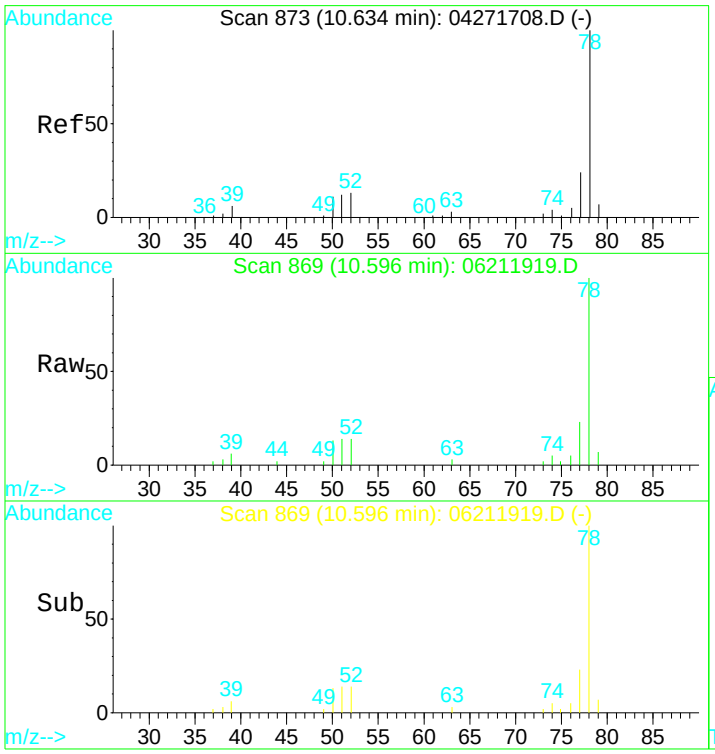


#22
cis-1,2-Dichloroethylene
Concen: 7.34 ug/l
RT: 8.69 min Scan# 676
Delta R.T. 0.00 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 96 Resp: 247432

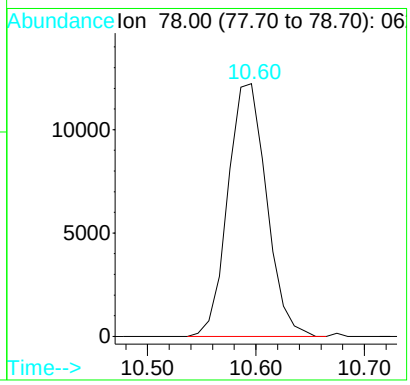
Ion	Ratio	Lower	Upper
96	100		
61	110.9	88.8	133.2
98	63.4	51.4	77.0

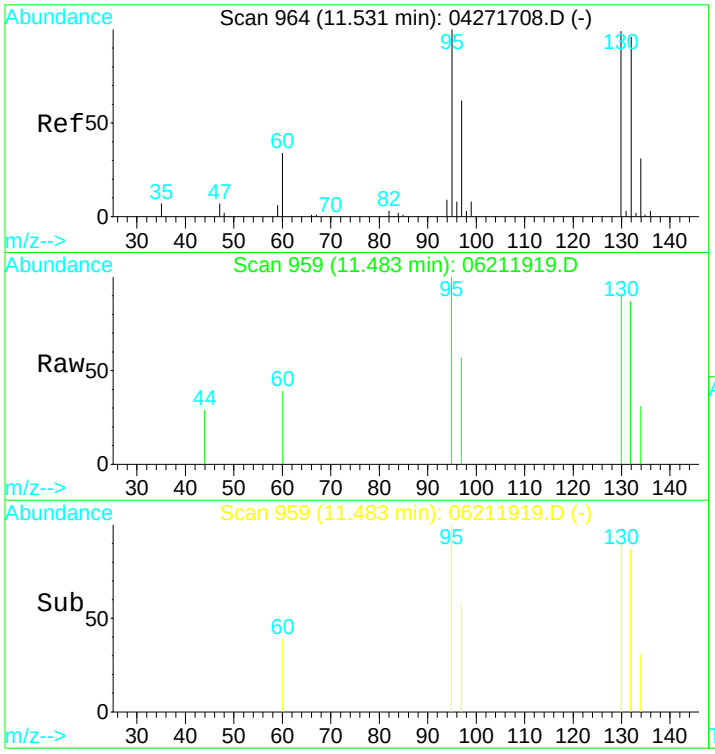




#32
Benzene
Concen: 2.40 ug/l
RT: 10.60 min Scan# 869
Delta R.T. 0.00 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 78 Resp: 302527

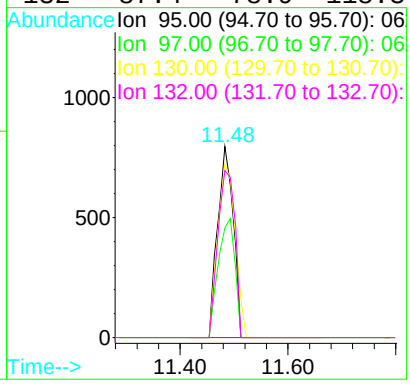




#37
Trichloroethylene (TCE)
Concen: 0.48 ug/L m
RT: 11.48 min Scan# 959
Delta R.T. -0.01 min
Lab File: 06211919.D
Acq: 21 Jun 2019 4:45 pm

Tgt Ion: 95 Resp: 15953

Ion	Ratio	Lower	Upper
95	100		
97	57.5	51.2	76.8
130	91.1	80.3	120.5
132	87.4	78.9	118.3



REVIEWED
By Lindsey Michel at 12:08 pm, Jun 24, 2019

RAW DATA FOR 1,4-DIOXANE

EPA METHOD 8270CM – ISOTOPE DILUTION

Analyst: JAMES BARAT
ICAL Date: 08/28/2018
Instrument: GCMS-2
New Method Name: DX082818.M

EPA 8270CM (1,4-Dioxane by GC-MS) Initial Calibration Checklist

- ☑ Is the required documentation in the ICAL folder?
  - ☑ Sequence report
  - ☑ DFTPP Tune report
  - ☑ DDT Degradation report
  - ☑ Tailing Factor report
  - ☑ Blank quant report (include "Not Reviewed" report, use new calibration method to requant)
  - ☑ Calibration Status report
  - ☑ Response Factor report
  - ☑ Print of the calibration curve for compounds using the curve
  - ☑ Compound List report
  - ☑ Internal Standard Midpoint Area/Retention Time report
  - ☑ Quant report for each calibration standard
  - ☑ ICV quantitation report
- ☑ Was the ICAL performed continuously? (no samples run in between calibration standards)
- ☑ Have all the calibration standards been analyzed within 48 hours of each other?
- ☑ Does the sequence show the LIMS IDs of the standards used for ICAL and ICV?
- ☑ Are all standards used before their expiration date?
- ☑ Does the DFTPP tune meet criteria?
- ☑ Is the degradation of DDT to DDD and DDE ≤ 20%?
- ☑ Is the tailing factor for Pentachlorophenol and Benzidine ≤ 3?
- ☑ Is the amount of 1,4-Dioxane in the blank < MRL (0.5 ppm)?
- ☑ Does the ICAL include a minimum of 5 concentrations?
- NA ☐ If the ICAL uses a 2nd-order equation, does the ICAL include a minimum of 6 concentrations?
- ☑ Does each calibration level have its own concentration value? (no two levels using the same concentration)
- ☑ Are there no levels skipped? (highest or lowest may be dropped for ≥ 6 levels)
- ☑ If using the average Relative Response Factor (RRF), is the %RSD ≤ 15%?
- NA ☐ If using linear regression, is the correlation coefficient ≥ 0.990?
- ☑ Does the lowest level meet the MRL criteria (0.5 ppm)?
- ☑ Is the relative retention time (RRT) for every calibration level within 0.06 RRT units of each other?
- ☑ For the ICV, is the percent recovery ~~70-130%~~? 80-120%.
- ☑ Was the ICV performed after all ICAL standards and before any samples were analyzed?
- ☑ Is the Q-Values in the ICV above 80?
- ☑ Are the front pages of all the quant reports initialed and dated by the analyst?

COMMENTS:

Reviewed By: _____ **Date:** 8/29/18

Injection Log

Directory: C:\HPCHEM\1\DATA\082818

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	08281801.d	1.	50 NG DFTPP TUNE		28 Aug 2018 10:37
2	2	08281802.d	1.	Method Blank	8030103	28 Aug 2018 10:58
3	3	08281803.d	1.	ICAL 20.0 mg/L 8270C + 30 m...	8072312, 8041306,...	28 Aug 2018 11:48
4	4	08281804.d	1.	CCV 30.0 mg/L 8270C + 30 mg...	8072312, 8041306,...	28 Aug 2018 12:38
5	5	08281805.d	1.	Method Blank	8030103	28 Aug 2018 14:47
6	6	08281806.d	1.	ICAL Benzidine 10.0 mg/L	8030103, 8082816	28 Aug 2018 15:49
7	7	08281807.d	1.	ICAL Benzidine 20.0 mg/L	8030103, 8082816	28 Aug 2018 16:40
8	8	08281808.d	1.	ICAL Benzidine 50.0 mg/L	8030103, 8082816	28 Aug 2018 17:31
9	9	08281809.d	1.	ICAL Benzidine 100.0 mg/L	8030103, 8082816	28 Aug 2018 18:22
10	10	08281810.d	1.	ICAL Benzidine 150.0 mg/L	8030103, 8082816	28 Aug 2018 19:13
11	11	08281811.d	1.	ICAL Benzidine 200.0 mg/L	8030103, 8082816	28 Aug 2018 20:03
12	12	08281812.d	1.	Method Blank	8030103	28 Aug 2018 20:53
13	13	08281813.d	1.	50 NG DFTPP TUNE		28 Aug 2018 21:35
14	14	08281814.d	1.	ICV Benzidine 100.0 mg/L	7101905, 8030103	28 Aug 2018 21:58
15	15	08281815.d	1.	Blank		28 Aug 2018 22:53
16	16	08281816.d	1.	ICAL 0.1 mg/L 1,4-Dioxane	8062701, 8062702	28 Aug 2018 23:25
17	17	08281817.d	1.	ICAL 0.5 mg/L 1,4-Dioxane	8062701, 8062702	28 Aug 2018 23:57
18	18	08281818.d	1.	ICAL 1.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 00:30
19	19	08281819.d	1.	ICAL 2.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 01:02
20	20	08281820.d	1.	ICAL 5.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 01:34
21	21	08281821.d	1.	ICAL 10.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 02:06
22	22	08281822.d	1.	ICAL 15.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 02:38
23	23	08281823.d	1.	ICAL 20.0 mg/L 1,4-Dioxane	8062701, 8062702	29 Aug 2018 03:10
24	24	08281824.d	1.	WASH	8062701, 8062702	29 Aug 2018 03:42
25	25	08281825.d	1.	ICV 10.0 mg/L 1,4-Dioxane	8062702, 8032705	29 Aug 2018 04:14

REVIEWED
By James Barai at 11:34 am, Aug 29, 2018

8/29/18

DFTPP

Data File : C:\HPCHEM\1\DATA\082818\08281813.D Vial: 13
Acq On : 28 Aug 2018 9:35 pm Operator: JB MS-2
Sample : 50 NG DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e

Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE

AutoFind: Scans 202, 203, 204; Background Corrected with Scan 195

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.0	129921	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.3	175558	PASS
70	69	0.00	2	0.0	0	PASS
127	198	35	60	42.0	156088	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	371371	PASS
199	198	5	9	6.7	24872	PASS
275	198	10	30	25.7	95355	PASS
365	198	1	100	2.5	9115	PASS
441	443	0.01	100	13.7	8181	PASS
442	198	40	100	84.2	312576	PASS
443	442	17	23	19.0	59536	PASS

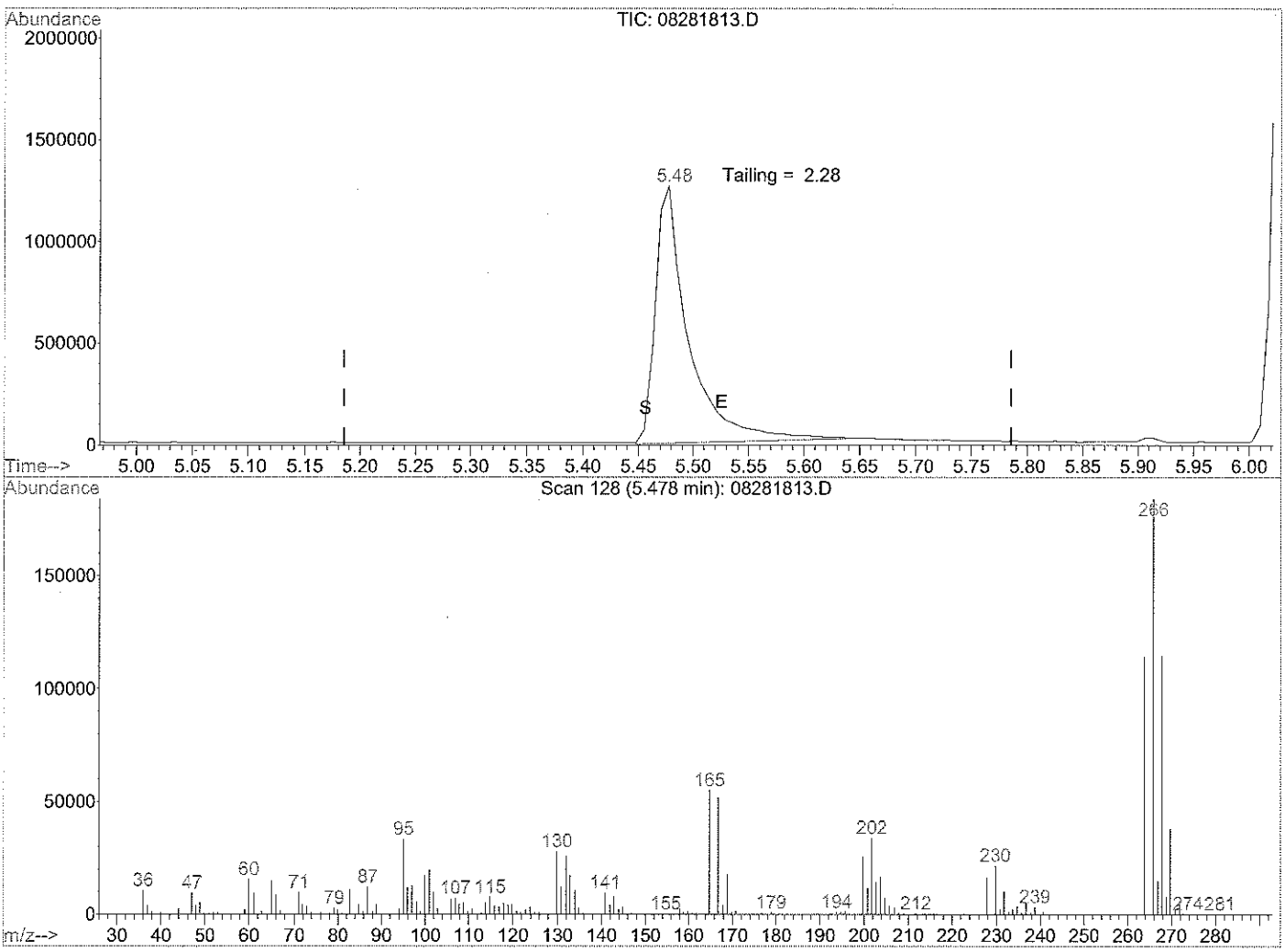
08281813.D RDFTPP.M Wed Aug 29 10:53:11 2018 PDFCREATOR

REVIEWED
By James Barai at 11:20 am, Aug 29, 2018

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\082818\08281813.D Vial: 13
Acq On : 28 Aug 2018 9:35 pm Operator: JB MS-2
Sample : 50 NG DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Aug 28 21:47 2018 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Tue Aug 28 11:00:03 2018
Response via : Multiple Level Calibration



TIC: 08281813.D

(1) Pentachlorophenol (S)

5.48min 139.45mg/L

response 27739803

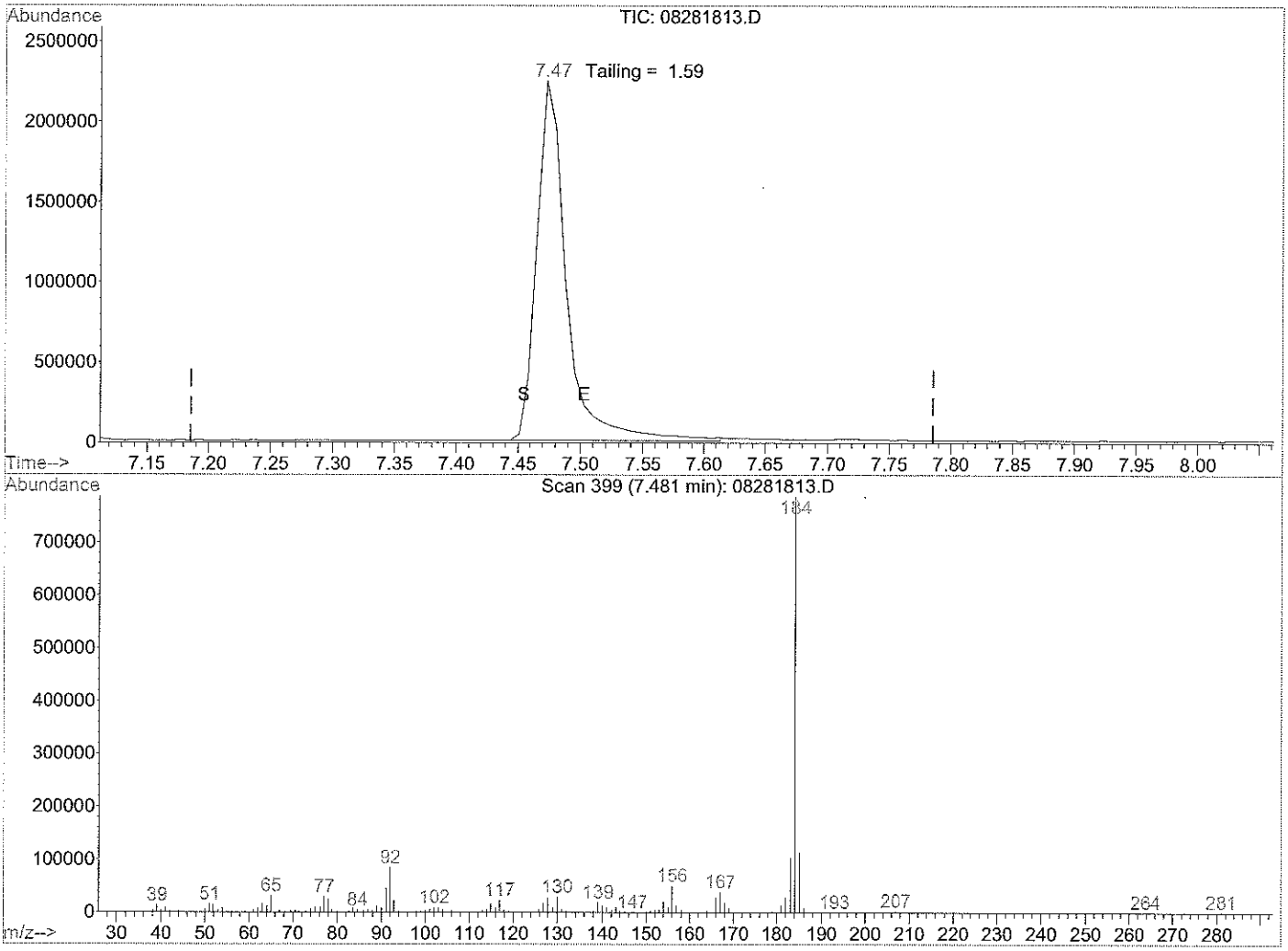
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

REVIEWED
By James Barai at 11:20 am, Aug 29, 2018

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\082818\08281813.D Vial: 13
Acq On : 28 Aug 2018 9:35 pm Operator: JB MS-2
Sample : 50 NG DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Aug 28 21:47 2018 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Tue Aug 28 11:00:03 2018
Response via : Multiple Level Calibration



TIC: 08281813.D

(3) Benzidine (S)

7.48min 163.72mg/L

response 37238379

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

REVIEWED
By James Barai at 11:20 am, Aug 29, 2018

08281813.D RDFTPP.M Wed Aug 29 10:53:59 2018 PDFCREATOR

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281813.D Vial: 13
Acq On : 28 Aug 2018 9:35 pm Operator: JB MS-2
Sample : 50 NG DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Aug 28 21:47 2018 Quant Results File: RDFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Tue Aug 28 11:00:03 2018
Response via : Initial Calibration
DataAcq Meth : RDFTPP

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
System Monitoring Compounds						
1) Pentachlorophenol	5.48	TIC	27739803	139.45	mg/L	0.00
2) DFTPP	6.04	TIC	44969613	196.64	mg/L	0.00
3) Benzidine	7.48	TIC	37238379	163.72	mg/L	0.00
4) p,p'-DDD	0.00	TIC	0	0.00	mg/L	
5) p,p'-DDT	8.56	TIC	43806675	182.95	mg/L	0.00

Target Compounds Qvalue

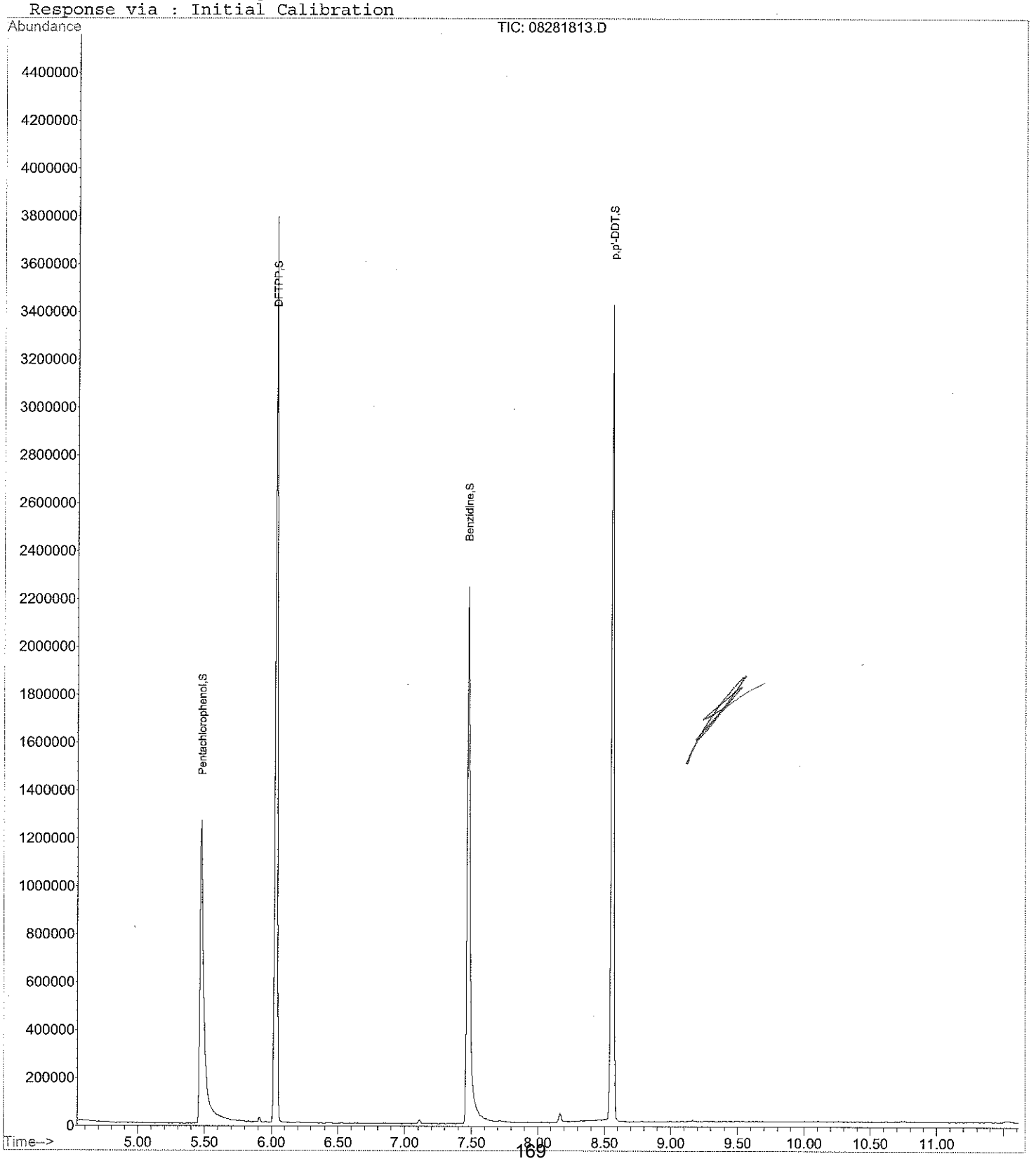
REVIEWED
By James Barai at 11:20 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281813.D Vial: 13
Acq On : 28 Aug 2018 9:35 pm Operator: JB MS-2
Sample : 50 NG DFTPP TUNE Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Aug 28 21:47 2018 Quant Results File: RDFTPP.RES

Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Tue Aug 28 11:00:03 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281815.D Vial: 15
Acq On : 28 Aug 2018 10:53 pm Operator: JB MS-2
Sample : Blank Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:29 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.66	96	2631863	50.00	mg/L	0.02
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.66	96	2631863	50.00	mg/L	0.02

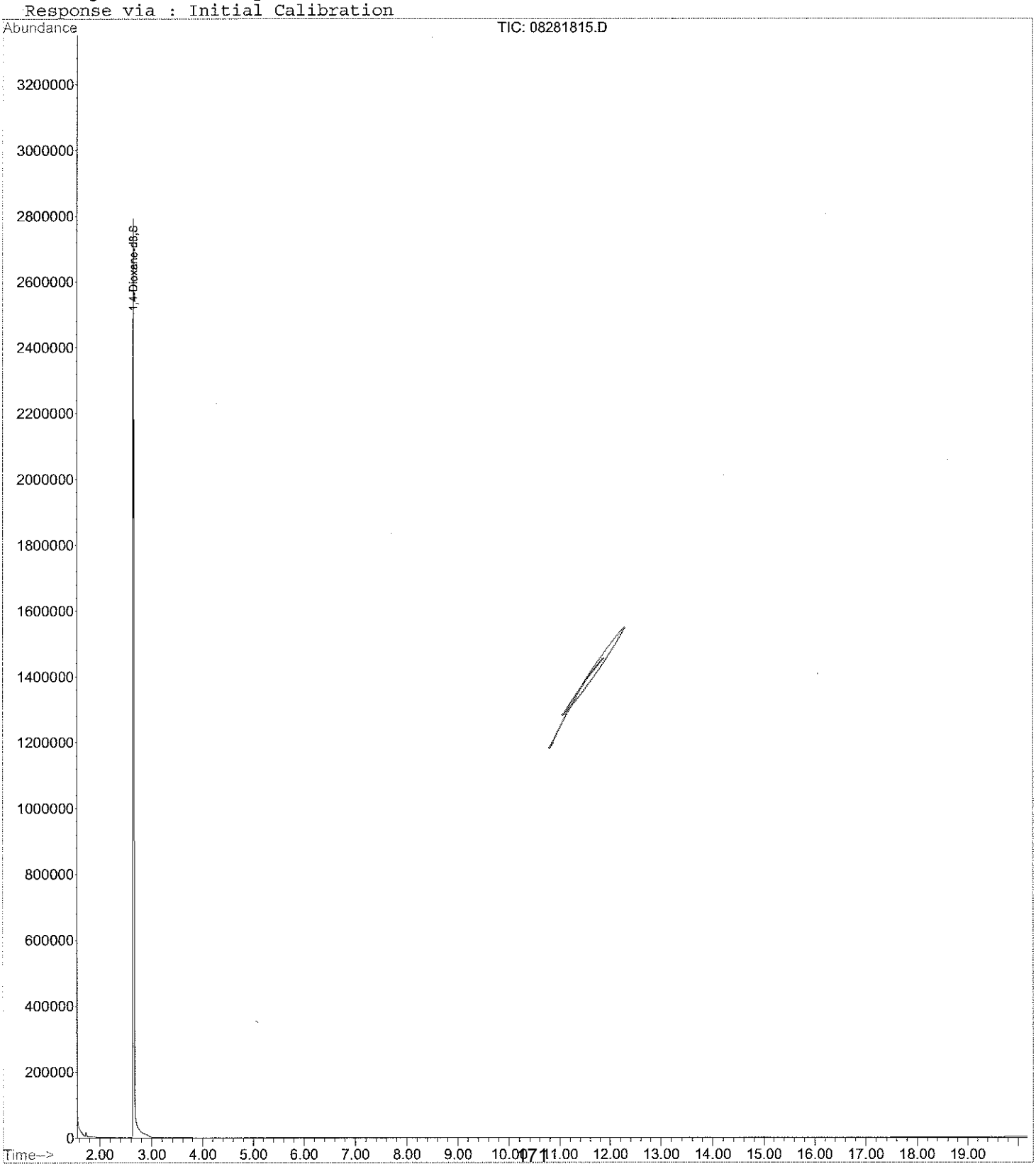
Target Compounds Qvalue

REVIEWED
By James Barai at 11:34 am, Aug 29, 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281815.D Vial: 15
Acq On : 28 Aug 2018 10:53 pm Operator: JB MS-2
Sample : Blank Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:29 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281815.D Vial: 15
Acq On : 28 Aug 2018 10:53 pm Operator: JB MS-2
Sample : Blank Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:29 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.66	96	2631863	50.00	mg/L	0.02
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.66	96	2631863	50.00	mg/L	0.02

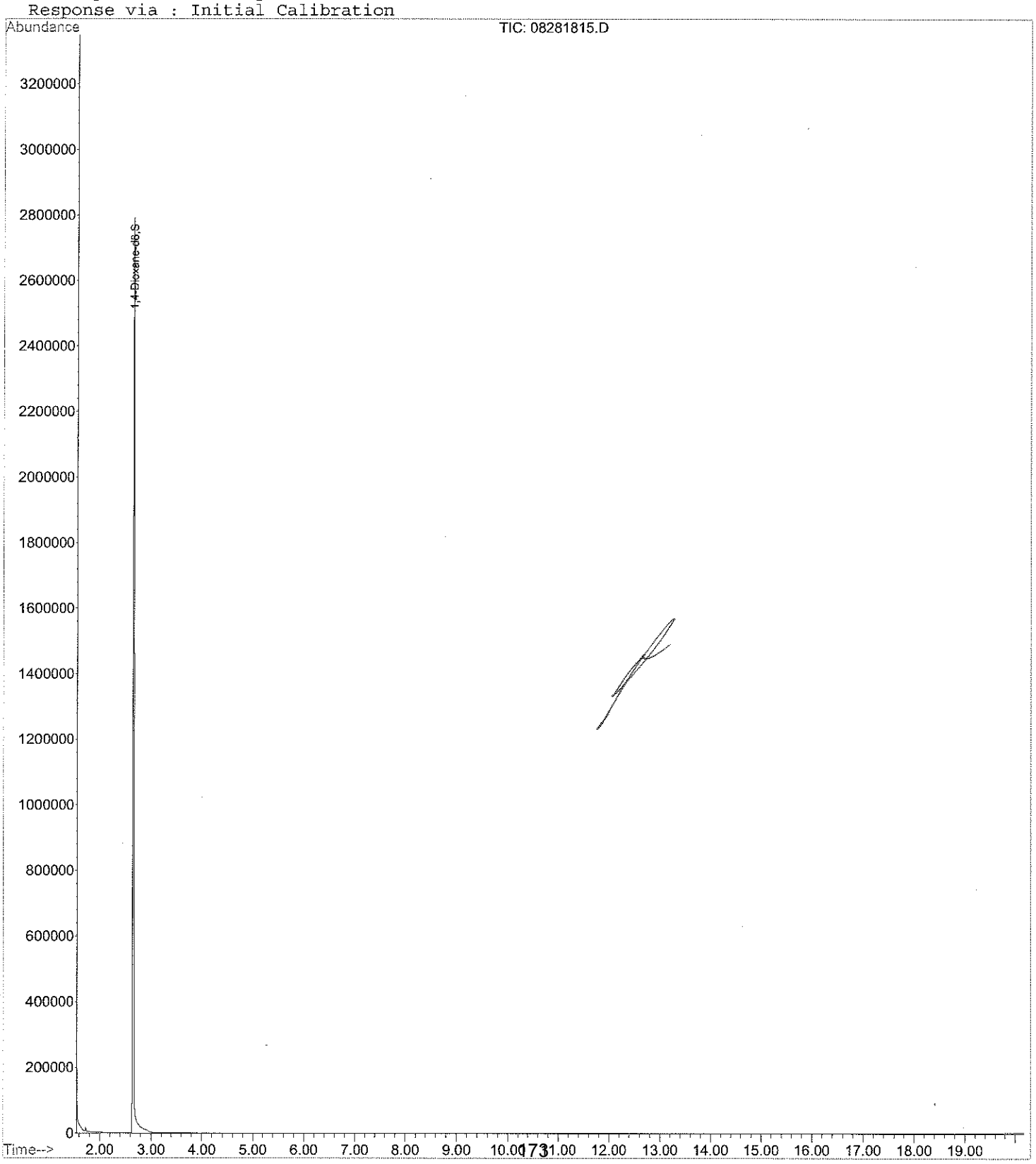
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
08281815.D DX082818.M Wed Aug 29 11:29:18 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281815.D Vial: 15
Acq On : 28 Aug 2018 10:53 pm Operator: JB MS-2
Sample : Blank Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:29 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Calibration Status Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	0	50	C:\HPCHEM\1\DATA\082818\08281816.D
2	2	1	50	C:\HPCHEM\1\DATA\082818\08281817.D
3	3	1	50	C:\HPCHEM\1\DATA\082818\08281818.D
4	4	2	50	C:\HPCHEM\1\DATA\082818\08281819.D
5	5	5	50	C:\HPCHEM\1\DATA\082818\08281820.D
6	6	10	50	C:\HPCHEM\1\DATA\082818\08281821.D
7	7	15	50	C:\HPCHEM\1\DATA\082818\08281822.D
8	8	20	50	C:\HPCHEM\1\DATA\082818\08281823.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 29 11:26 2018	Aug 29 11:24 2018	28 Aug 2018 11:25 pm
2	2	Aug 29 11:26 2018	Aug 29 11:24 2018	28 Aug 2018 11:57 pm
3	3	Aug 29 11:26 2018	Aug 29 11:24 2018	29 Aug 2018 12:30 am
4	4	Aug 29 11:27 2018	Aug 29 11:25 2018	29 Aug 2018 1:02 am
5	5	Aug 29 11:27 2018	Aug 29 11:25 2018	29 Aug 2018 1:34 am
6	6	Aug 29 11:27 2018	Aug 29 11:25 2018	29 Aug 2018 2:06 am
7	7	Aug 29 11:28 2018	Aug 29 11:25 2018	29 Aug 2018 2:38 am
8	8	Aug 29 11:28 2018	Aug 29 11:25 2018	29 Aug 2018 3:10 am

DX082818.M Wed Aug 29 11:29:29 2018 PDFCREATOR

REVIEWED
By James Barai at 11:34 am, Aug 29, 2018

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration

Calibration Files
1 =08281816.D 2 =08281817.D 3 =08281818.D
4 =08281819.D 5 =08281820.D 6 =08281821.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) S 1,4-Dioxane-d8	----------ISTD----------							
2) 1,4-Dioxane	1.183	1.266	1.266	1.261	1.228	1.160	1.210	4.20

(#) = Out of Range ### Number of calibration levels exceeded format ###

DX082818.M Wed Aug 29 11:29:40 2018 PDFCREATOR

REVIEWED
By James Barai at 11:34 am, Aug 29, 2018

Internal Standard Calculations 1,4-Dioxane

ICAL Date: 8/28/2018
Instrument ID: GCMS-2
ICAL Method: DX082818.M

Area Limit = 50–200% of ICAL midpoint
Retention Time Limit = ± 30 seconds of ICAL midpoint

1,4-Dioxane-d8

	Lower Limit	*Midpoint*	*Upper Limit*
Area	**1578042**	3156084	**6312168**
Retention Time	**2.14**	2.64	**3.14**

J.B
08/29/18

Compound List Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration
Total Cpnds : 2

PK#		Compound Name	QIon	Exp RT	Rel RT	Cal	#Qual	A/H	ID
1	S	1,4-Dioxane-d8	96	2.64	1.000	A	0	A	R
2		1,4-Dioxane	88	2.69	1.018	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

DX082818.M Wed Aug 29 11:29:50 2018 PDFCREATOR

REVIEWED
By James Barai at 11:34 am, Aug 29, 2018

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281816.D Vial: 16
Acq On : 28 Aug 2018 11:25 pm Operator: JB MS-2
Sample : ICAL 0.1 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2749289	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2749289	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.71	88	6503	0.10	mg/L	# 65

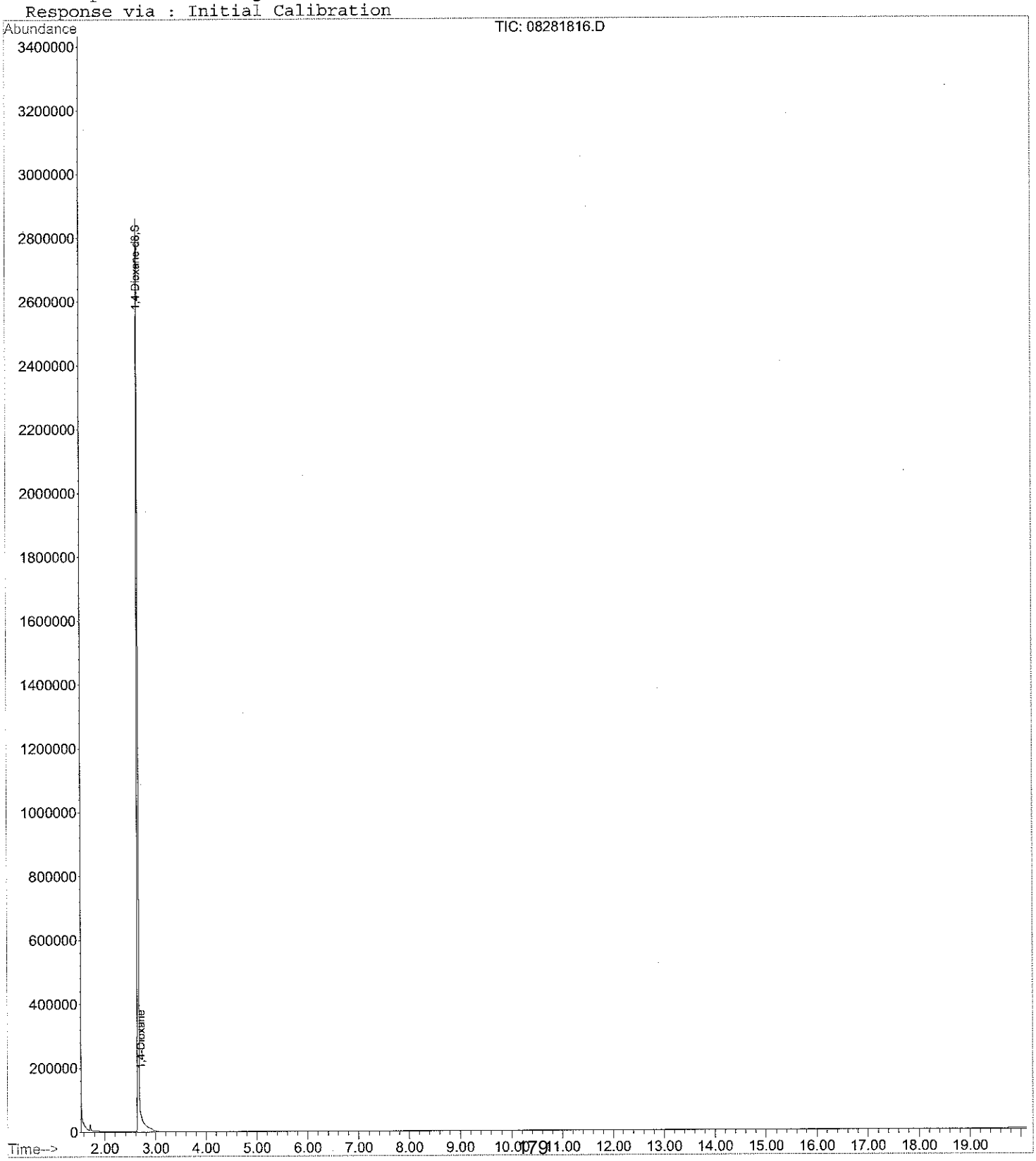
REVIEWED
By James Barai at 2:01 pm, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration
08281816.D DX082818.M Wed Aug 29 13:48:22 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281816.D Vial: 16
Acq On : 28 Aug 2018 11:25 pm Operator: JB MS-2
Sample : ICAL 0.1 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281816.D Vial: 16
Acq On : 28 Aug 2018 11:25 pm Operator: JB MS-2
Sample : ICAL 0.1 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

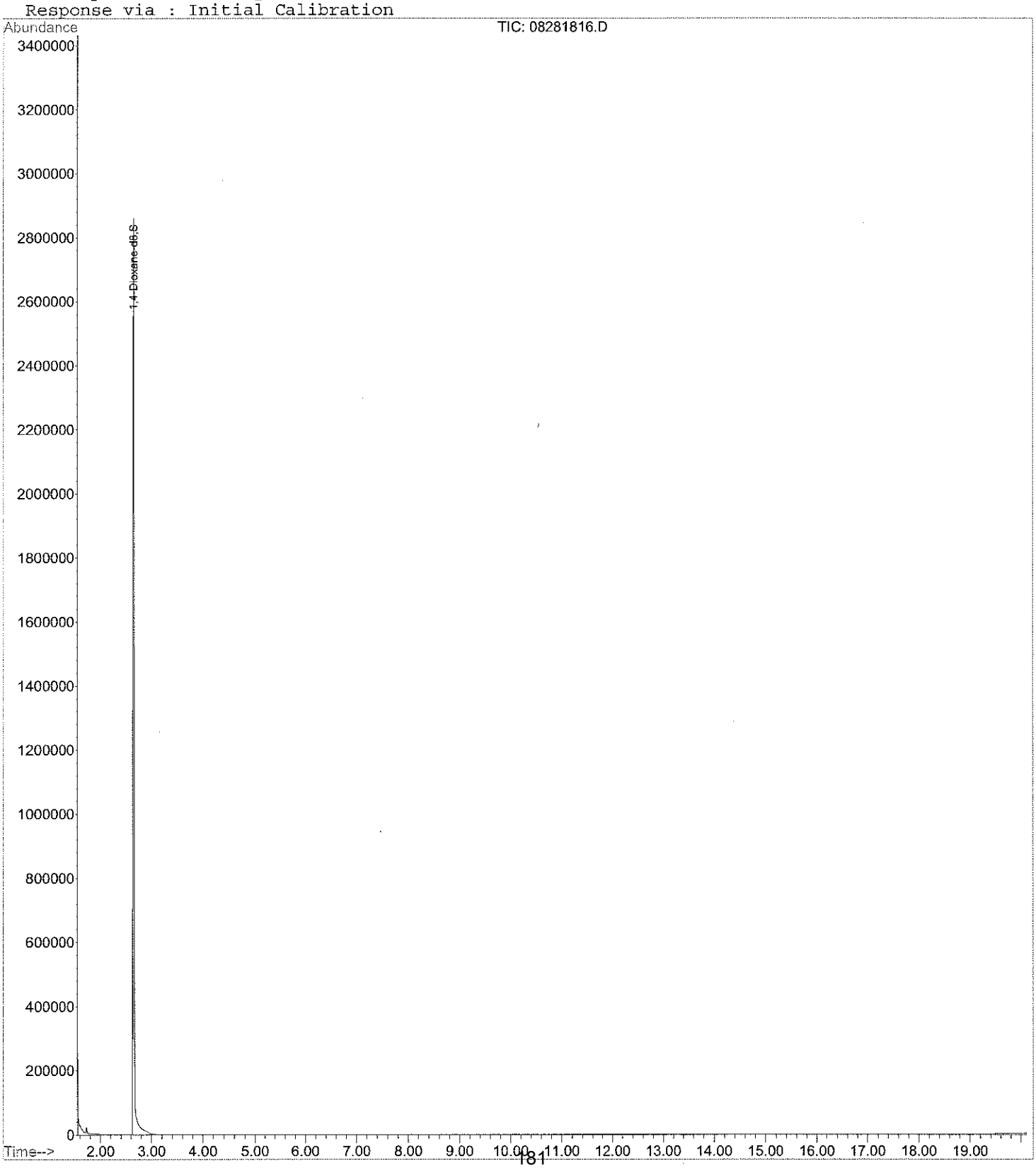
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2749289	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2749289	50.00	mg/L	0.00
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration
08281816.D DX082818.M Wed Aug 29 11:24:50 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281816.D Vial: 16
Acq On : 28 Aug 2018 11:25 pm Operator: JB MS-2
Sample : ICAL 0.1 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281817.D Vial: 17
Acq On : 28 Aug 2018 11:57 pm Operator: JB MS-2
Sample : ICAL 0.5 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2654436	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2654436	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.70	88	33595	0.52	mg/L	# 62

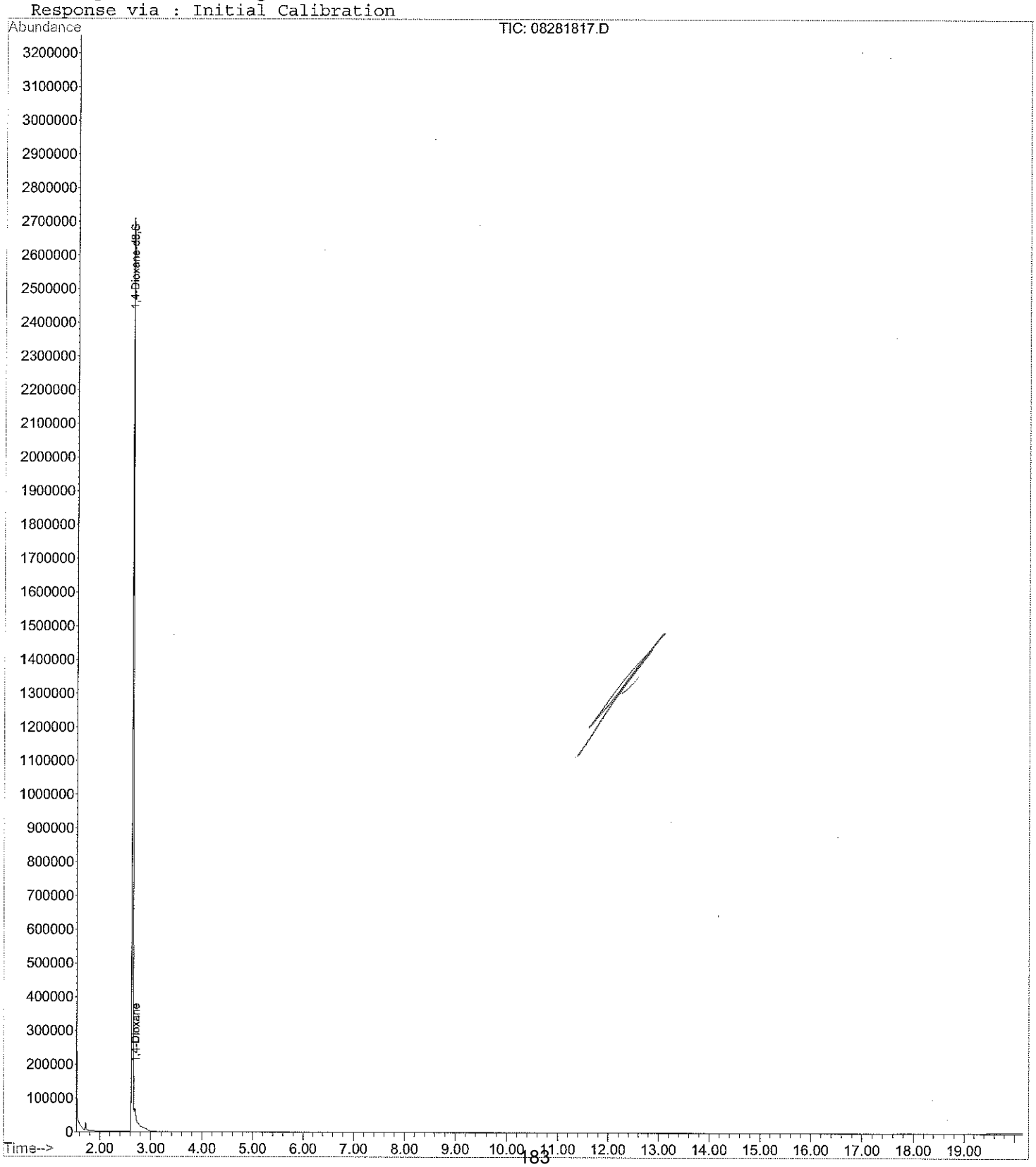
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration
08281817.D DX082818.M Wed Aug 29 11:30:20 2018 PDFCREATOR

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281817.D Vial: 17
Acq On : 28 Aug 2018 11:57 pm Operator: JB MS-2
Sample : ICAL 0.5 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281817.D Vial: 17
Acq On : 28 Aug 2018 11:57 pm Operator: JB MS-2
Sample : ICAL 0.5 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

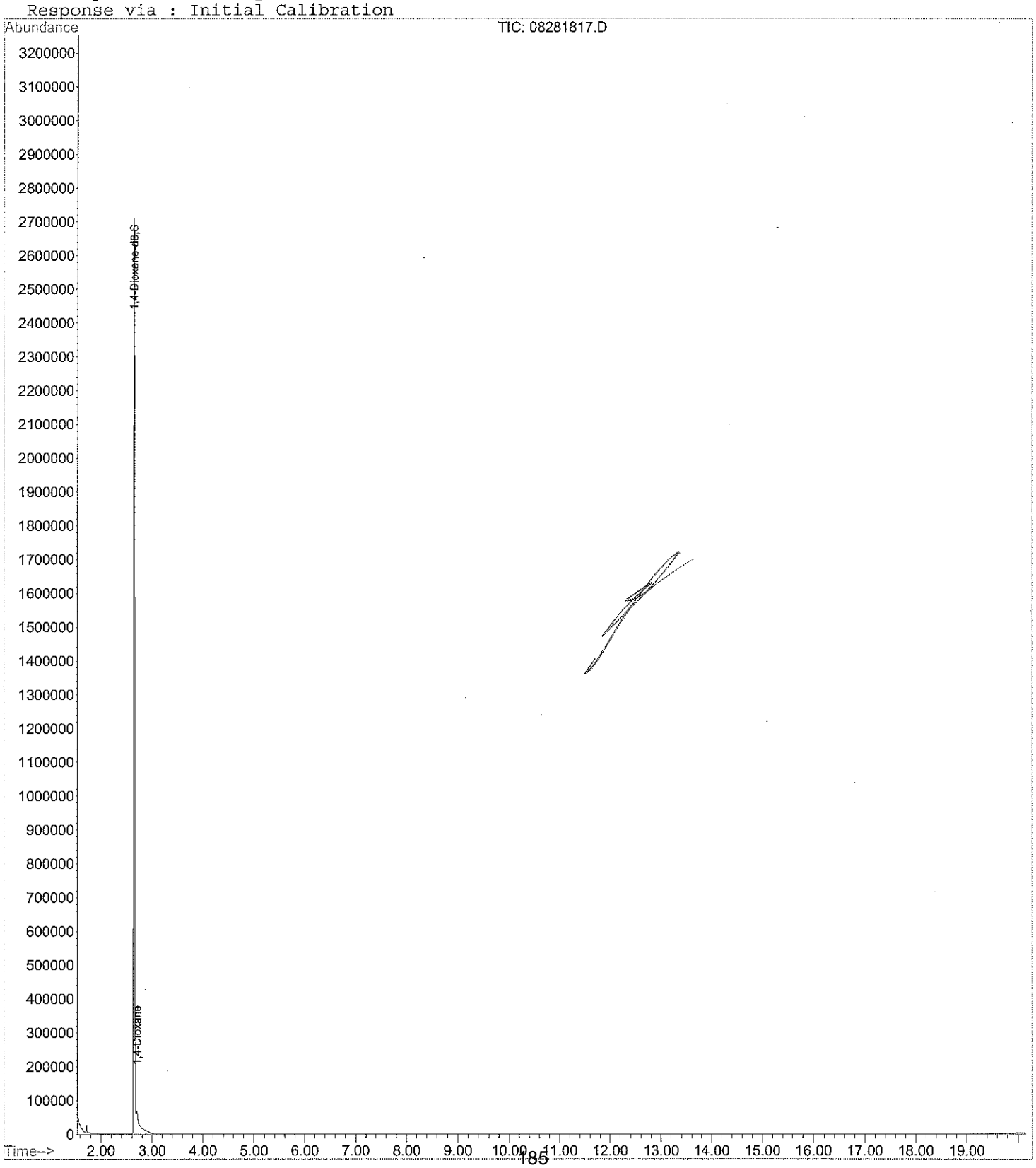
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2654436	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2654436	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.70	88	33595	0.52	mg/L	# 62

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281817.D Vial: 17
Acq On : 28 Aug 2018 11:57 pm Operator: JB MS-2
Sample : ICAL 0.5 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281818.D Vial: 18
Acq On : 29 Aug 2018 12:30 am Operator: JB MS-2
Sample : ICAL 1.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2660880	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2660880	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.70	88	67377	1.05	mg/L	# 64

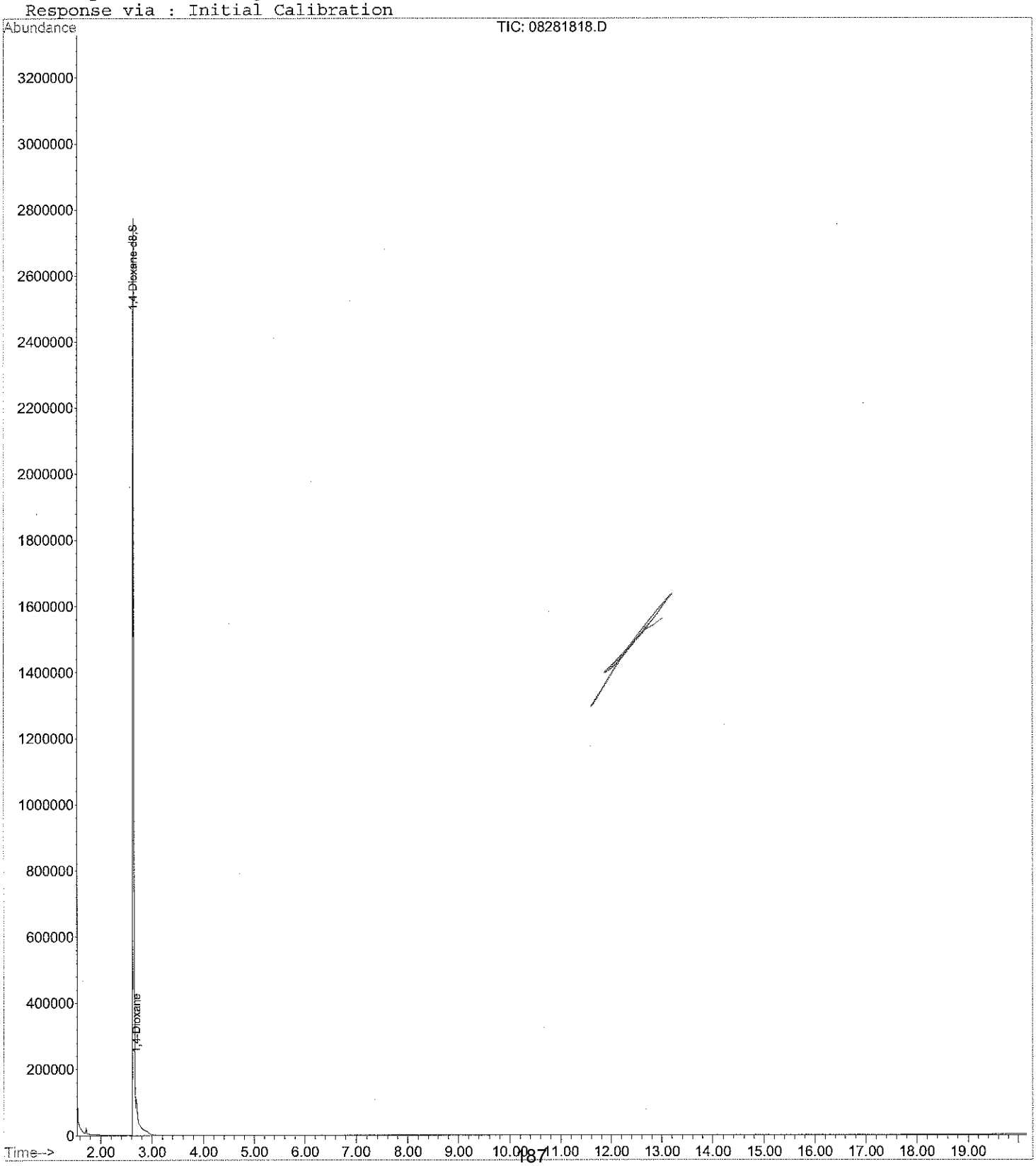
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration
08281818.D DX082818.M Wed Aug 29 11:30:28 2018 PDFCREATOR

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281818.D Vial: 18
Acq On : 29 Aug 2018 12:30 am Operator: JB MS-2
Sample : ICAL 1.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281818.D Vial: 18
Acq On : 29 Aug 2018 12:30 am Operator: JB MS-2
Sample : ICAL 1.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

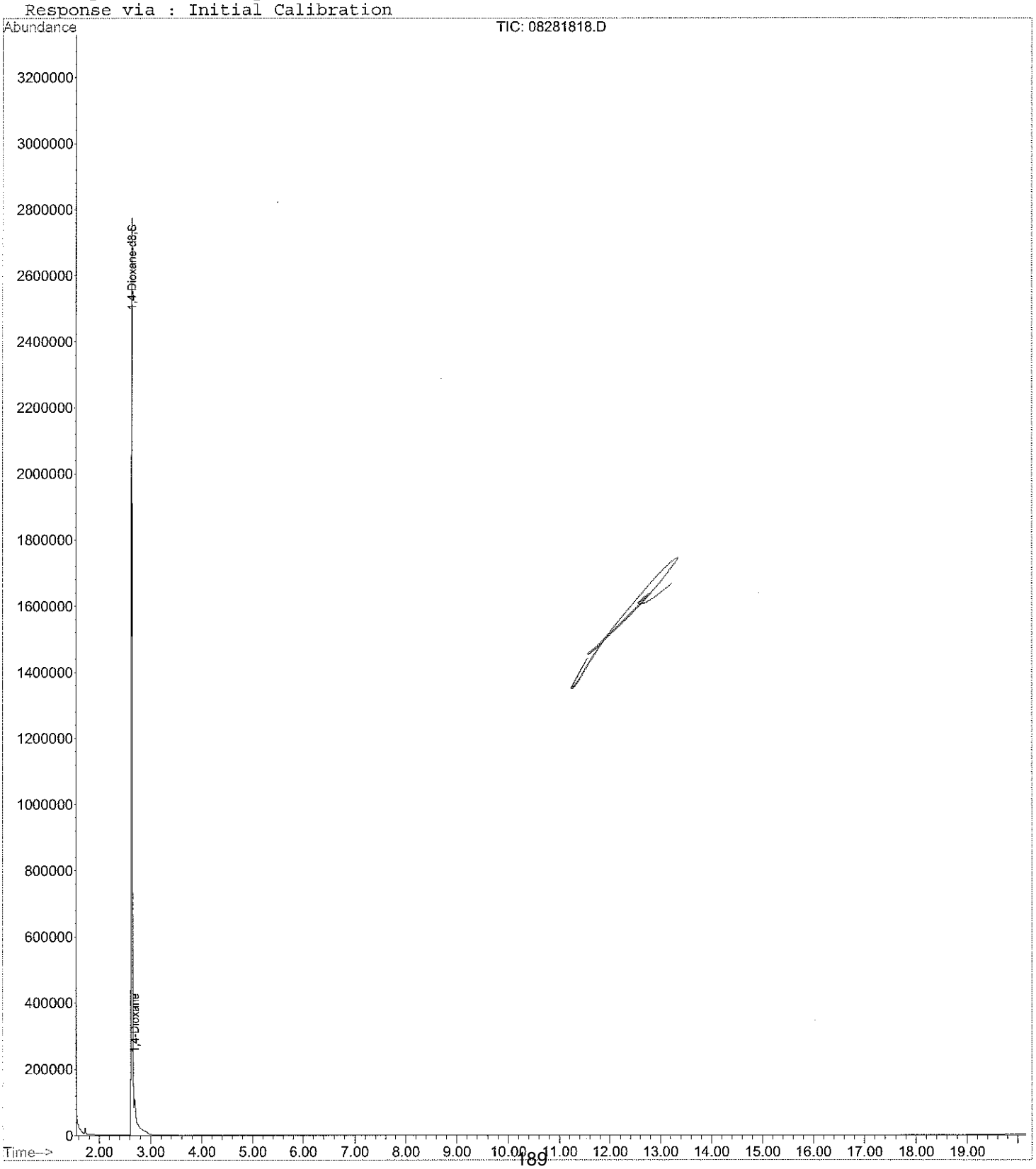
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2660880	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2660880	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.70	88	67377	1.05	mg/L	# 64

(#) = qualifier out of range (m) = manual integration
08281818.D DX082818.M Wed Aug 29 11:24:59 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281818.D Vial: 18
Acq On : 29 Aug 2018 12:30 am Operator: JB MS-2
Sample : ICAL 1.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:24 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281819.D Vial: 19
Acq On : 29 Aug 2018 1:02 am Operator: JB MS-2
Sample : ICAL 2.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2607482	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2607482	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	131514	2.08	mg/L	# 64

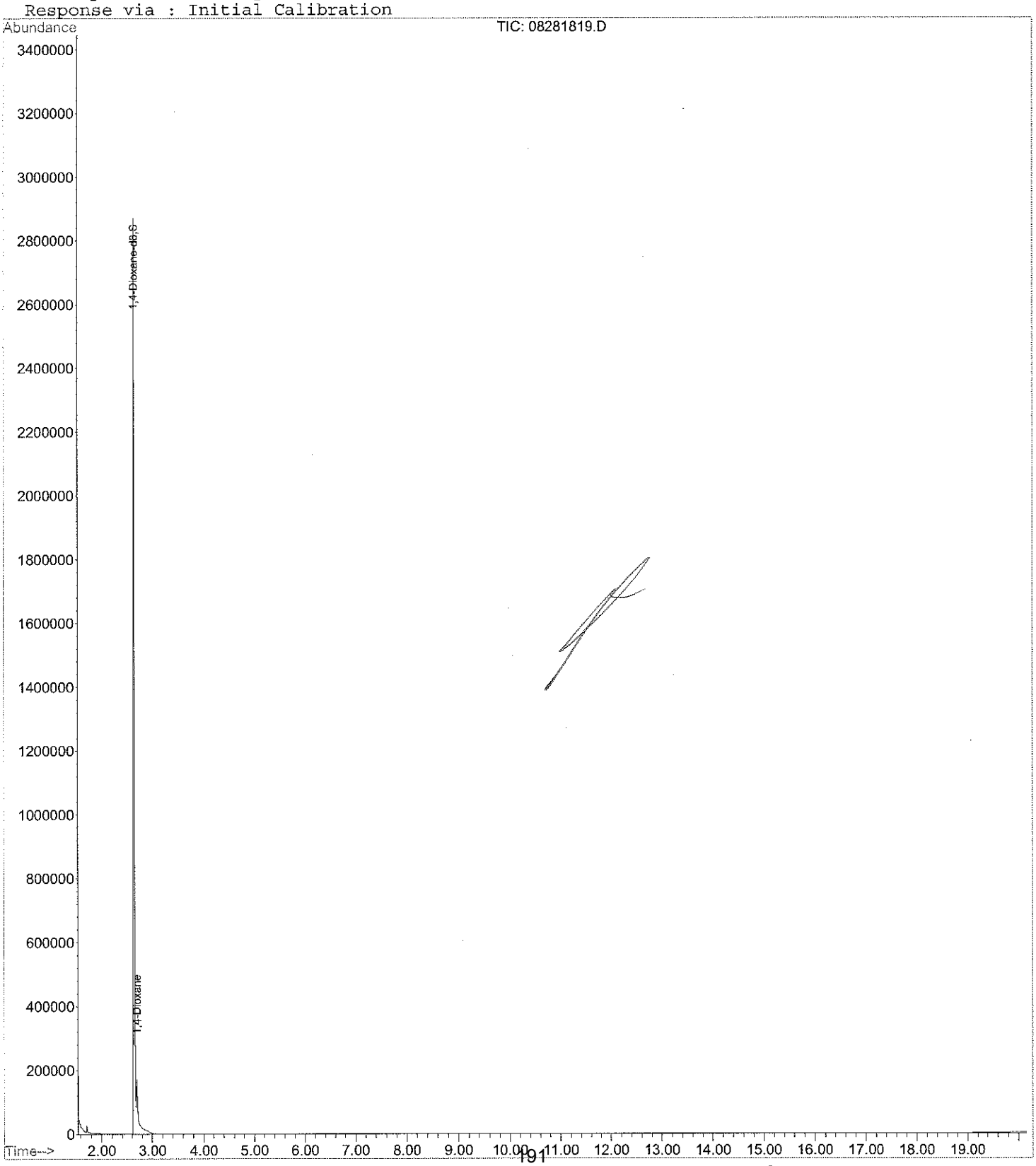
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration
08281819.D DX082818.M Wed Aug 29 11:30:32 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281819.D Vial: 19
Acq On : 29 Aug 2018 1:02 am Operator: JB MS-2
Sample : ICAL 2.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281819.D Vial: 19
Acq On : 29 Aug 2018 1:02 am Operator: JB MS-2
Sample : ICAL 2.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

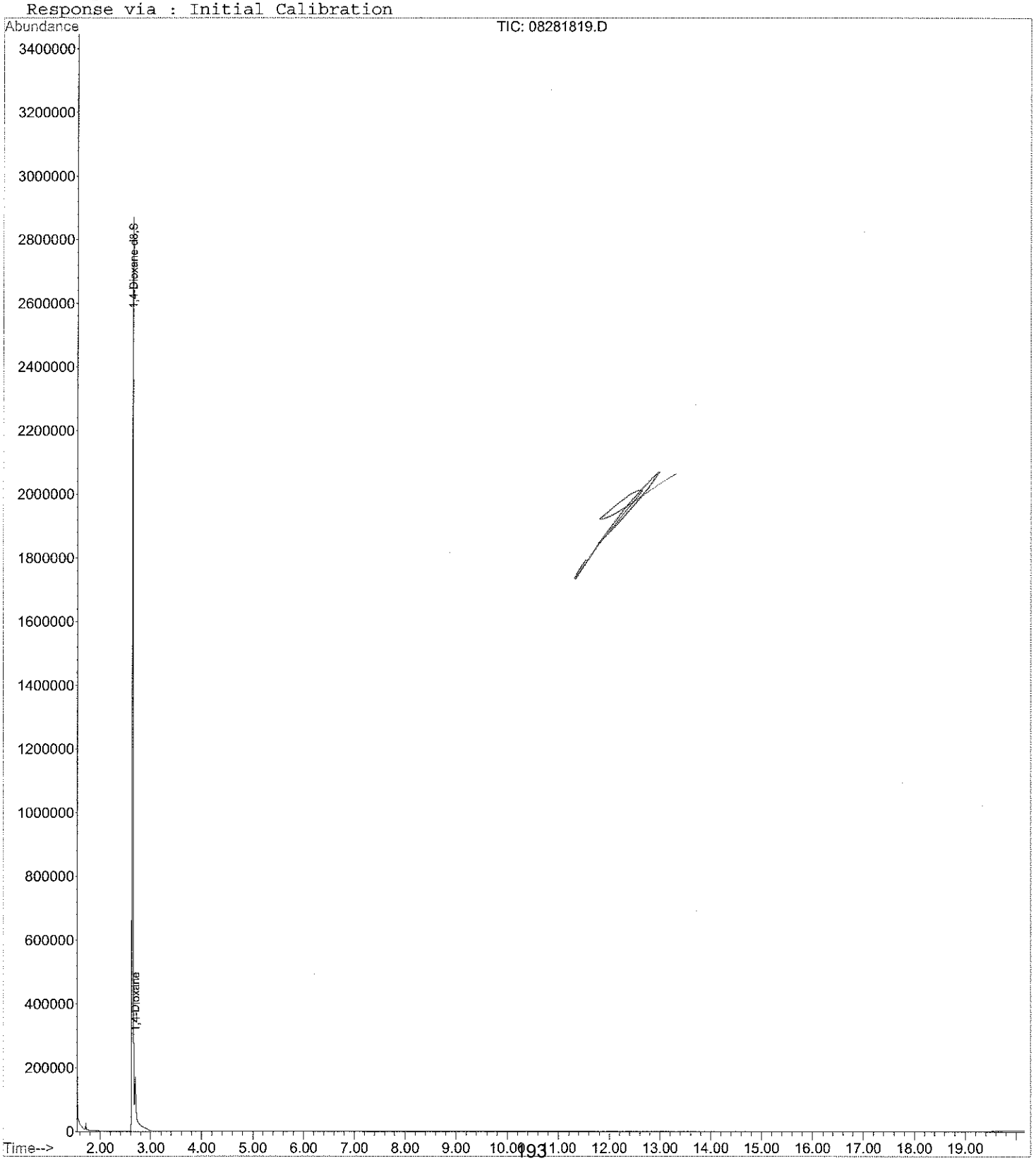
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2607482	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2607482	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	131514	2.08	mg/L	# 64

(#) = qualifier out of range (m) = manual integration
08281819.D DX082818.M Wed Aug 29 11:25:04 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281819.D Vial: 19
Acq On : 29 Aug 2018 1:02 am Operator: JB MS-2
Sample : ICAL 2.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281820.D Vial: 20
Acq On : 29 Aug 2018 1:34 am Operator: JB MS-2
Sample : ICAL 5.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2664808	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2664808	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	327353	5.08	mg/L	# 66

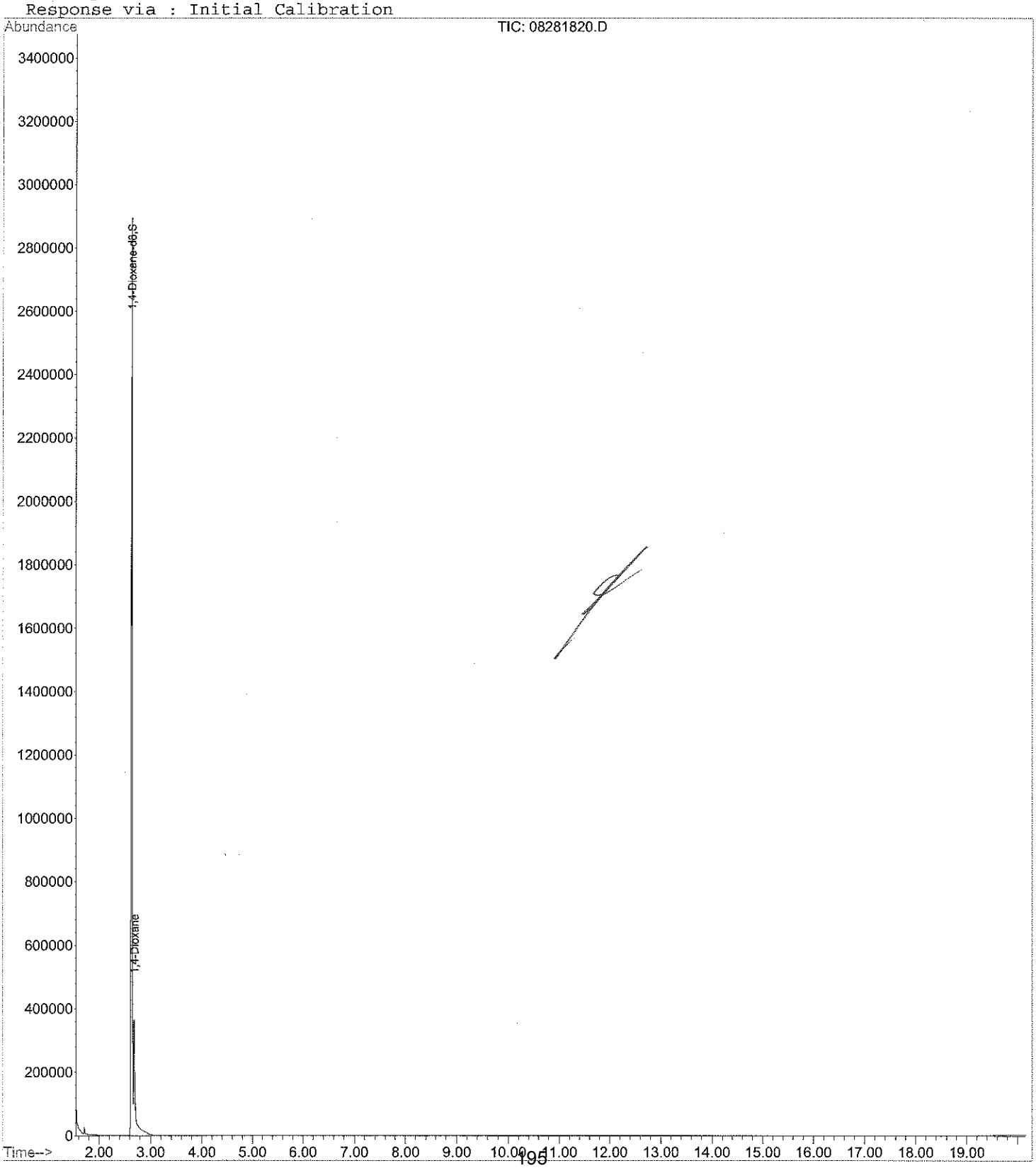
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration
08281820.D DX082818.M Wed Aug 29 11:30:37 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281820.D Vial: 20
Acq On : 29 Aug 2018 1:34 am Operator: JB MS-2
Sample : ICAL 5.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281820.D Vial: 20
Acq On : 29 Aug 2018 1:34 am Operator: JB MS-2
Sample : ICAL 5.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

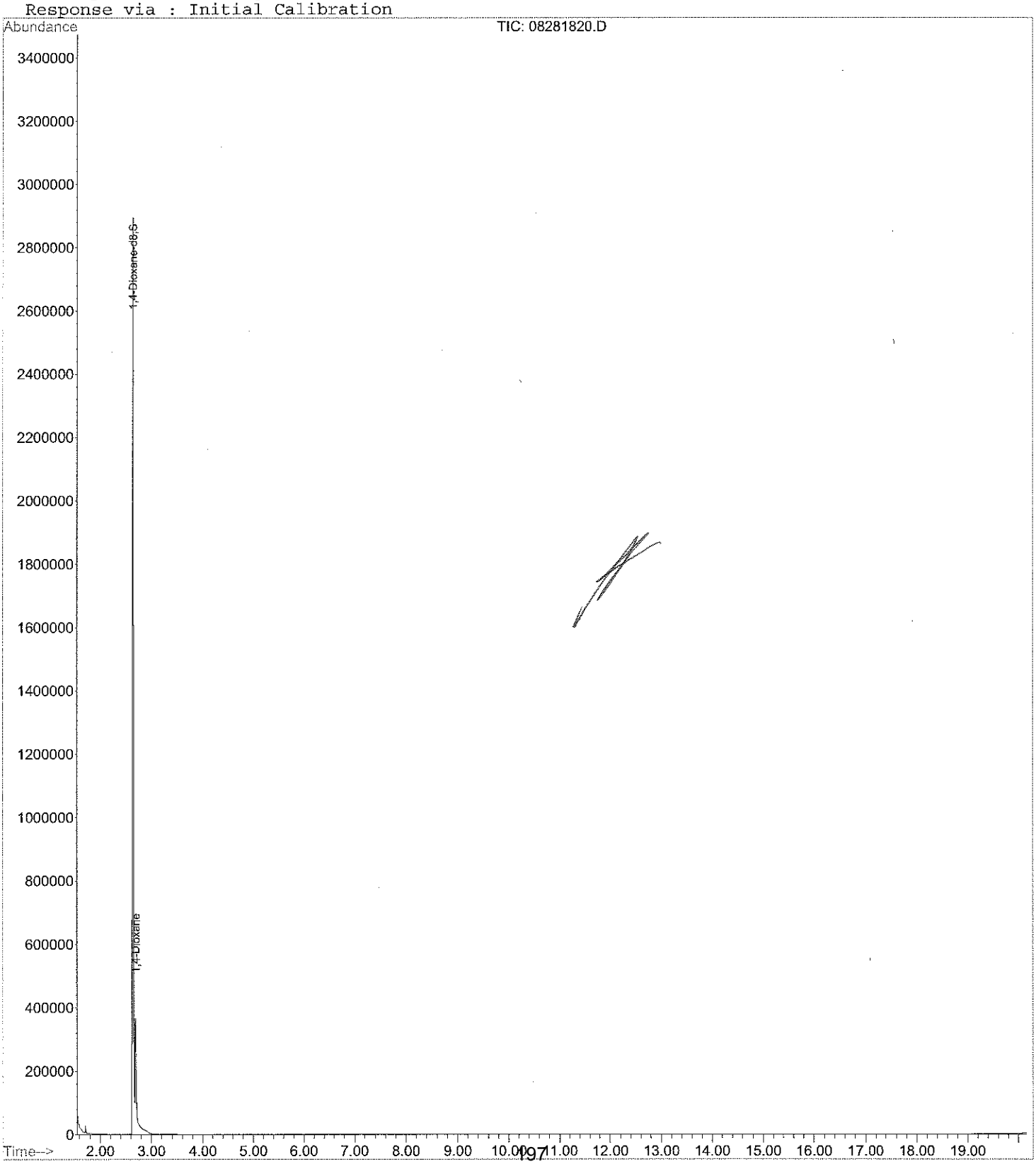
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2664808	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2664808	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	327353	5.08	mg/L	# 66

(#) = qualifier out of range (m) = manual integration
08281820.D DX082818.M Wed Aug 29 11:25:09 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281820.D Vial: 20
Acq On : 29 Aug 2018 1:34 am Operator: JB MS-2
Sample : ICAL 5.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281821.D Vial: 21
Acq On : 29 Aug 2018 2:06 am Operator: JB MS-2
Sample : ICAL 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	3156084	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	3156084	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	731961	9.59	mg/L	# 66

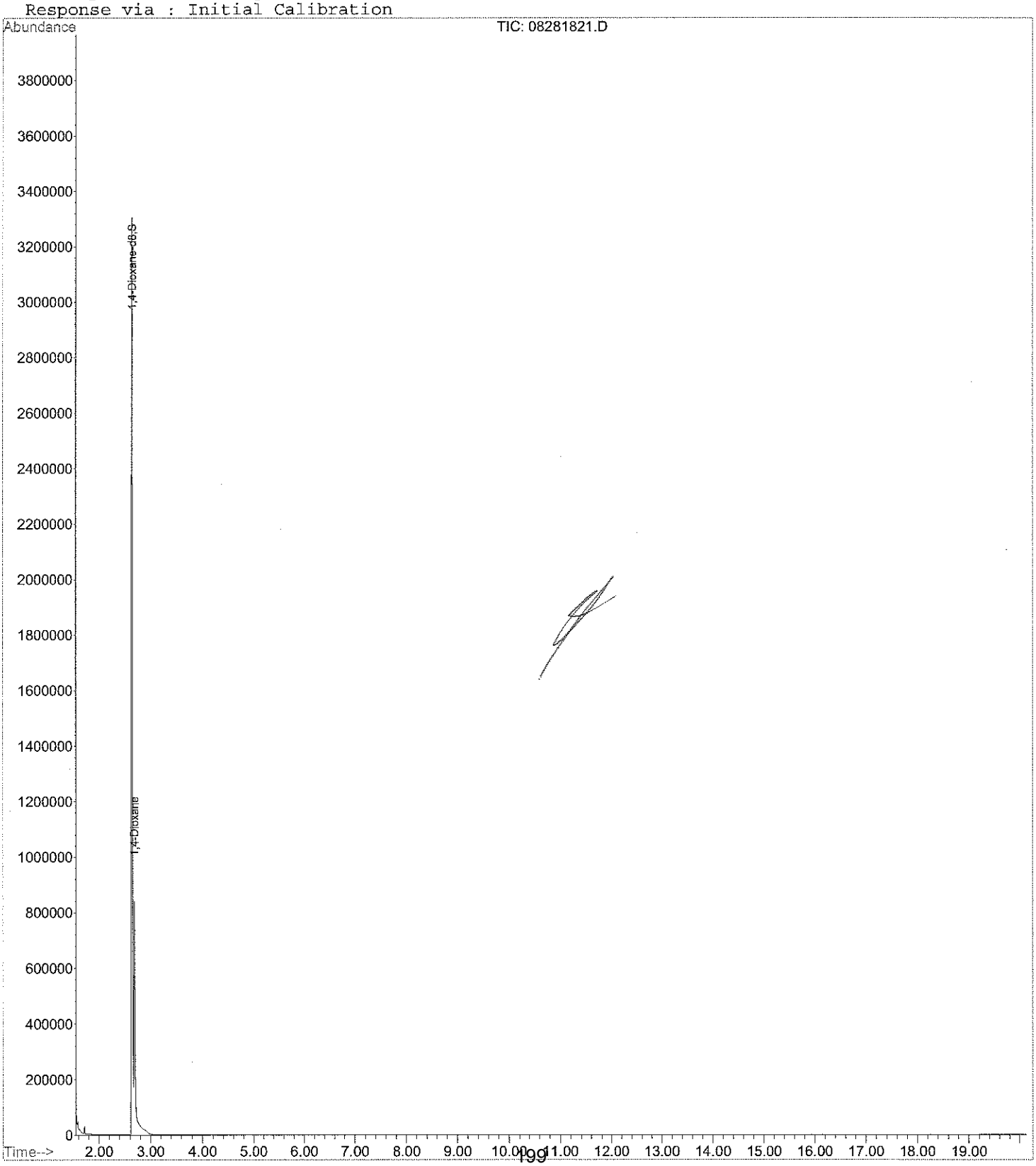
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281821.D Vial: 21
Acq On : 29 Aug 2018 2:06 am Operator: JB MS-2
Sample : ICAL 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281821.D Vial: 21
Acq On : 29 Aug 2018 2:06 am Operator: JB MS-2
Sample : ICAL 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

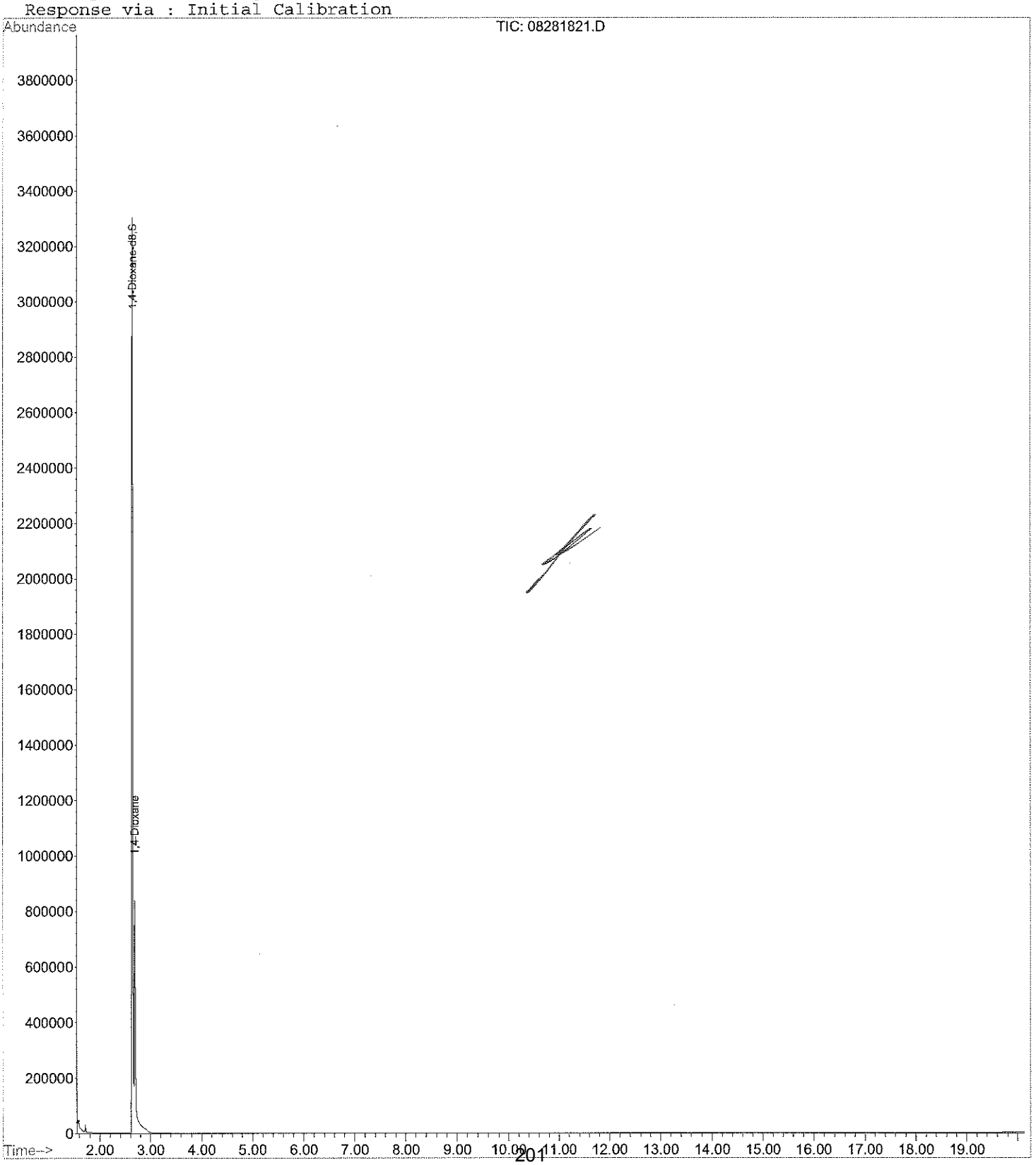
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	3156084	50.00	mg/L	-0.01
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	3156084	50.00	mg/L	-0.01
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	731961	9.59	mg/L	# 66

(#) = qualifier out of range (m) = manual integration
08281821.D DX082818.M Wed Aug 29 11:25:19 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281821.D Vial: 21
Acq On : 29 Aug 2018 2:06 am Operator: JB MS-2
Sample : ICAL 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281822.D Vial: 22
Acq On : 29 Aug 2018 2:38 am Operator: JB MS-2
Sample : ICAL 15.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

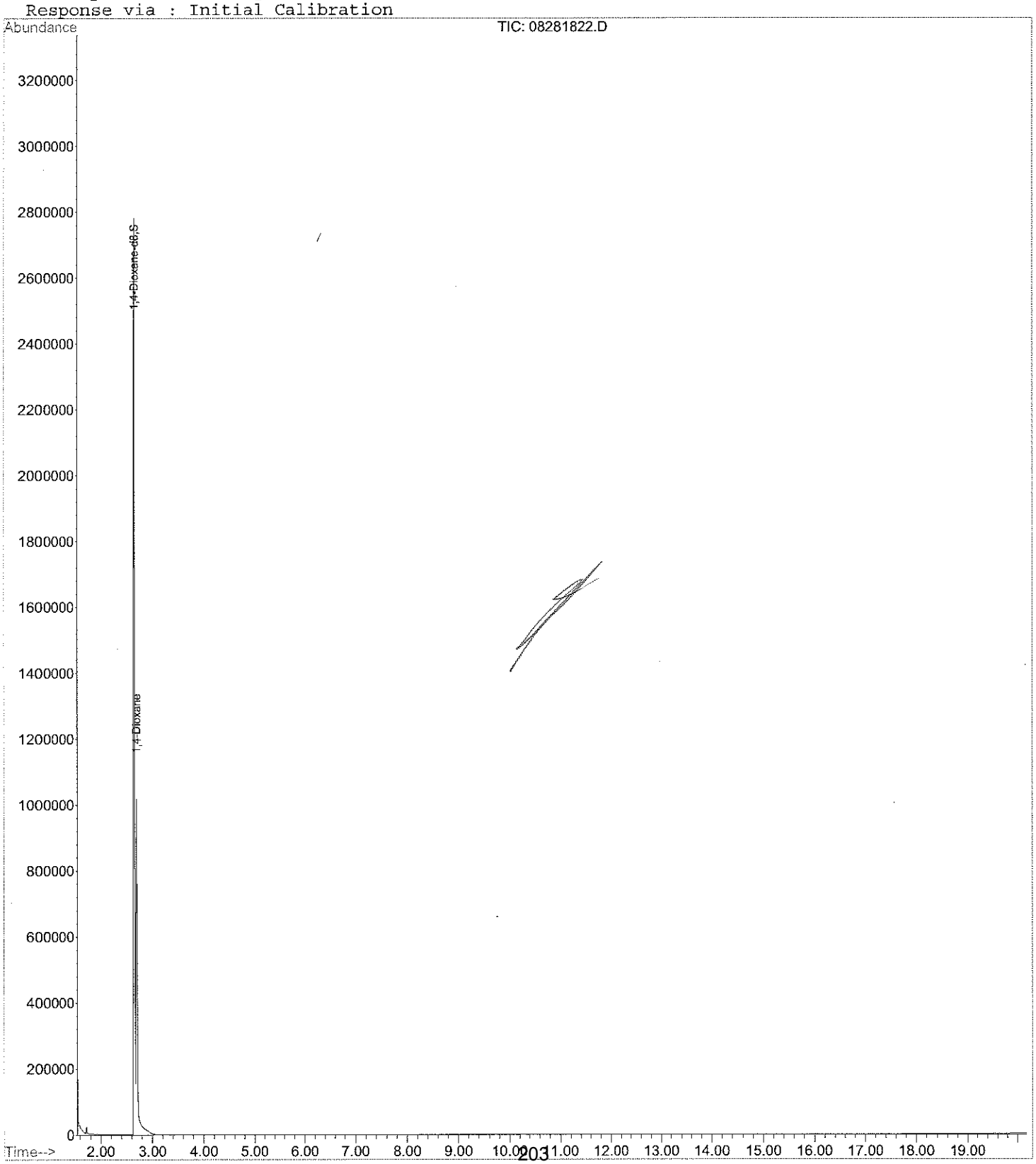
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2604210	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2604210	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	906432	14.39	mg/L	# 66

REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281822.D Vial: 22
Acq On : 29 Aug 2018 2:38 am Operator: JB MS-2
Sample : ICAL 15.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281822.D Vial: 22
Acq On : 29 Aug 2018 2:38 am Operator: JB MS-2
Sample : ICAL 15.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

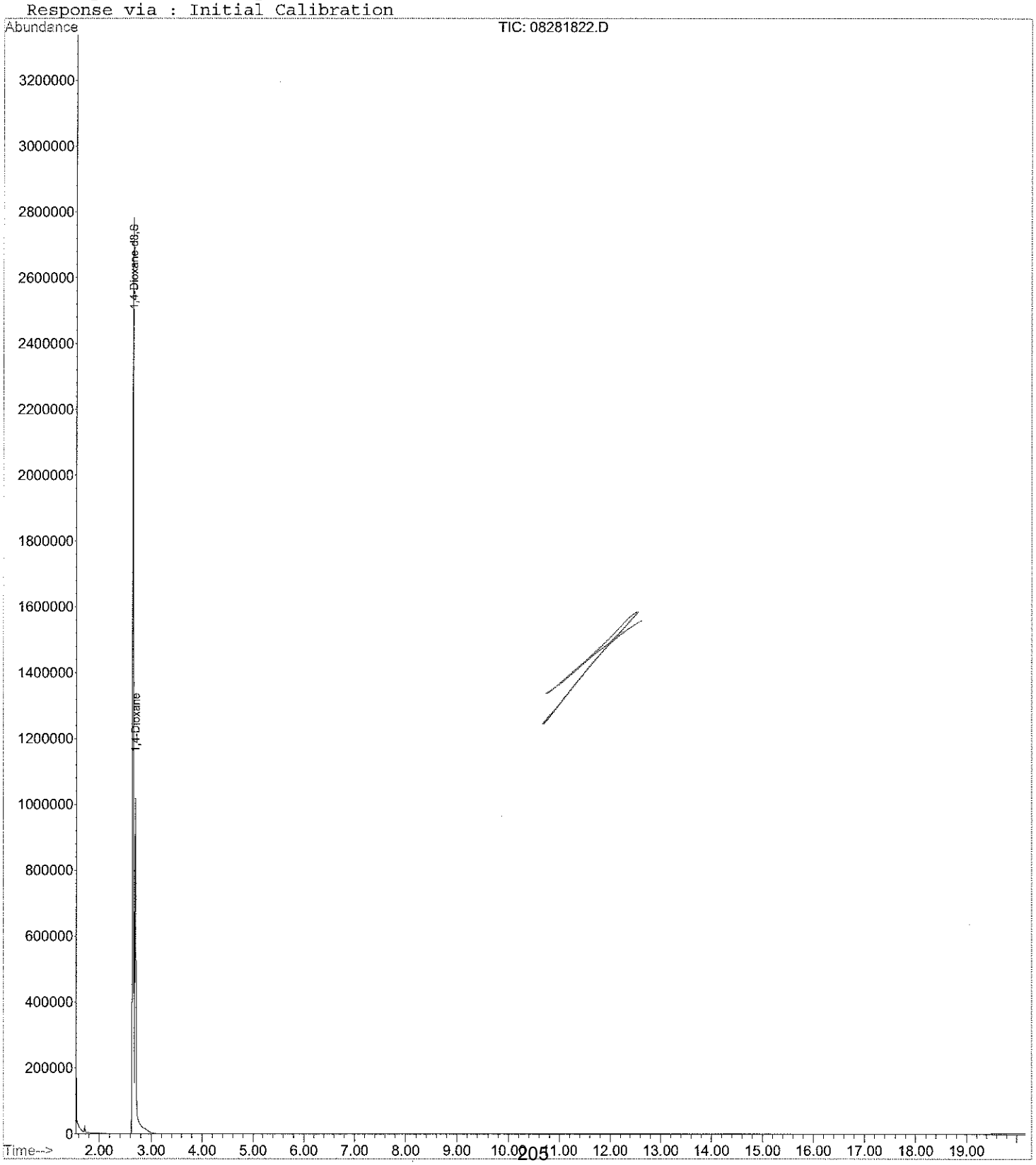
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2604210	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2604210	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	906432	14.39	mg/L	# 66

(#) = qualifier out of range (m) = manual integration
08281822.D DX082818.M Wed Aug 29 11:25:23 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281822.D Vial: 22
Acq On : 29 Aug 2018 2:38 am Operator: JB MS-2
Sample : ICAL 15.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281823.D Vial: 23
Acq On : 29 Aug 2018 3:10 am Operator: JB MS-2
Sample : ICAL 20.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2621270	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2621270	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	1210035	19.08	mg/L	# 66

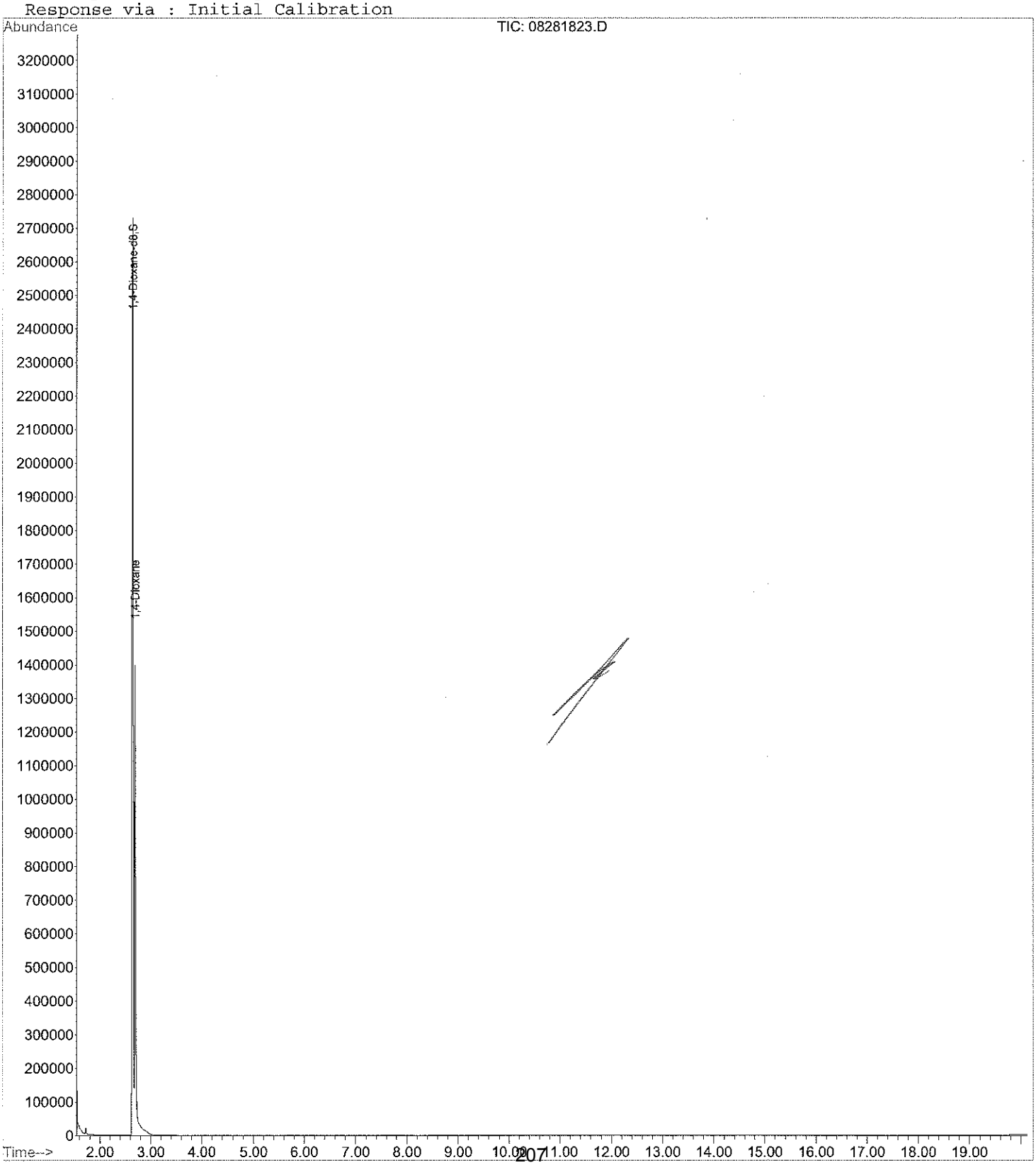
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281823.D Vial: 23
Acq On : 29 Aug 2018 3:10 am Operator: JB MS-2
Sample : ICAL 20.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281823.D Vial: 23
Acq On : 29 Aug 2018 3:10 am Operator: JB MS-2
Sample : ICAL 20.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

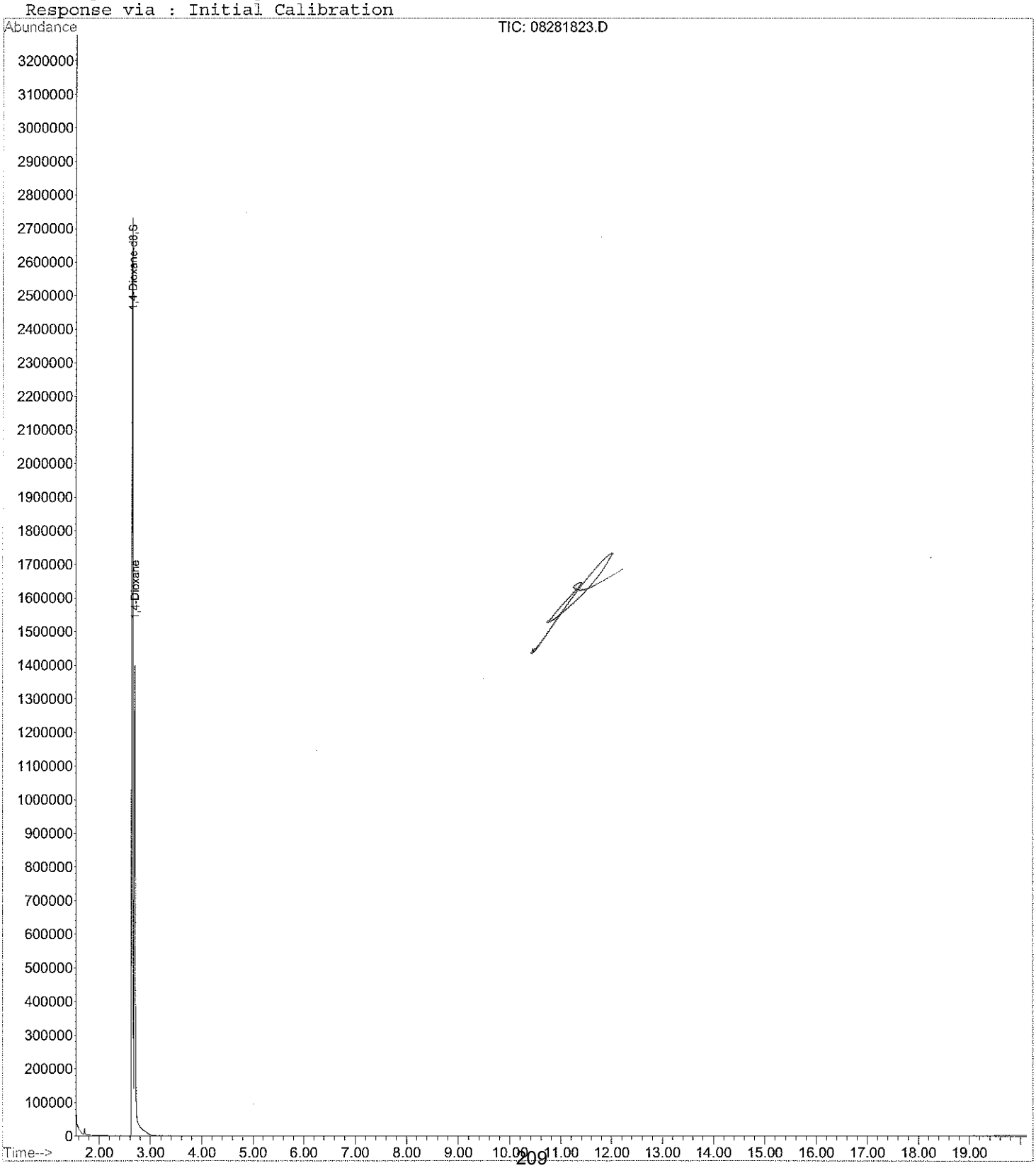
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.65	96	2621270	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.65	96	2621270	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	1210035	19.08	mg/L	# 66

(#) = qualifier out of range (m) = manual integration
08281823.D DX082818.M Wed Aug 29 11:25:27 2018 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281823.D Vial: 23
Acq On : 29 Aug 2018 3:10 am Operator: JB MS-2
Sample : ICAL 20.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:25 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:24:39 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281825.D Vial: 25
Acq On : 29 Aug 2018 4:14 am Operator: JB MS-2
Sample : ICV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062702, 8032705 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:30 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2530232	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2530232	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	691898	11.30	mg/L	100

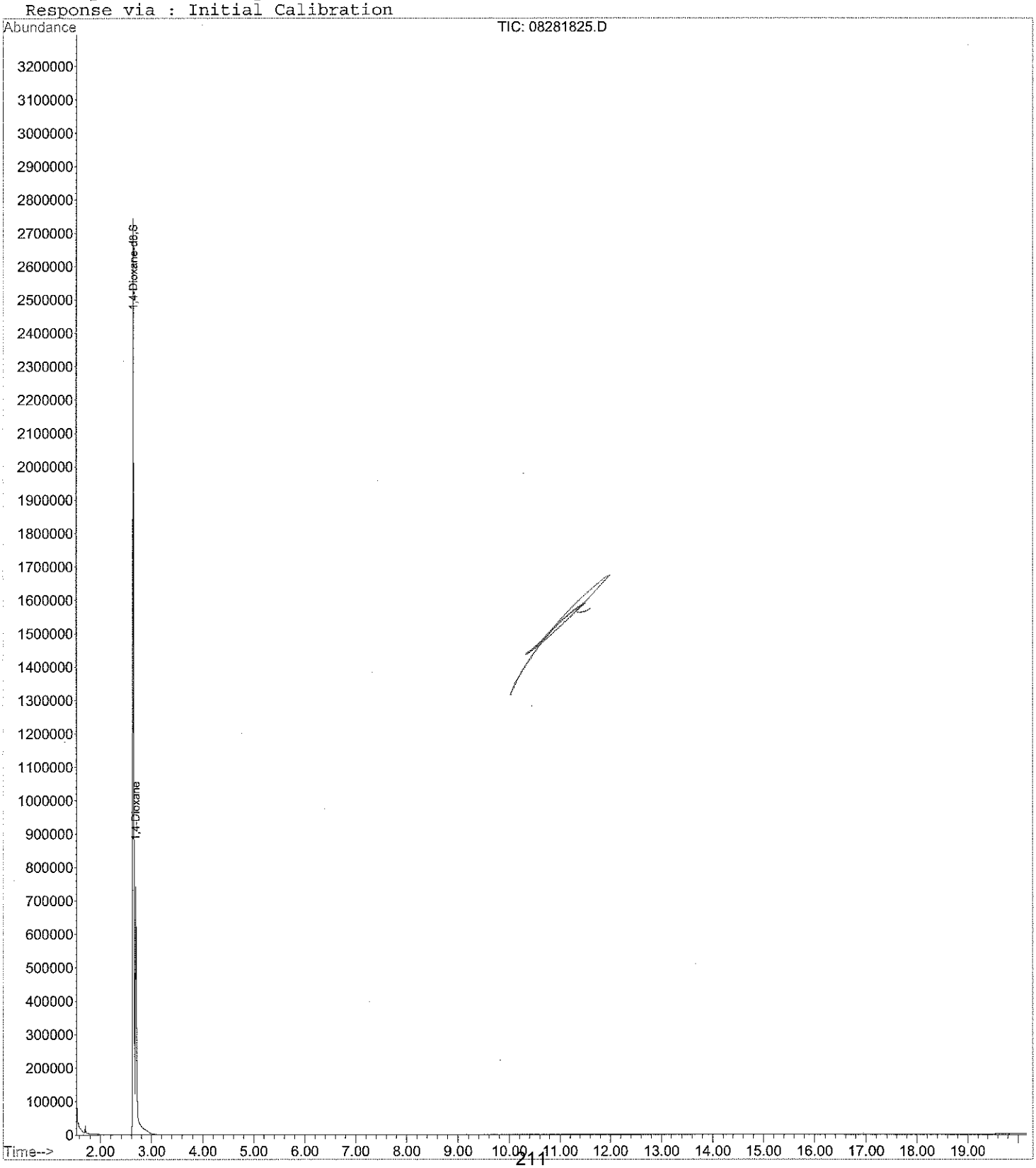
REVIEWED
By James Barai at 11:35 am, Aug 29, 2018

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281825.D Vial: 25
Acq On : 29 Aug 2018 4:14 am Operator: JB MS-2
Sample : ICV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062702, 8032705 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:30 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\082818\08281825.D Vial: 25
Acq On : 29 Aug 2018 4:14 am Operator: JB MS-2
Sample : ICV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062702, 8032705 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:30 2018 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration
DataAcq Meth : DX012116

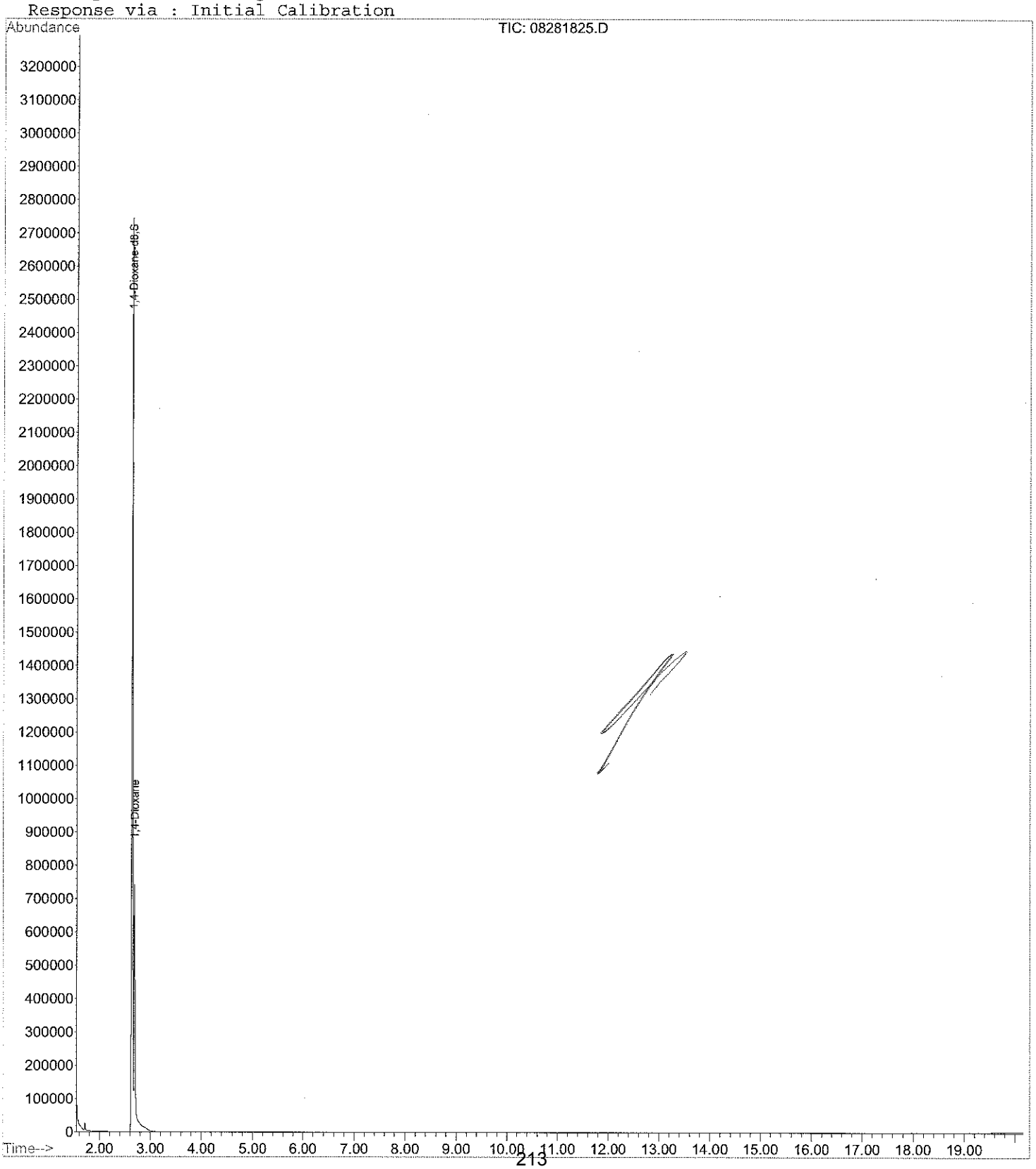
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.64	96	2530232	50.00	mg/L	0.00
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.64	96	2530232	50.00	mg/L	0.00
Target Compounds						Qvalue
2) 1,4-Dioxane	2.69	88	691898	11.30	mg/L	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\082818\08281825.D Vial: 25
Acq On : 29 Aug 2018 4:14 am Operator: JB MS-2
Sample : ICV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062702, 8032705 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 29 11:30 2018 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Wed Aug 29 11:28:16 2018
Response via : Initial Calibration



American Analytics, Inc. - Chatsworth, California
AA5205/5210 (EPA 8270) SVOCs by GCMS Sample Preparation Logbook

Date: 6-20-19 **Method:** 8270 L4 Dilution W **Analyst:** A. Z **Batch #:** B9F2002

Seq #	AA Sample ID #	Client ID	Project #	Sample Size	Acid (pH)	Base (pH)	Final Volume (mL)
1	Blank	DI H2O		1L	✓	✓	1mL
2	LCS	↓		↓	✓	✓	↓
3	LCSD	↓		↓	✓	✓	↓
4	9F1400J-11MS	MW-04	A874360	↓	✓	✓	↓
5	↓ -11MSD	↓	↓	↓	✓	✓	↓
6	9F1400K-1	ZW-A	A874355	↓	✓	✓	↓
7	-2	MW-33B	↓	↓	✓	✓	↓
8	-3	MW-17	↓	↓	✓	✓	↓
9	-4	MW-5B	↓	↓	✓	✓	↓
10	-5	MW-4B	↓	↓	✓	✓	↓
11	-6	QC-15	↓	↓	✓	✓	↓
12	-7	ZW-2	↓	↓	✓	✓	↓
13	9F1400J-2	ZW-8	A834360	↓	✓	✓	↓
14	-3	MW-16	↓	↓	✓	✓	↓
15	-4	MW-15	↓	↓	✓	✓	↓
16	-5	MW-15B	↓	↓	✓	✓	↓
17	-6	MW-18	↓	↓	✓	✓	↓
18	-7	MW-61A	↓	↓	✓	✓	↓
19	-8	QC-14	↓	↓	✓	✓	↓
20	-9	MW-61B	↓	↓	✓	✓	Z
21	-10	QC-12	↓	980mL	✓	✓	↓
22	-11	MW-04	↓	1L	✓	✓	↓
23	-12	QC-13	↓	↓	✓	✓	↓
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							

QA / QC Information & Comments

AA 5205/5210 (EPA 8270)
Surrogate
LIMS ID #: 9AJ0703
Concentration.: 1,000 ppm
Volume Added: 50 µL

AA 5205/5210 (EPA 8270)
LCS/LCSD/MS/MSD
LIMS ID #: 9AJ0704
Concentration: 1,000 ppm
Volume Added: 10 µL

Chemical Lot Numbers
$MeCl_2$: 188318
Na_2SO_4: 178494
H_2SO_4: _____
NaOH: _____

Water Bath Temperature: 76°C
Thermometer S/N: P35904

$MeCl_2$ Dispenser S/N: 06D0534

Balance S/N: 68548

Calibration Weight S/N: 96-J080006

APPROVED
By Stuart Sigman at 11:08 am, Jun 27, 2019

Reviewed by : _____

Date: _____

Injection Log

Directory: C:\HPCHEM\1\DATA\2019\062119

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	06211901.d	1.	WASH		21 Jun 2019 11:06
2	2	06211902.d	1.	DFTPP 50ng		21 Jun 2019 11:21
3	3	06211903.d	1.	CCV 10.0 mg/L 1,4-Dioxane	8062701, 8062702	21 Jun 2019 11:46
4	4	06211904.d	1.	9F13001-18 @ 5x	9050703	21 Jun 2019 12:17
5	5	06211905.d	1.	B9F2002-BLK1	9050703	21 Jun 2019 12:49
6	6	06211906.d	1.	B9F2002-BS1	9050703, 9050704	21 Jun 2019 13:21
7	7	06211907.d	1.	B9F2002-BSD1	9050703, 9050704	21 Jun 2019 13:54
8	8	06211908.d	1.	9F14005-11 ms	9050703, 9050704	21 Jun 2019 14:27
9	9	06211909.d	1.	9F14005-11 msd	9050703, 9050704	21 Jun 2019 15:00
10	10	06211910.d	1.	9F14004-01	9050703	21 Jun 2019 15:33
11	11	06211911.d	1.	9F14004-02	9050703	21 Jun 2019 16:05
12	12	06211912.d	1.	9F14004-03	9050703	21 Jun 2019 16:38
13	13	06211913.d	1.	9F14004-04	9050703	21 Jun 2019 17:12
14	14	06211914.d	1.	9F14004-05	9050703	21 Jun 2019 17:45
15	15	06211915.d	1.	9F14004-06	9050703	21 Jun 2019 18:18
16	16	06211916.d	1.	9F14004-07	9050703	21 Jun 2019 18:51
17	17	06211917.d	1.	9F14005-02	9050703	21 Jun 2019 19:24
18	18	06211918.d	1.	9F14005-03	9050703	21 Jun 2019 19:57
19	19	06211919.d	1.	9F14005-04	9050703	21 Jun 2019 20:30
20	20	06211920.d	1.	9F14005-05	9050703	21 Jun 2019 21:02
21	21	06211921.d	1.	9F14005-06	9050703	21 Jun 2019 21:35
22	22	06211922.d	1.	9F14005-07	9050703	21 Jun 2019 22:07
23	2	06211923.d	1.	DFTPP 50ng		21 Jun 2019 22:31
24	3	06211924.d	1.	CCV 10.0 mg/L 1,4-Dioxane	8062701, 8062702	21 Jun 2019 22:56
25	23	06211925.d	1.	9F14005-08	9050703	21 Jun 2019 23:28
26	24	06211926.d	1.	9F14005-09	9050703	22 Jun 2019 00:00
27	25	06211927.d	1.	9F14005-10	9050703	22 Jun 2019 00:32
28	26	06211928.d	1.	9F14005-11	9050703	22 Jun 2019 01:04
29	27	06211929.d	1.	9F14005-12	9050703	22 Jun 2019 01:35
30	3	06211930.d	1.	CCV 10.0 mg/L 1,4-Dioxane	8062701, 8062702	22 Jun 2019 02:07

APPROVED

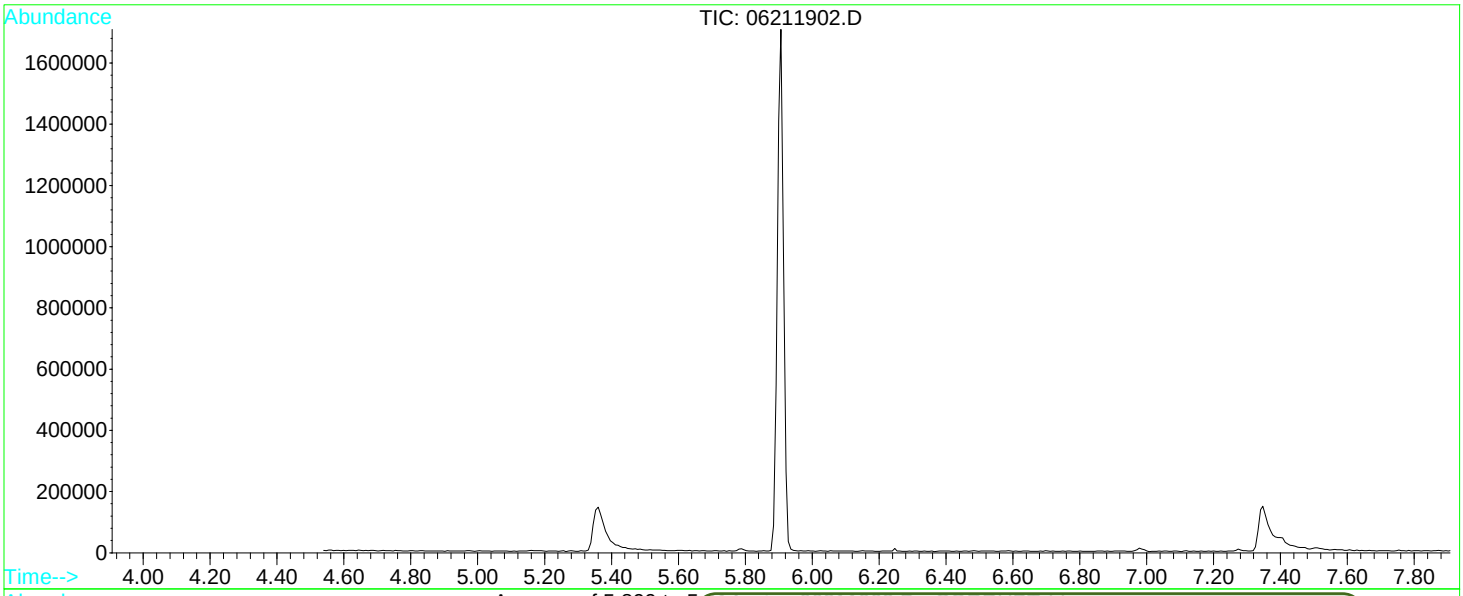
By Stuart Sigman at 11:12 am, Jun 27, 2019

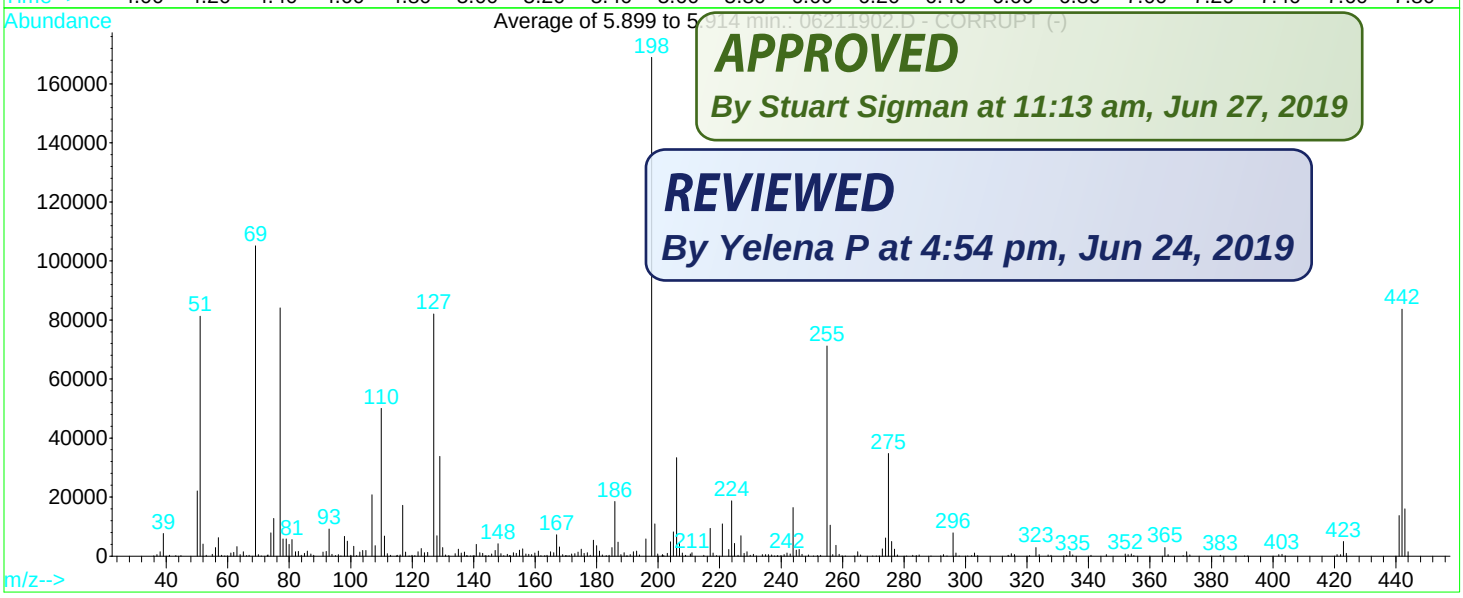
REVIEWED

By Yelena P at 4:54 pm, Jun 24, 2019

DFTPP

Data File : C:\HPCHEM\1\DATA\2019\062119\06211902.D Vial: 2
Acq On : 21 Jun 2019 11:21 am Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane





APPROVED
By Stuart Sigman at 11:13 am, Jun 27, 2019

REVIEWED
By Yelena P at 4:54 pm, Jun 24, 2019

AutoFind: Scans 185, 186, 187; Background Corrected with Scan 179

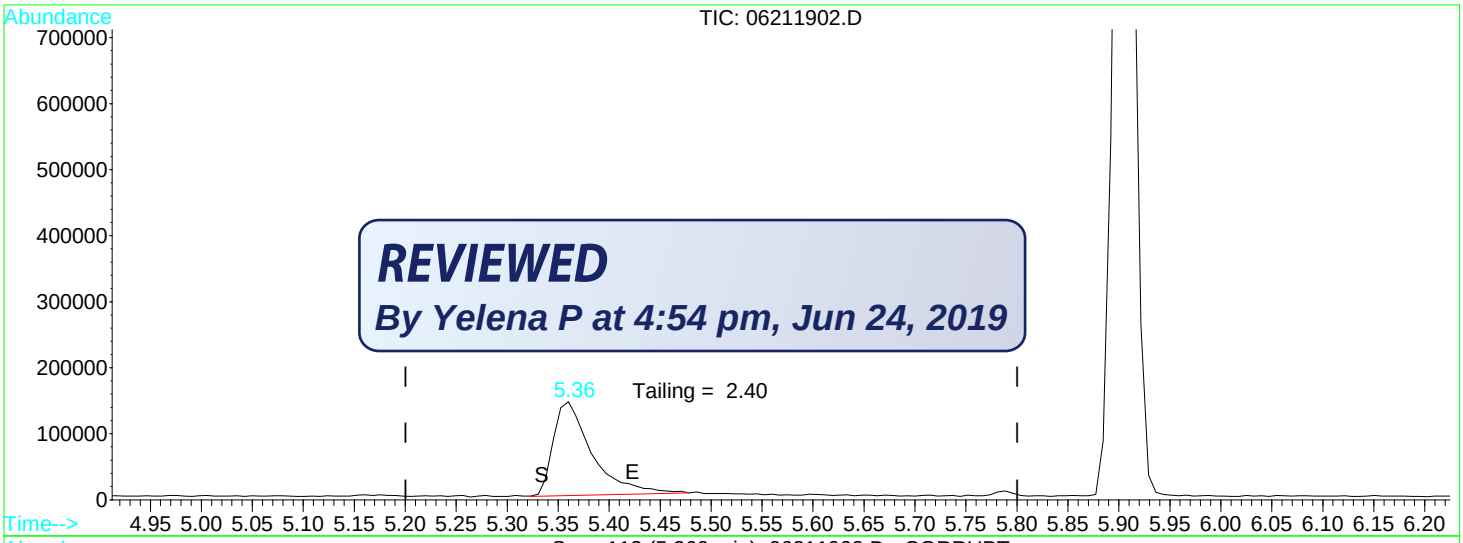
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	48.1	81235	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	62.2	105133	PASS
70	69	0.00	2	0.5	501	PASS
127	198	35	60	48.6	82027	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	168933	PASS
199	198	5	9	6.4	10856	PASS
275	198	10	30	20.5	34715	PASS
365	198	1	100	1.7	2928	PASS
441	443	0.01	100	85.9	13731	PASS
442	198	35	100	49.5	83651	PASS
443	442	17	23	19.1	15990	PASS

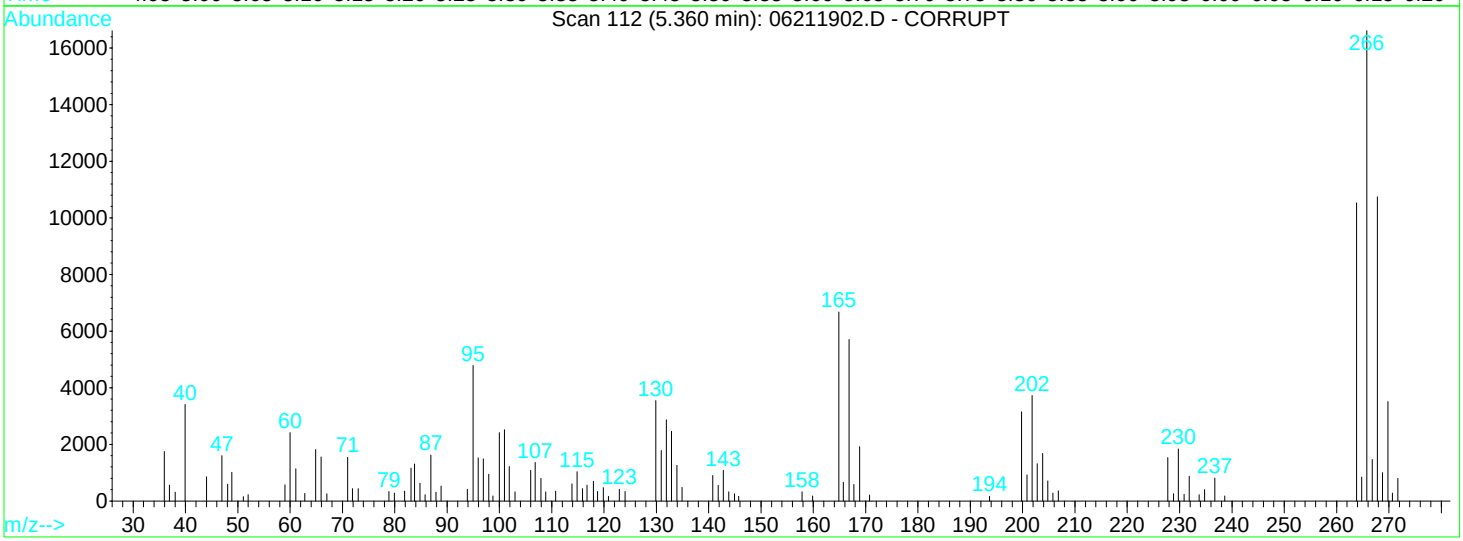
06211902.D DX082818.M Mon Jun 24 16:40:36 2019 PDFCREATOR

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211902.D Vial: 2
Acq On : 21 Jun 2019 11:21 am Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 12:24 2019 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Multiple Level Calibration





TIC: 06211902.D

(1) Pentachlorophenol (S)

5.36min 20.49mg/L

response 4076111

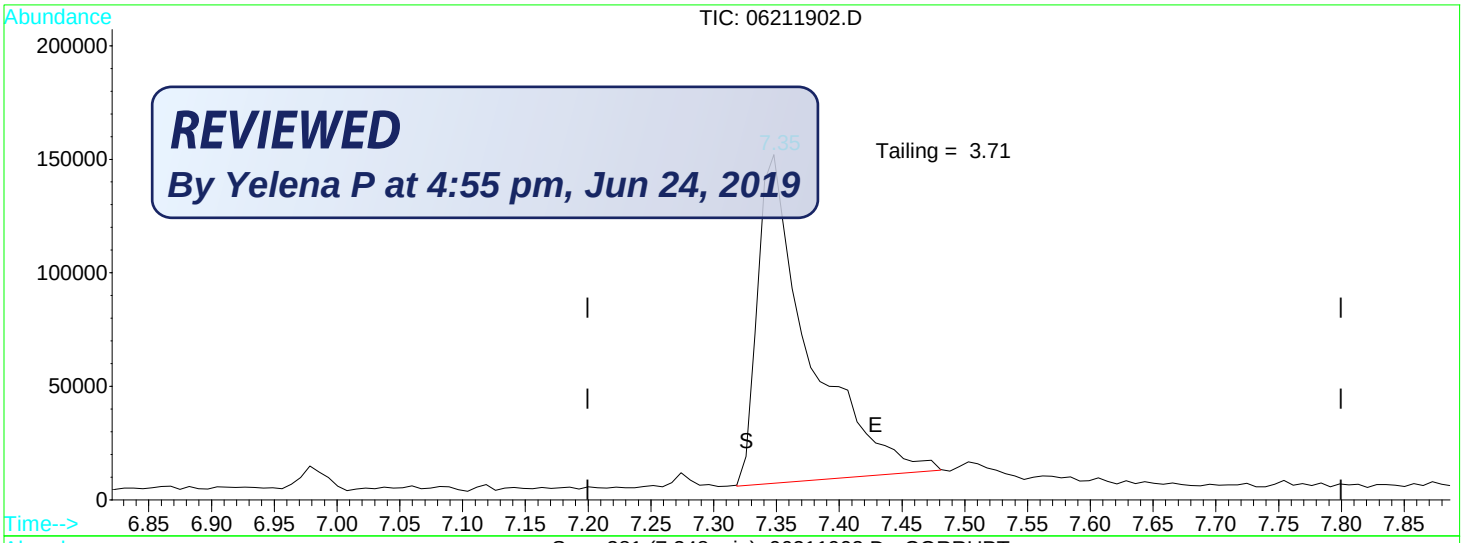
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

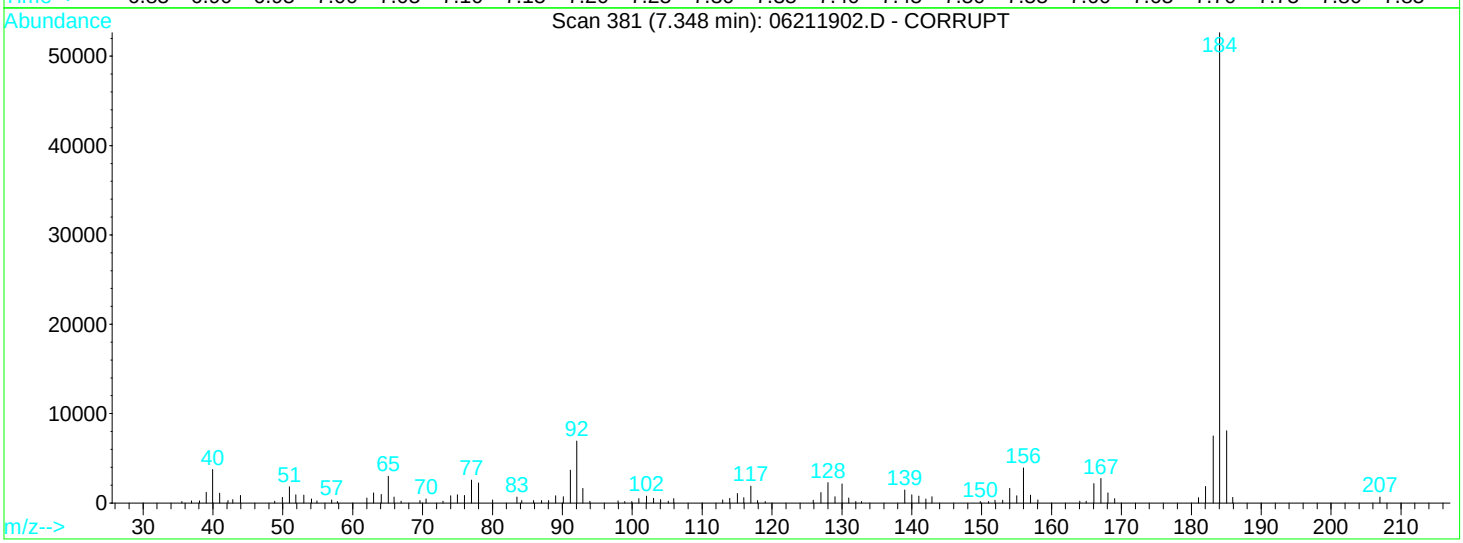
APPROVED
By Stuart Sigman at 11:13 am, Jun 27, 2019

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211902.D Vial: 2
Acq On : 21 Jun 2019 11:21 am Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 12:24 2019 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Multiple Level Calibration





TIC: 06211902.D

(3) Benzidine (S)

7.35min 18.29mg/L

response 4160976

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

APPROVED
By Stuart Sigman at 11:17 am, Jun 27, 2019

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211902.D Vial: 2
Acq On : 21 Jun 2019 11:21 am Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 21 12:24 2019 Quant Results File: RDFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Fri Aug 31 12:47:31 2018
Response via : Initial Calibration
DataAcq Meth : RDFTPP

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
System Monitoring Compounds						
1) Pentachlorophenol	5.36	TIC	4076111	20.49	mg/L	-0.14
2) DFTPP	5.91	TIC	22184620	97.01	mg/L	-0.14
3) Benzidine	7.35	TIC	4160976	18.29	mg/L	-0.15
4) p,p'-DDD	8.02	TIC	473236m	3.61	mg/L	-0.16
5) p,p'-DDT	8.42	TIC	9630070	40.22	mg/L	-0.16

Target Compounds Qvalue

APPROVED
By Stuart Sigman at 11:18 am, Jun 27, 2019

about 9%

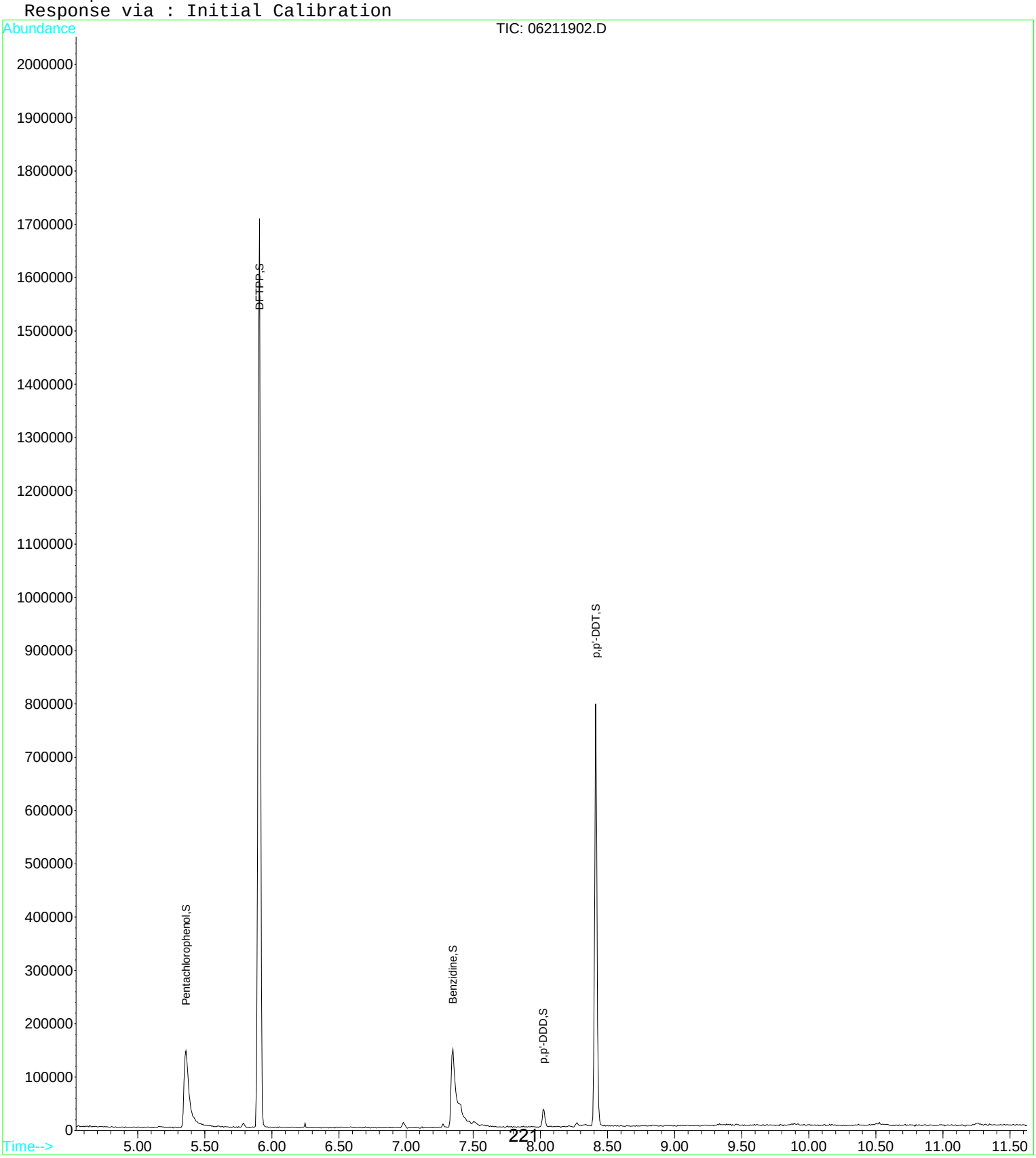
REVIEWED
By Yelena P at 4:55 pm, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211902.D Vial: 2
Acq On : 21 Jun 2019 11:21 am Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 21 12:24 2019 Quant Results File: RDFTPP.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211903.D Vial: 3
Acq On : 21 Jun 2019 11:46 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

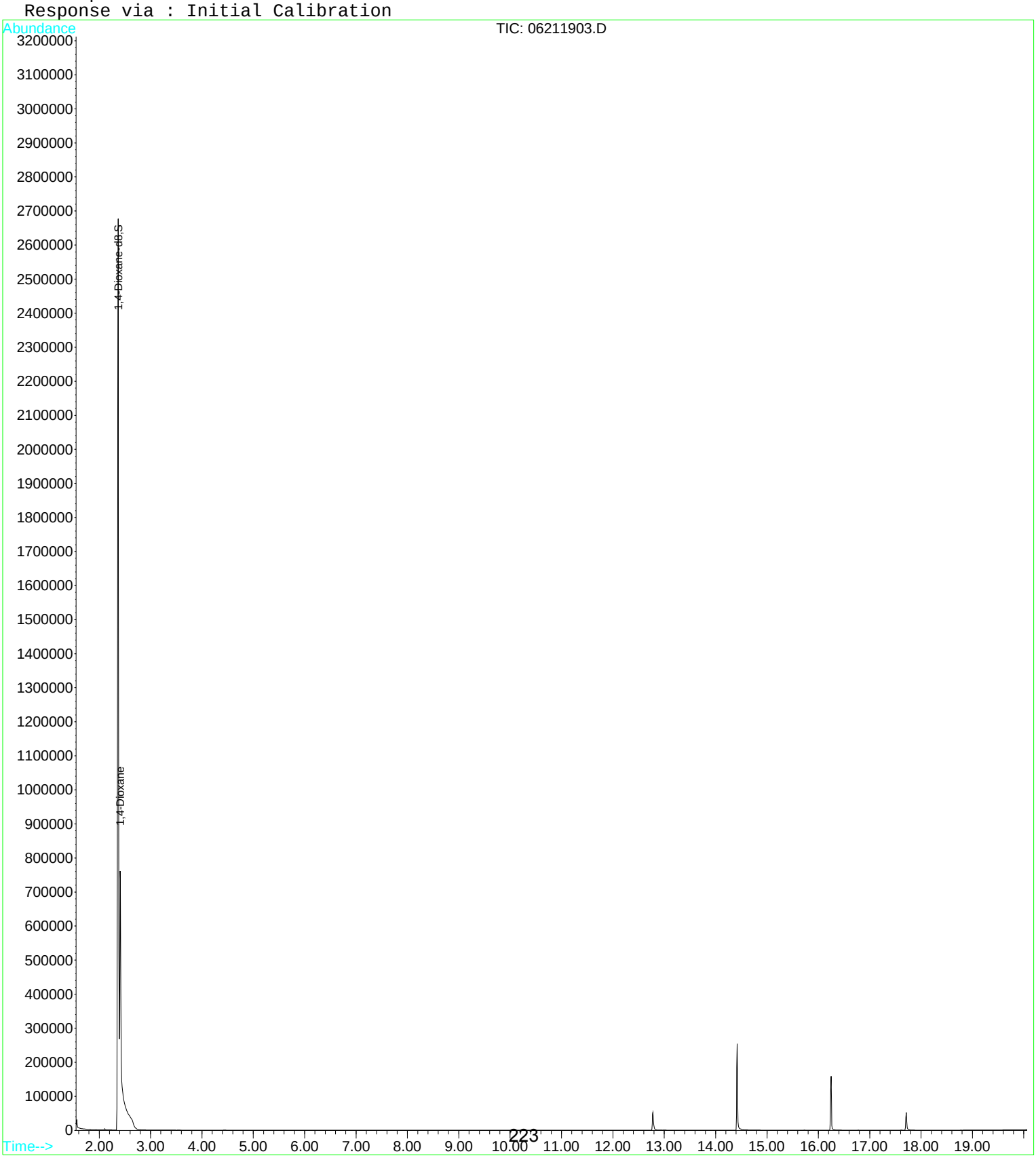
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	2739288	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	2739288	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.41	88	683528	10.31	mg/L	99

REVIEWED
By Yelena P at 4:55 pm, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211903.D Vial: 3
Acq On : 21 Jun 2019 11:46 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211903.D Vial: 3
Acq On : 21 Jun 2019 11:46 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	2739288	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	2739288	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.41	88	683528	10.31	mg/L	99

REVIEWED
By Yelena P at 4:55 pm, Jun 24, 2019

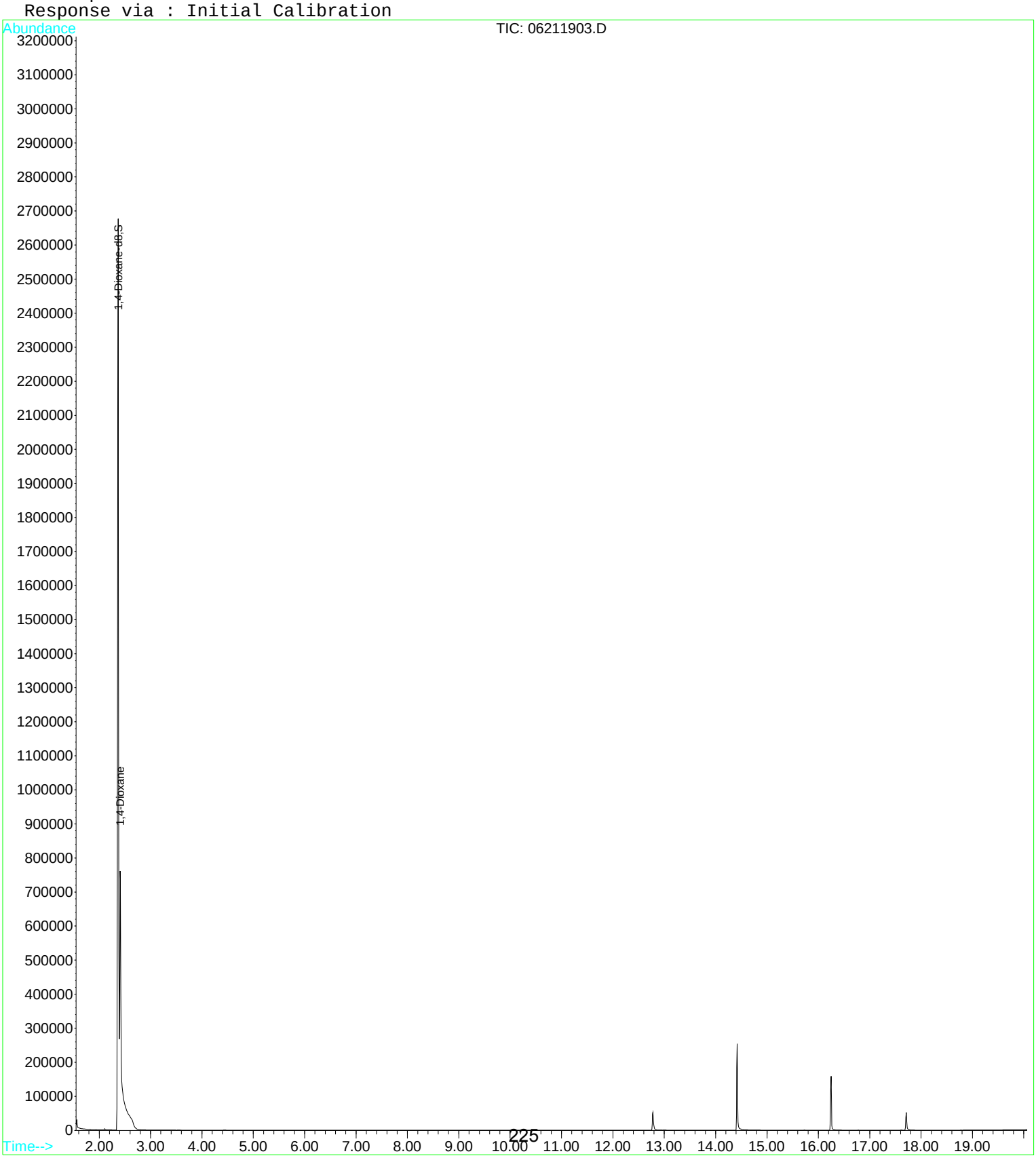
APPROVED
By Stuart Sigman at 11:19 am, Jun 27, 2019

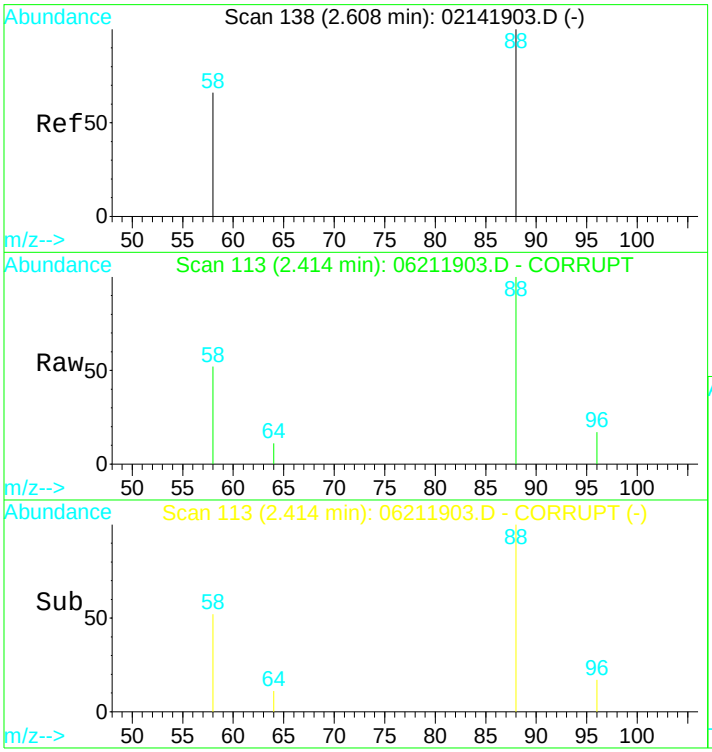
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211903.D Vial: 3
Acq On : 21 Jun 2019 11:46 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

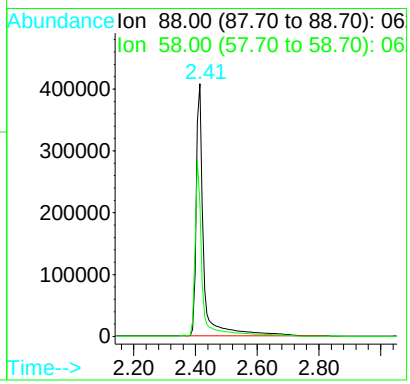




#2
1,4-Dioxane
Concen: 10.31 mg/L
RT: 2.41 min Scan# 113
Delta R.T. -0.27 min
Lab File: 06211903.D
Acq: 21 Jun 2019 11:46 am

Tgt Ion: 88 Resp: 683528

Ion	Ratio	Lower	Upper
88	100		
58	67.1	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211905.D Vial: 5
Acq On : 21 Jun 2019 12:49 pm Operator: JB_MS-2
Sample : B9F2002-BLK1 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	681120	50.00	mg/L	-0.27

System Monitoring Compounds

1) 1,4-Dioxane-d8	2.37	96	681120	50.00	mg/L	-0.27

Target Compounds Qvalue

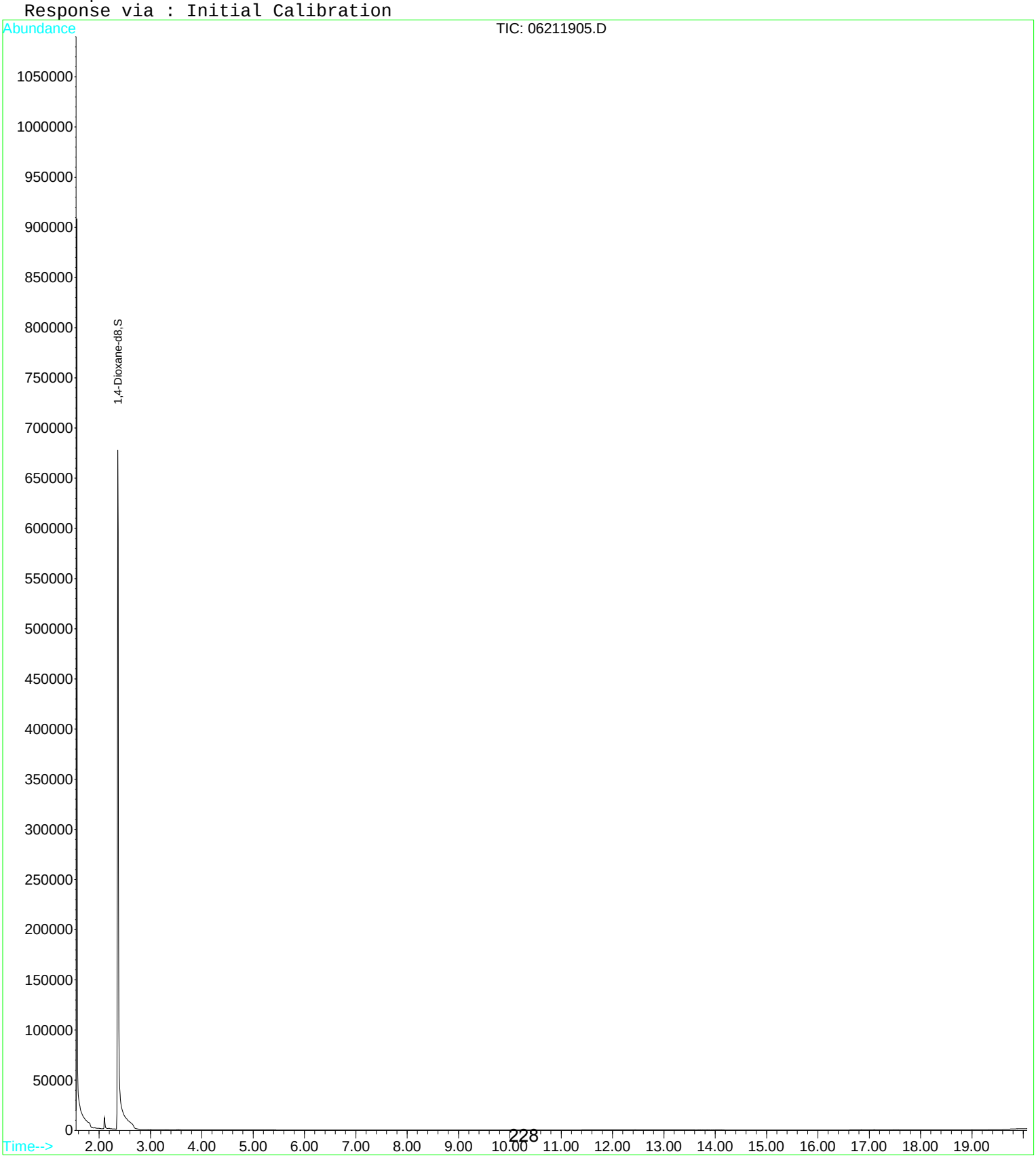
REVIEWED
By Yelena P at 4:56 pm, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211905.D Vial: 5
Acq On : 21 Jun 2019 12:49 pm Operator: JB_MS-2
Sample : B9F2002-BLK1 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211905.D Vial: 5
Acq On : 21 Jun 2019 12:49 pm Operator: JB_MS-2
Sample : B9F2002-BLK1 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	681120	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	681120	50.00	mg/L	-0.27
Target Compounds						Qvalue

REVIEWED
By Yelena P at 4:56 pm, Jun 24, 2019

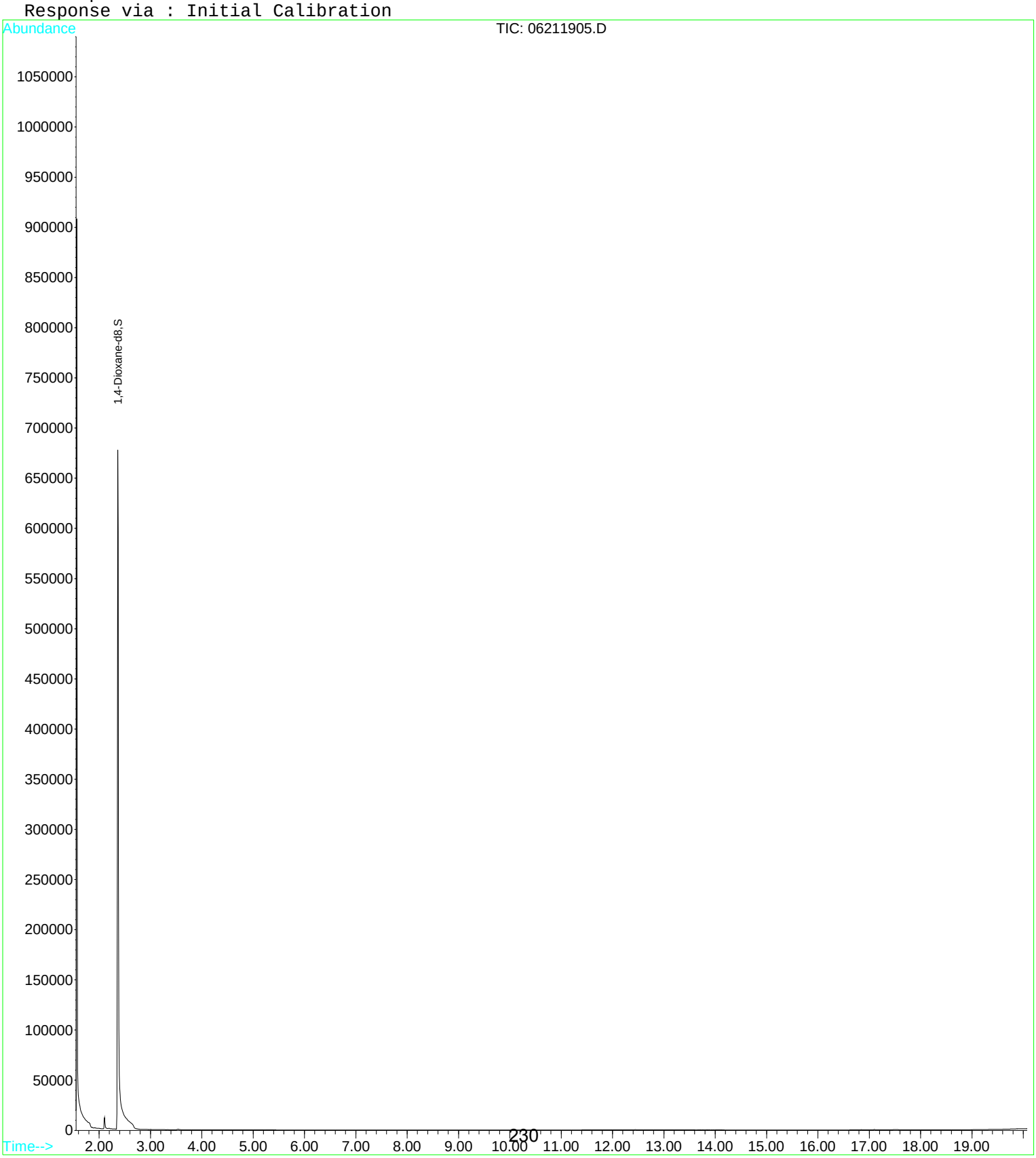
APPROVED
By Stuart Sigman at 11:21 am, Jun 27, 2019

ND

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211905.D Vial: 5
Acq On : 21 Jun 2019 12:49 pm Operator: JB_MS-2
Sample : B9F2002-BLK1 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:41 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



230

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211906.D Vial: 6
Acq On : 21 Jun 2019 1:21 pm Operator: JB_MS-2
Sample : B9F2002-BS1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	546055	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	546055	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	129521	9.80	mg/L	100

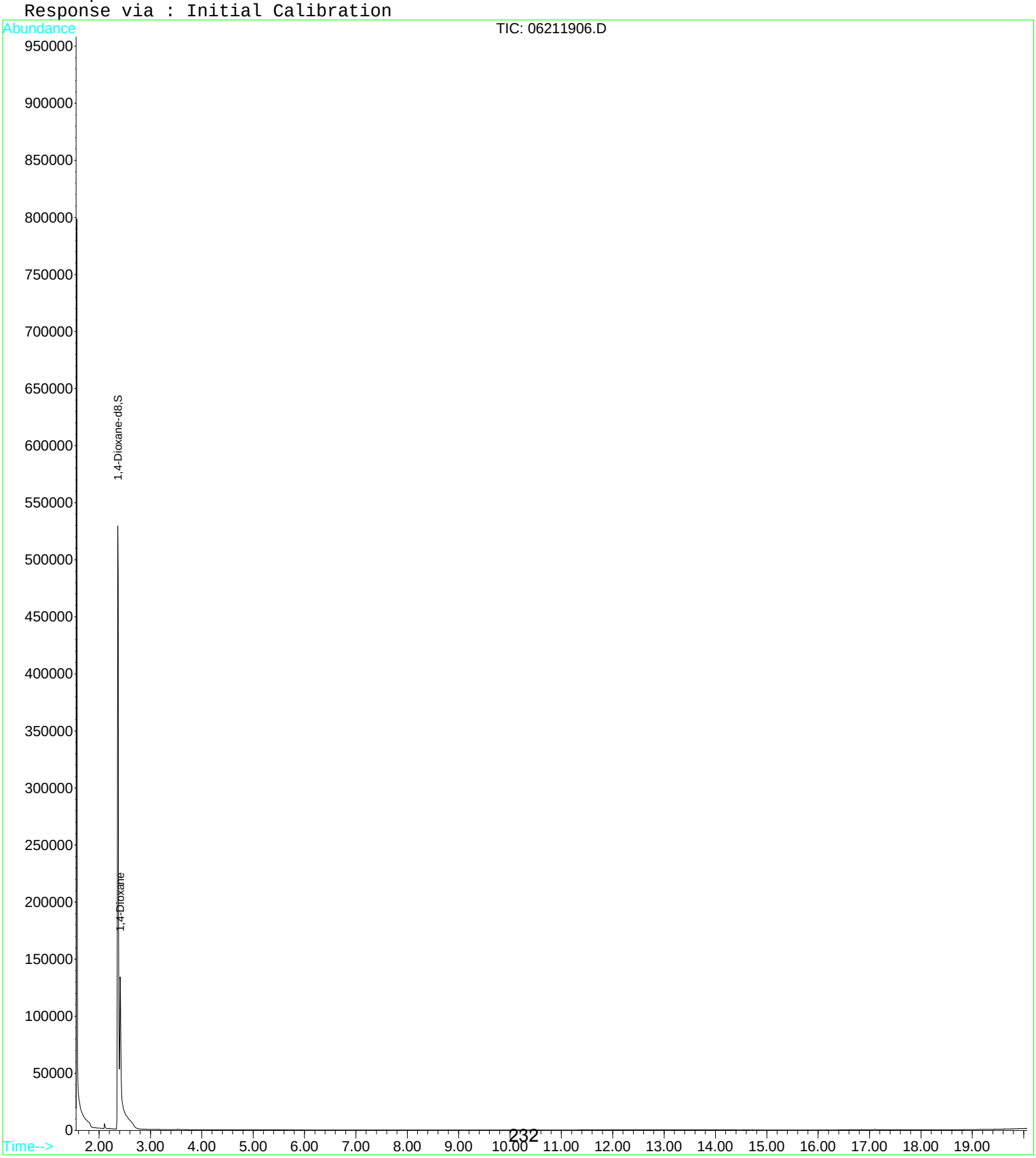
REVIEWED
By Yelena P at 4:56 pm, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211906.D Vial: 6
Acq On : 21 Jun 2019 1:21 pm Operator: JB_MS-2
Sample : B9F2002-BS1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211906.D Vial: 6
Acq On : 21 Jun 2019 1:21 pm Operator: JB_MS-2
Sample : B9F2002-BS1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	546055	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	546055	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	129521	9.80	mg/L	100

REVIEWED
By Yelena P at 4:56 pm, Jun 24, 2019

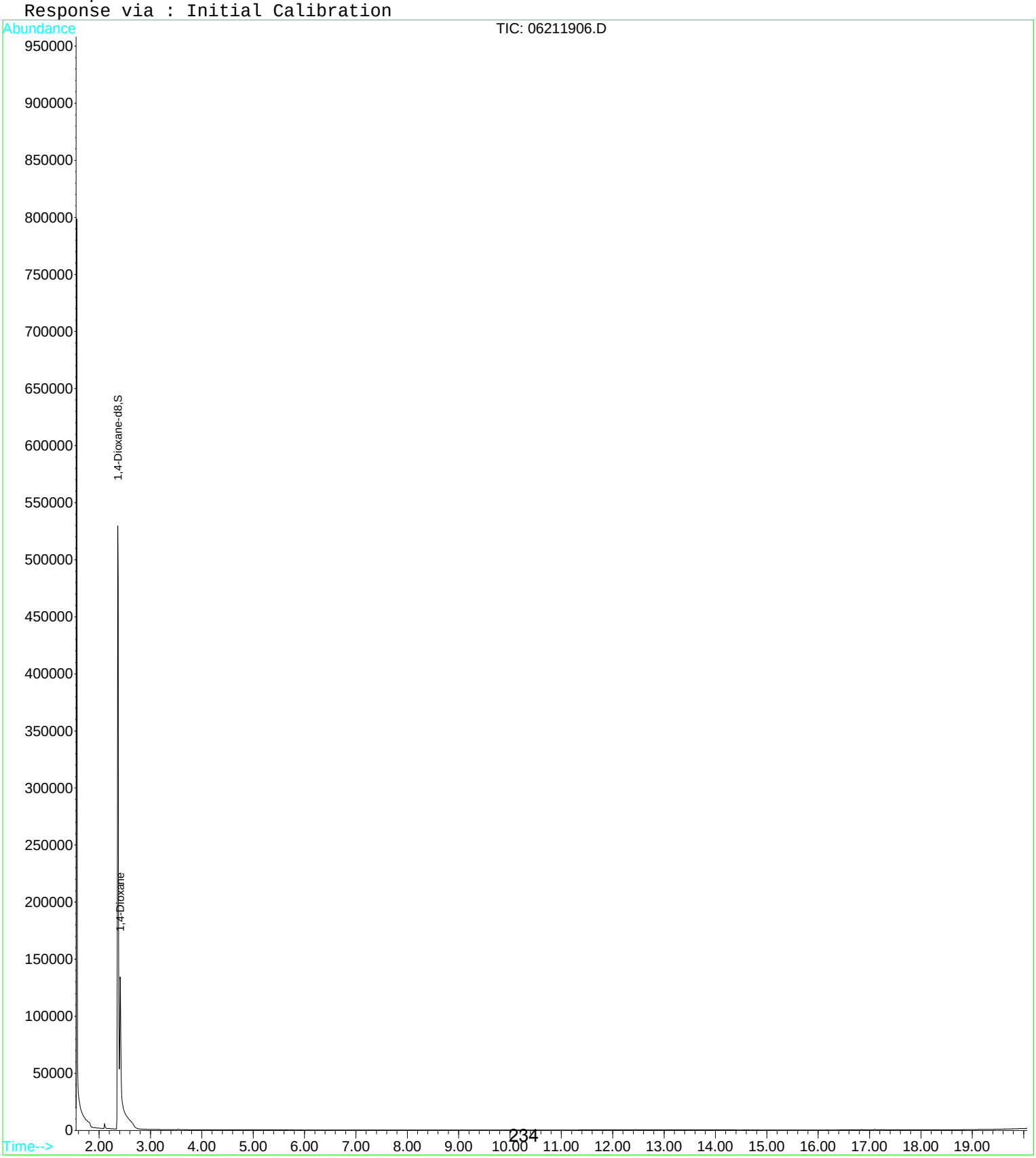
APPROVED
By Stuart Sigman at 11:24 am, Jun 27, 2019

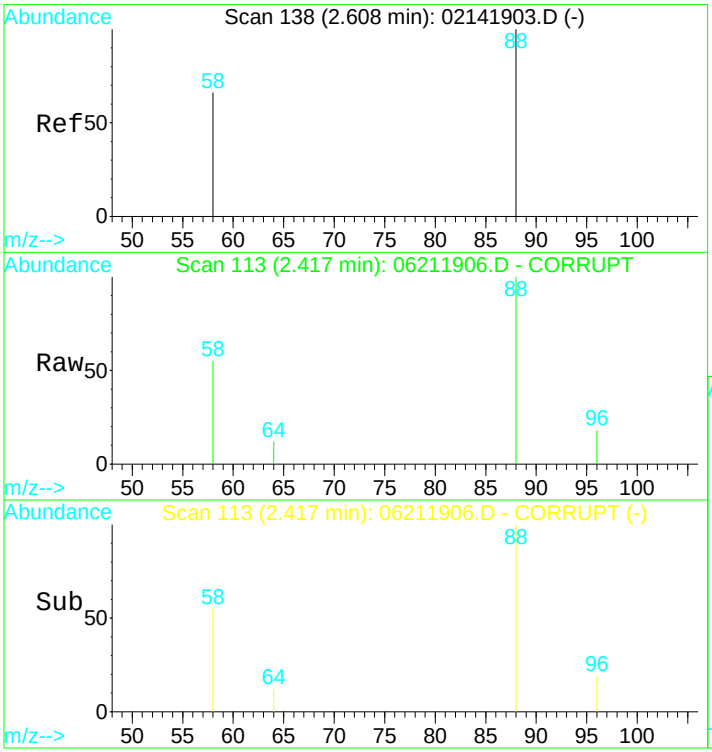
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211906.D Vial: 6
Acq On : 21 Jun 2019 1:21 pm Operator: JB_MS-2
Sample : B9F2002-BS1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

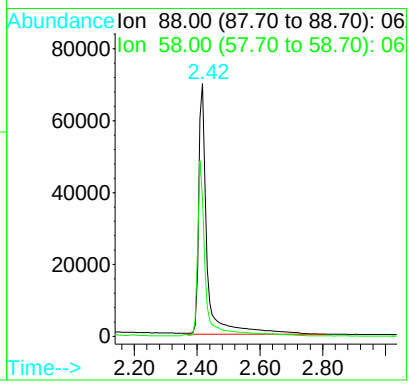




#2
1,4-Dioxane
Concen: 9.80 mg/L
RT: 2.42 min Scan# 113
Delta R.T. -0.27 min
Lab File: 06211906.D
Acq: 21 Jun 2019 1:21 pm

Tgt Ion: 88 Resp: 129521

Ion	Ratio	Lower	Upper
88	100		
58	65.7	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211907.D Vial: 7
Acq On : 21 Jun 2019 1:54 pm Operator: JB_MS-2
Sample : B9F2002-BSD1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	612036	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	612036	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.41	88	153211	10.35	mg/L	100

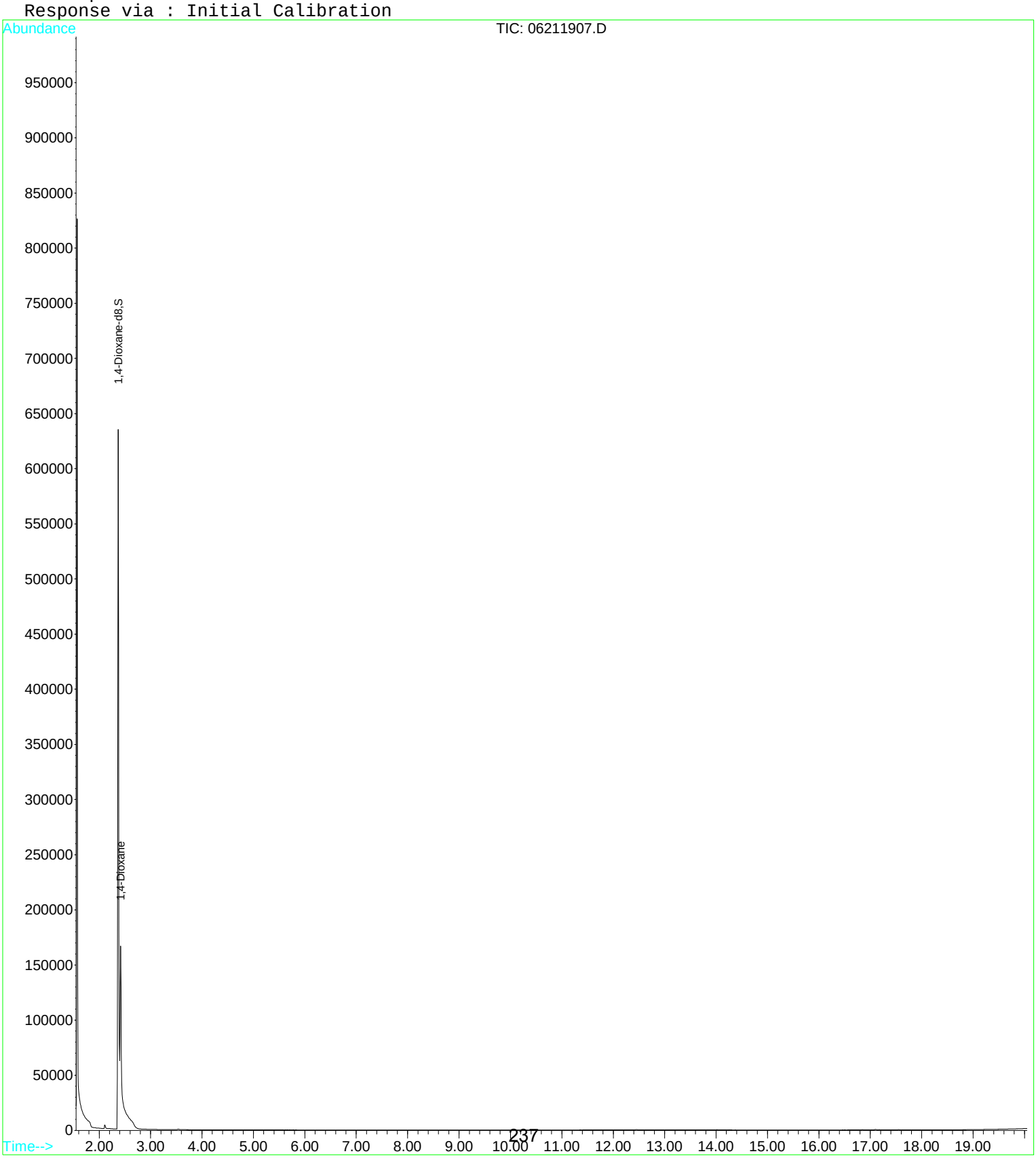
REVIEWED
By Yelena P at 4:56 pm, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211907.D Vial: 7
Acq On : 21 Jun 2019 1:54 pm Operator: JB_MS-2
Sample : B9F2002-BSD1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211907.D Vial: 7
Acq On : 21 Jun 2019 1:54 pm Operator: JB_MS-2
Sample : B9F2002-BSD1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	612036	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	612036	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.41	88	153211	10.35	mg/L	100

REVIEWED
By Yelena P at 4:57 pm, Jun 24, 2019

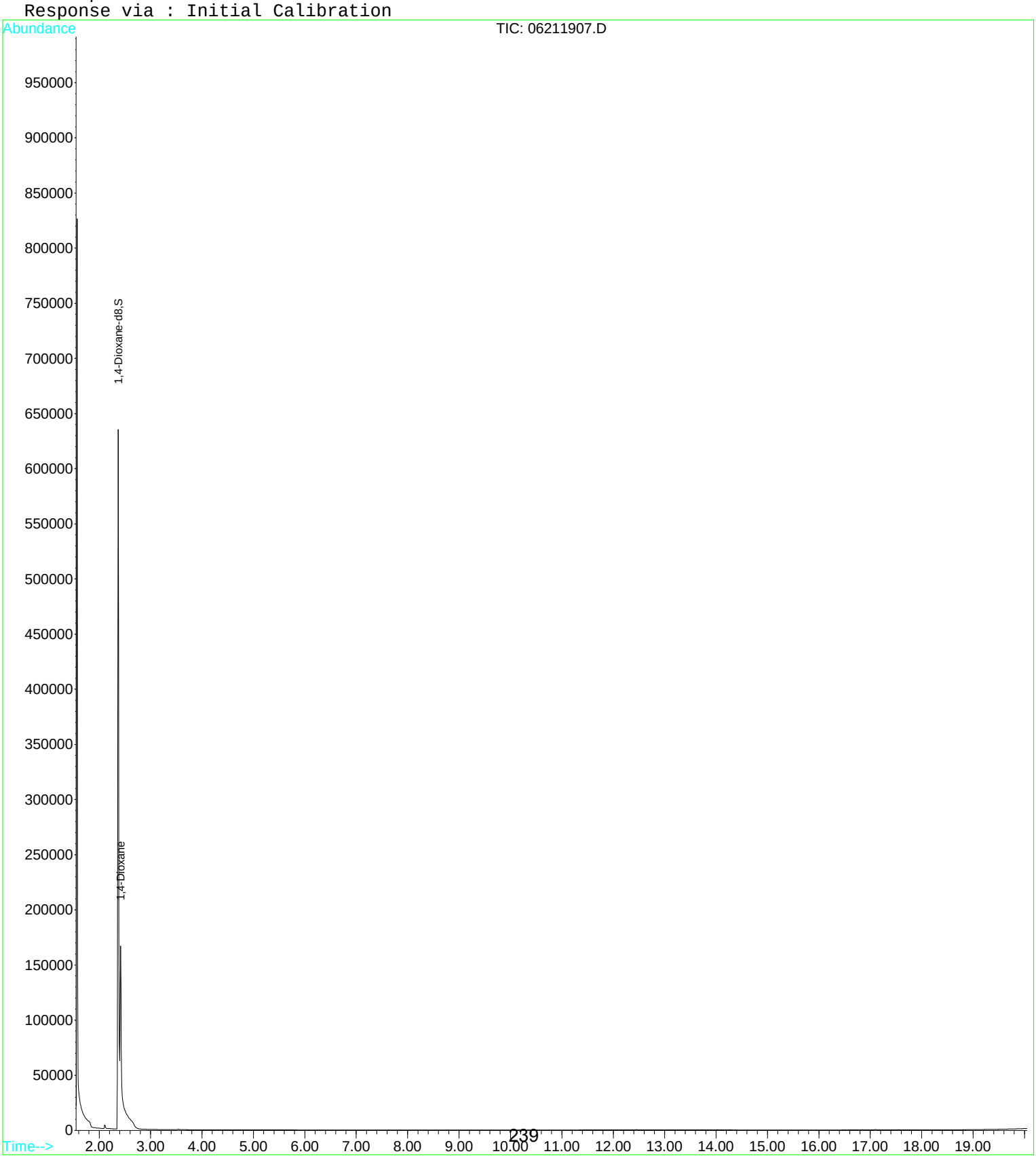
APPROVED
By Stuart Sigman at 11:25 am, Jun 27, 2019

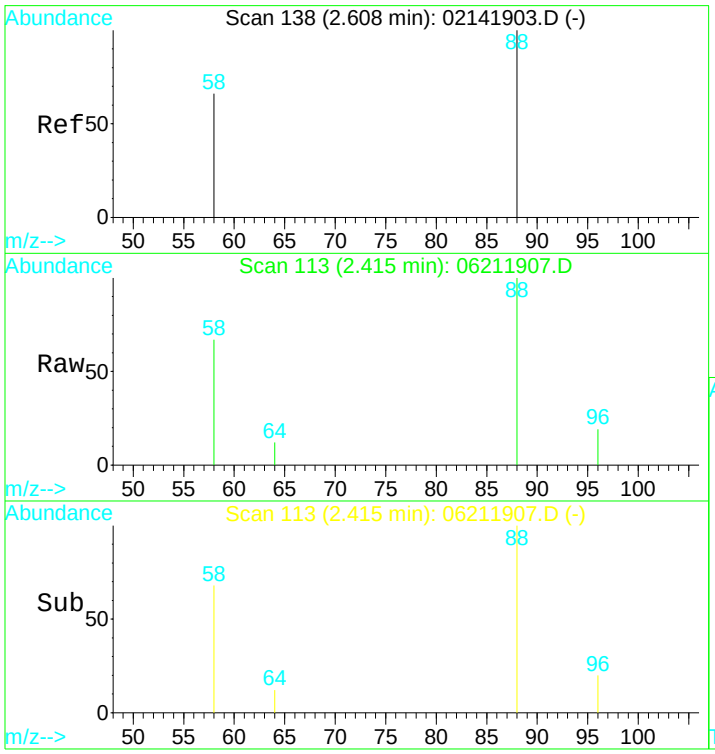
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211907.D Vial: 7
Acq On : 21 Jun 2019 1:54 pm Operator: JB_MS-2
Sample : B9F2002-BSD1 Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

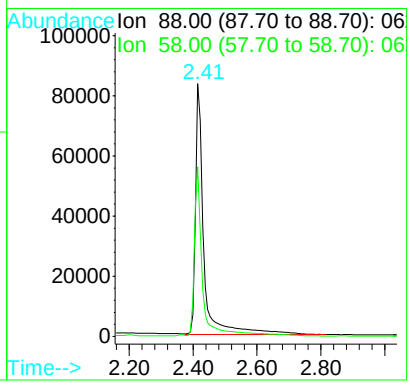




#2
1,4-Dioxane
Concen: 10.35 mg/L
RT: 2.41 min Scan# 113
Delta R.T. -0.27 min
Lab File: 06211907.D
Acq: 21 Jun 2019 1:54 pm

Tgt Ion: 88 Resp: 153211

Ion	Ratio	Lower	Upper
88	100		
58	65.6	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211908.D Vial: 8
Acq On : 21 Jun 2019 2:27 pm Operator: JB_MS-2
Sample : 9F14005-11 ms Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	816195	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	816195	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	248312	12.57	mg/L	97

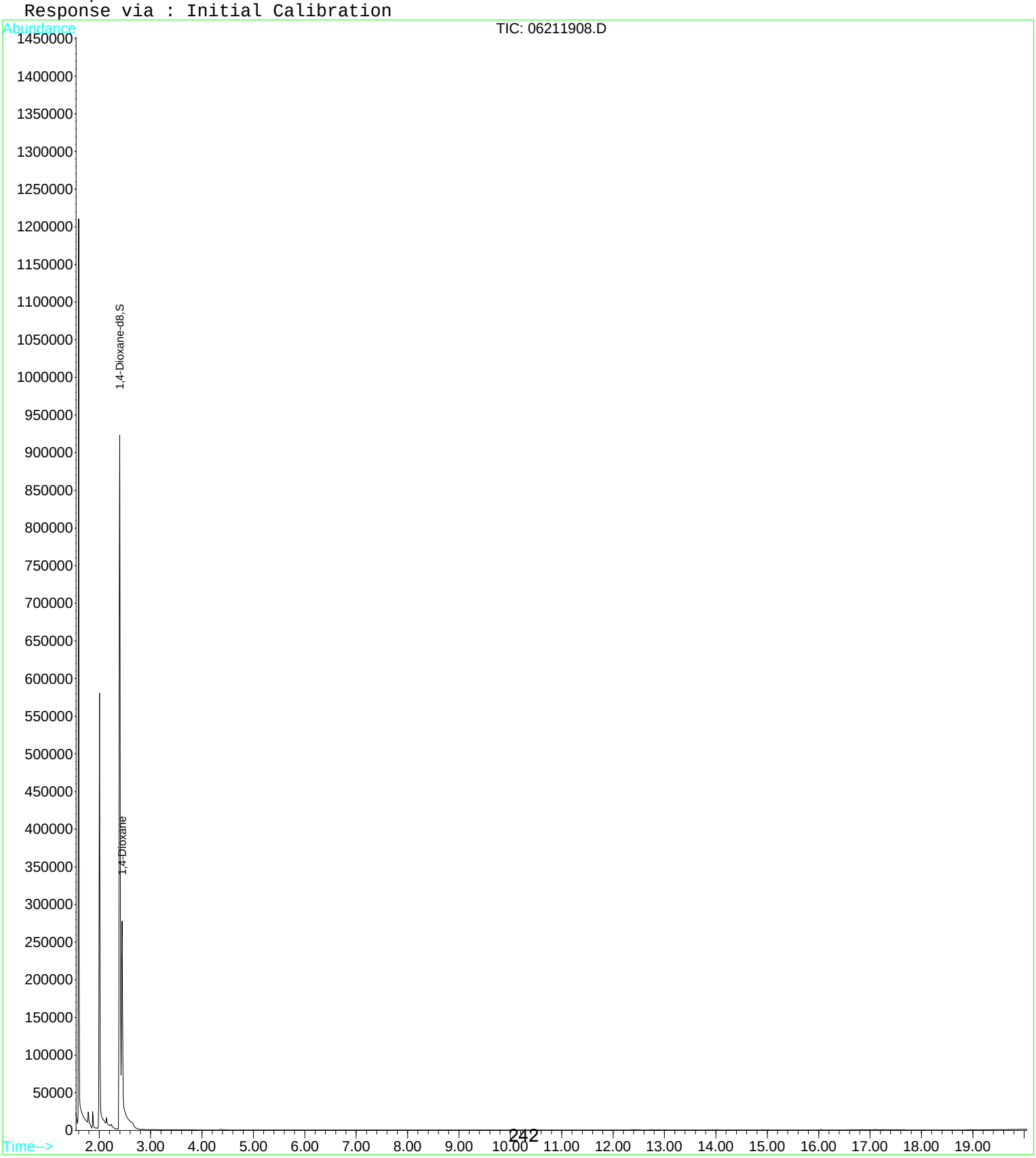
REVIEWED
By Yelena P at 4:57 pm, Jun 24, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211908.D Vial: 8
Acq On : 21 Jun 2019 2:27 pm Operator: JB_MS-2
Sample : 9F14005-11 ms Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211908.D Vial: 8
Acq On : 21 Jun 2019 2:27 pm Operator: JB_MS-2
Sample : 9F14005-11 ms Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	816195	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	816195	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	248312	12.57	mg/L	97

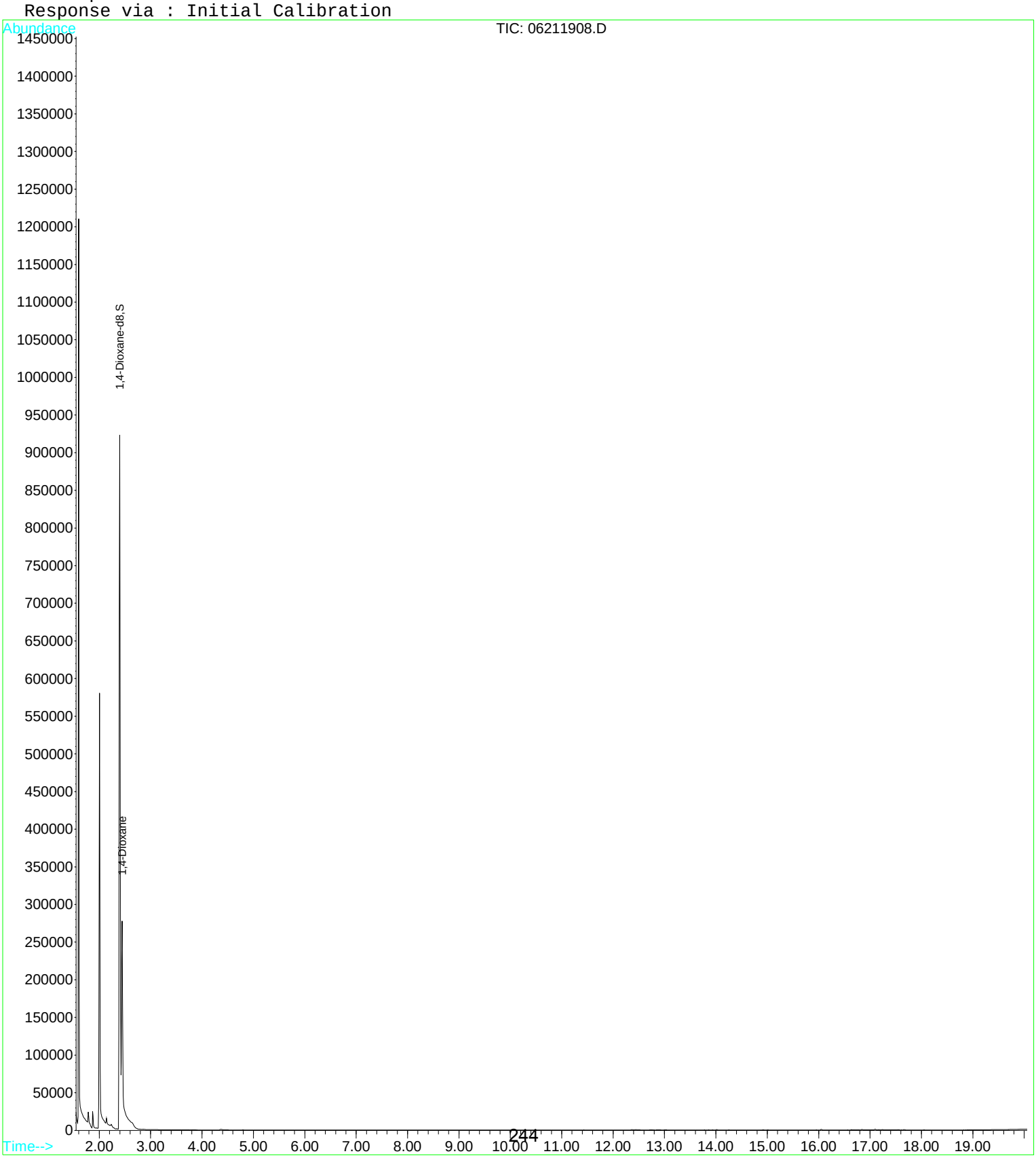
REVIEWED
By Yelena P at 4:57 pm, Jun 24, 2019

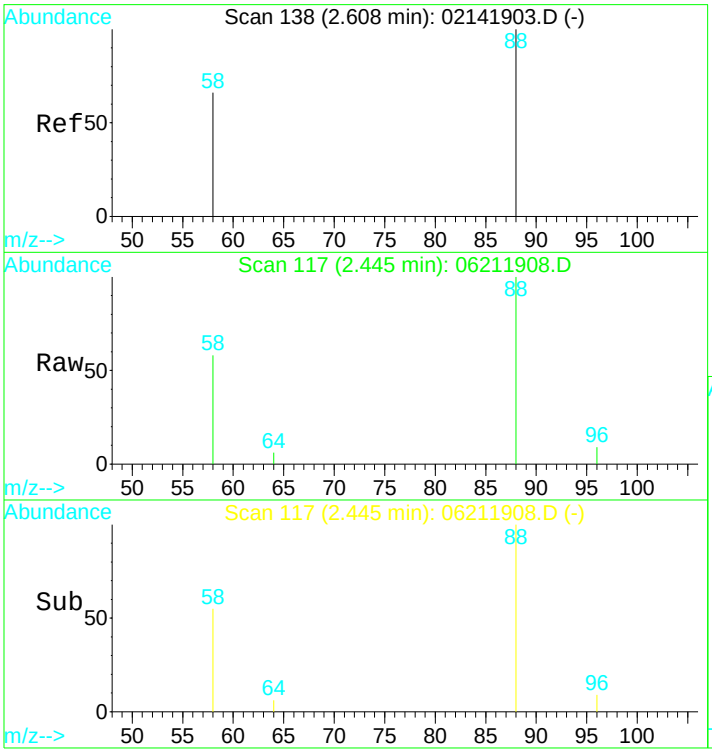
APPROVED
By Stuart Sigman at 11:26 am, Jun 27, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211908.D Vial: 8
Acq On : 21 Jun 2019 2:27 pm Operator: JB_MS-2
Sample : 9F14005-11 ms Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:42 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

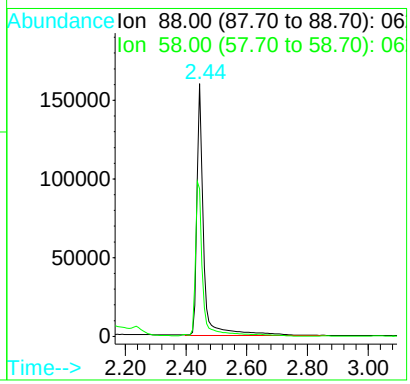




#2
1,4-Dioxane
Concen: 12.57 mg/L
RT: 2.44 min Scan# 117
Delta R.T. -0.24 min
Lab File: 06211908.D
Acq: 21 Jun 2019 2:27 pm

Tgt Ion: 88 Resp: 248312

Ion	Ratio	Lower	Upper
88	100		
58	63.9	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211909.D Vial: 9
Acq On : 21 Jun 2019 3:00 pm Operator: JB_MS-2
Sample : 9F14005-11 msd Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:43 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

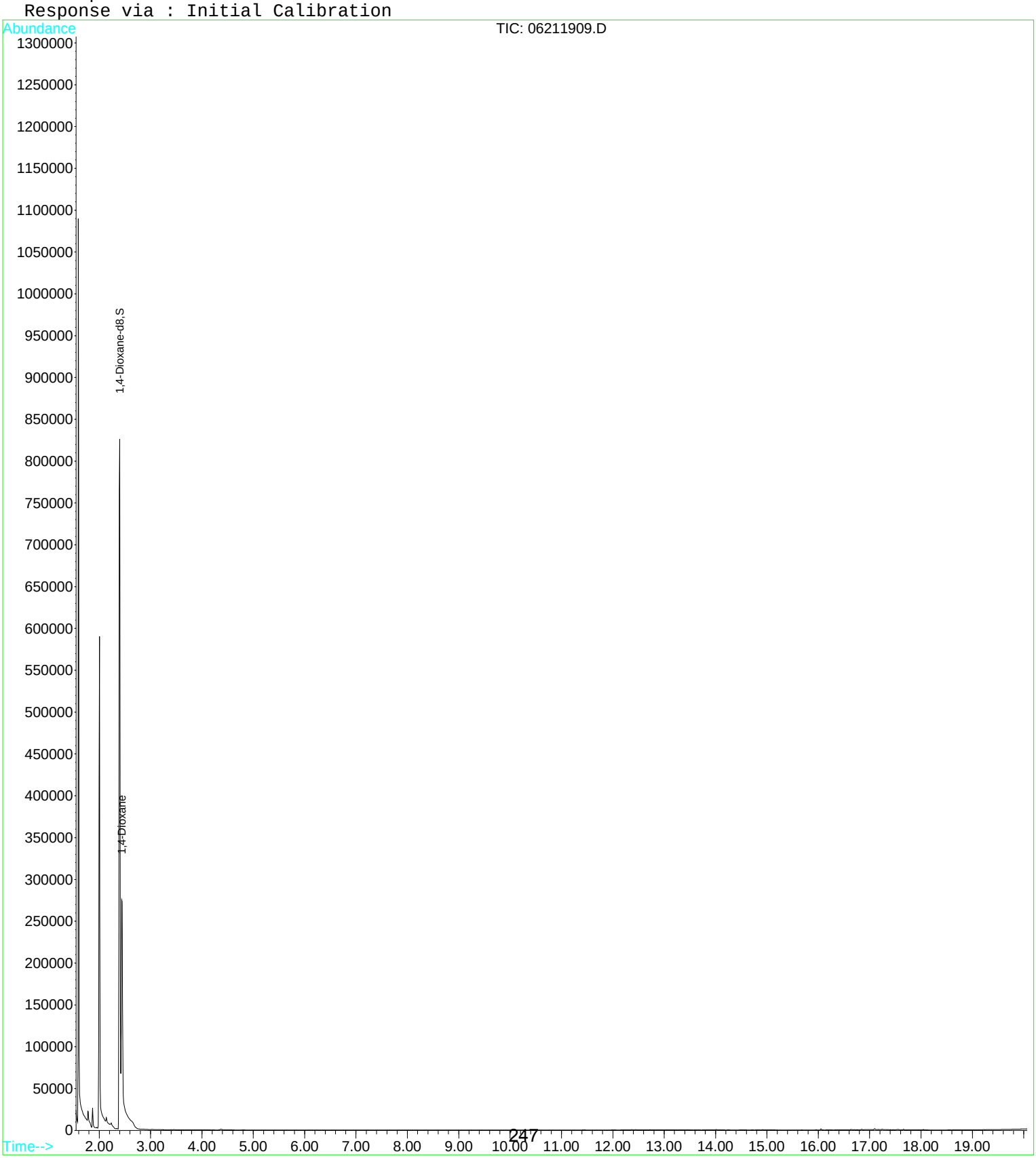
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	787304	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	787304	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.45	88	264291	13.88	mg/L	95

REVIEWED
By Yelena P at 4:57 pm, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211909.D Vial: 9
Acq On : 21 Jun 2019 3:00 pm Operator: JB_MS-2
Sample : 9F14005-11 msd Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:43 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211909.D Vial: 9
Acq On : 21 Jun 2019 3:00 pm Operator: JB_MS-2
Sample : 9F14005-11 msd Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:43 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	787304	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	787304	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.45	88	264291	13.88	mg/L	95

REVIEWED
By Yelena P at 4:57 pm, Jun 24, 2019

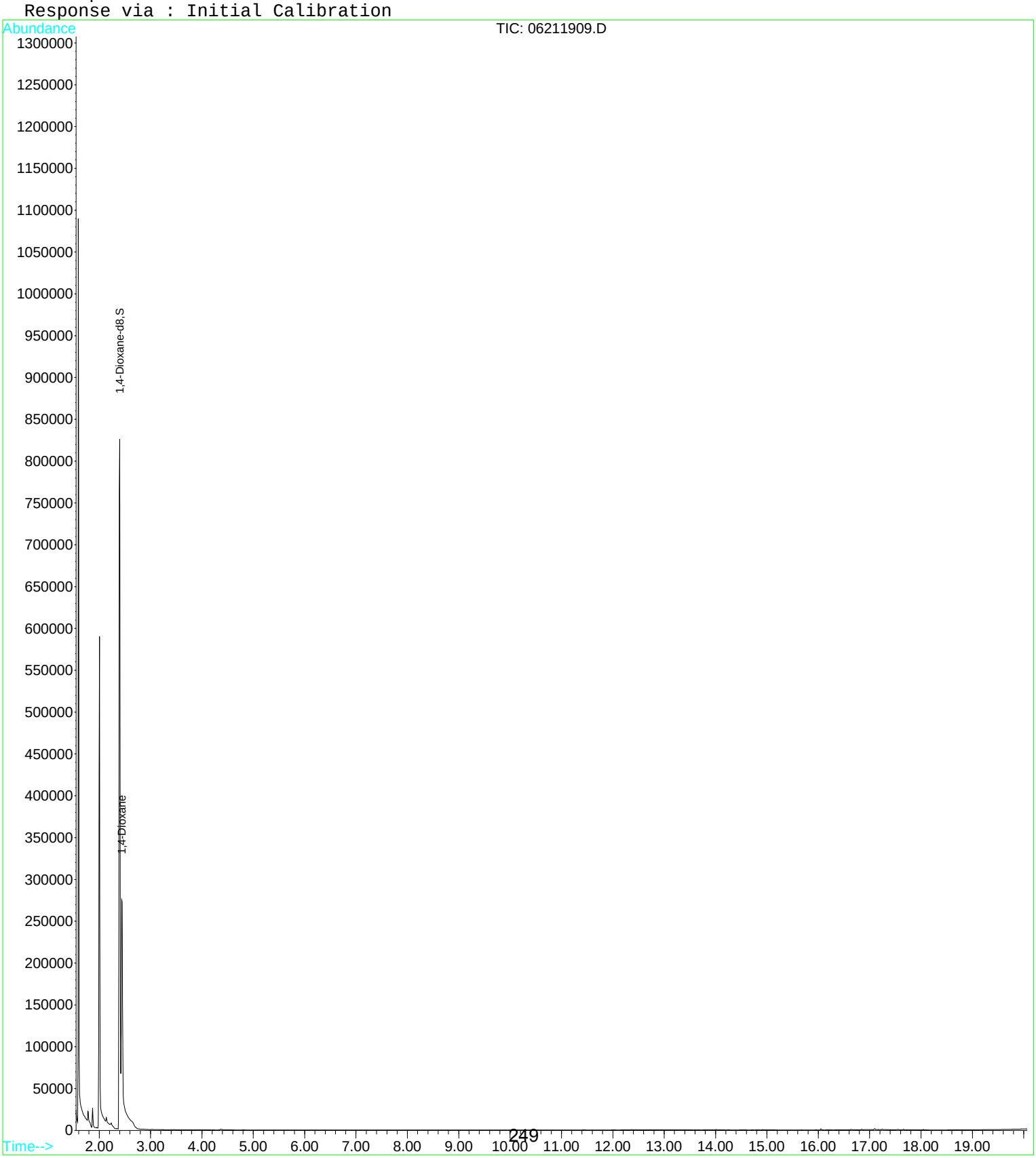
APPROVED
By Stuart Sigman at 11:27 am, Jun 27, 2019

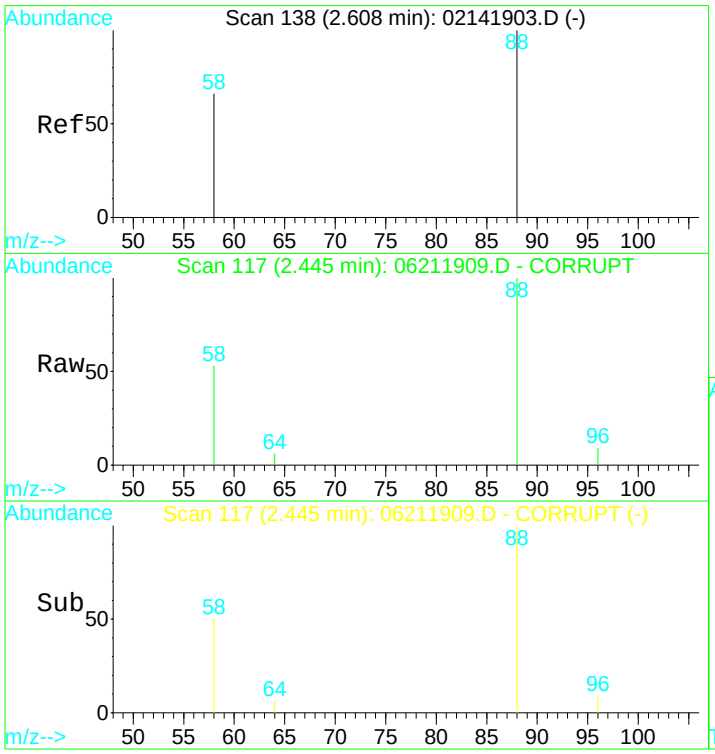
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211909.D Vial: 9
Acq On : 21 Jun 2019 3:00 pm Operator: JB_MS-2
Sample : 9F14005-11 msd Inst : GC/MS Ins
Misc : 9050703, 9050704 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:43 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

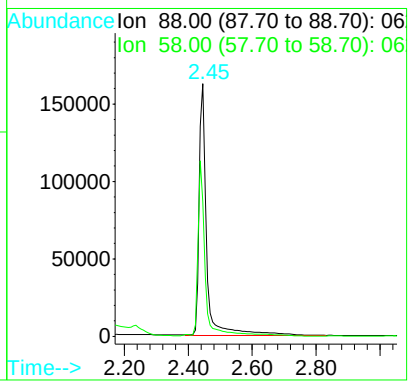




#2
1,4-Dioxane
Concen: 13.88 mg/L
RT: 2.45 min Scan# 117
Delta R.T. -0.24 min
Lab File: 06211909.D
Acq: 21 Jun 2019 3:00 pm

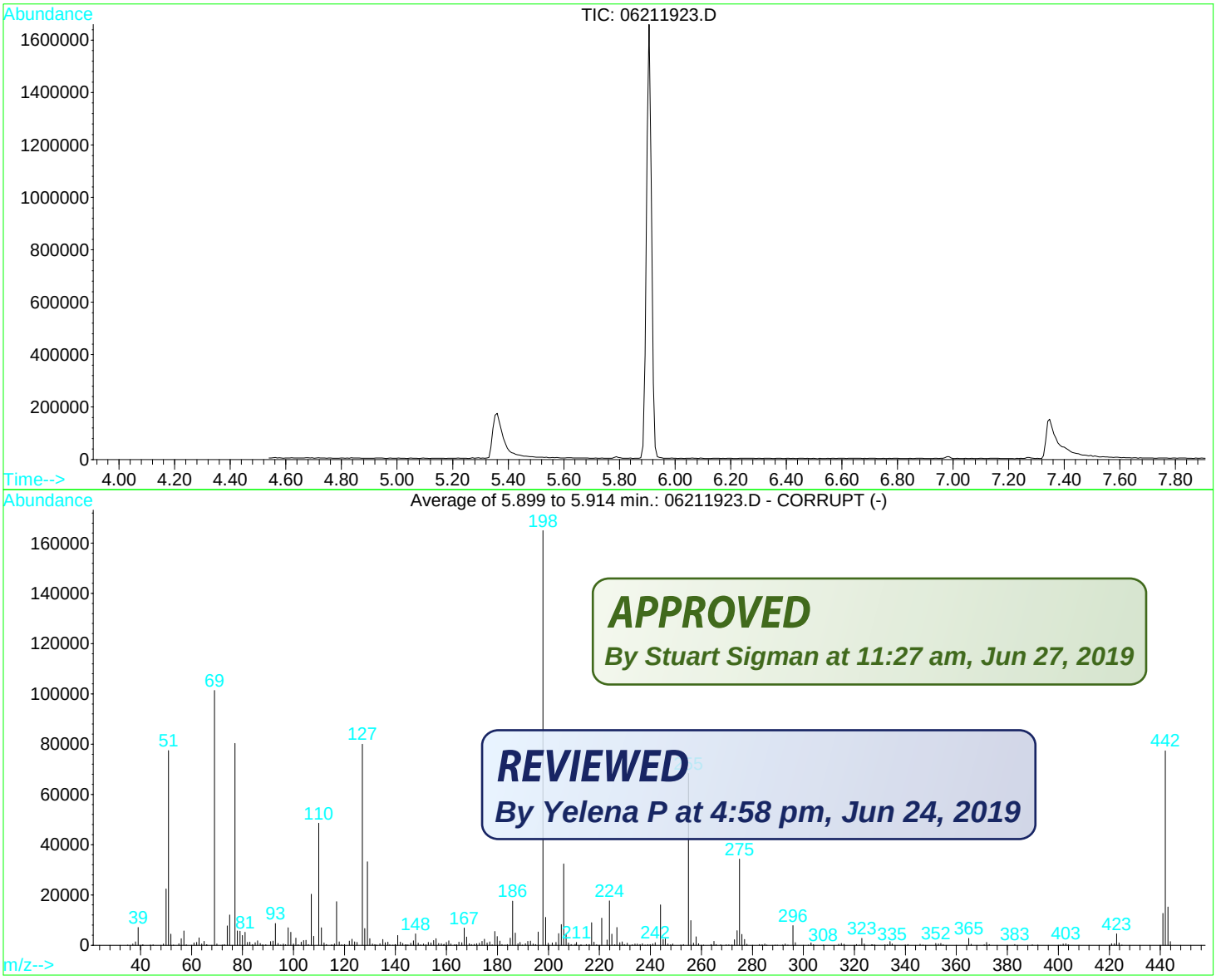
Tgt Ion: 88 Resp: 264291

Ion	Ratio	Lower	Upper
88	100		
58	61.8	36.0	96.0



DFTPP

Data File : C:\HPCHEM\1\DATA\2019\062119\06211923.D Vial: 2
Acq On : 21 Jun 2019 10:31 pm Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane



APPROVED
By Stuart Sigman at 11:27 am, Jun 27, 2019

REVIEWED
By Yelena P at 4:58 pm, Jun 24, 2019

AutoFind: Scans 185, 186, 187; Background Corrected with Scan 180

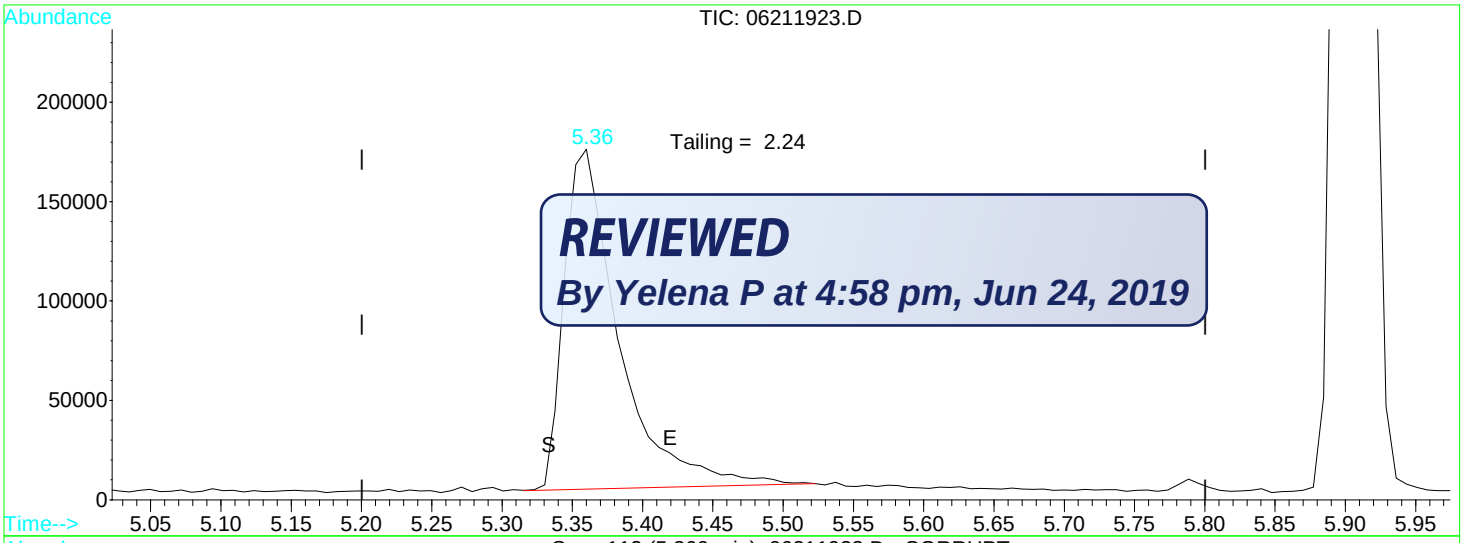
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.0	77475	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	61.5	101416	PASS
70	69	0.00	2	0.4	432	PASS
127	198	35	60	48.5	79941	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	164949	PASS
199	198	5	9	6.7	11021	PASS
275	198	10	30	20.8	34261	PASS
365	198	1	100	1.7	2742	PASS
441	443	0.01	100	83.1	12653	PASS
442	198	35	100	46.9	77379	PASS
443	442	17	23	19.7	15228	PASS

06211923.D DX082818.M Mon Jun 24 16:43:29 2019 PDFCREATOR

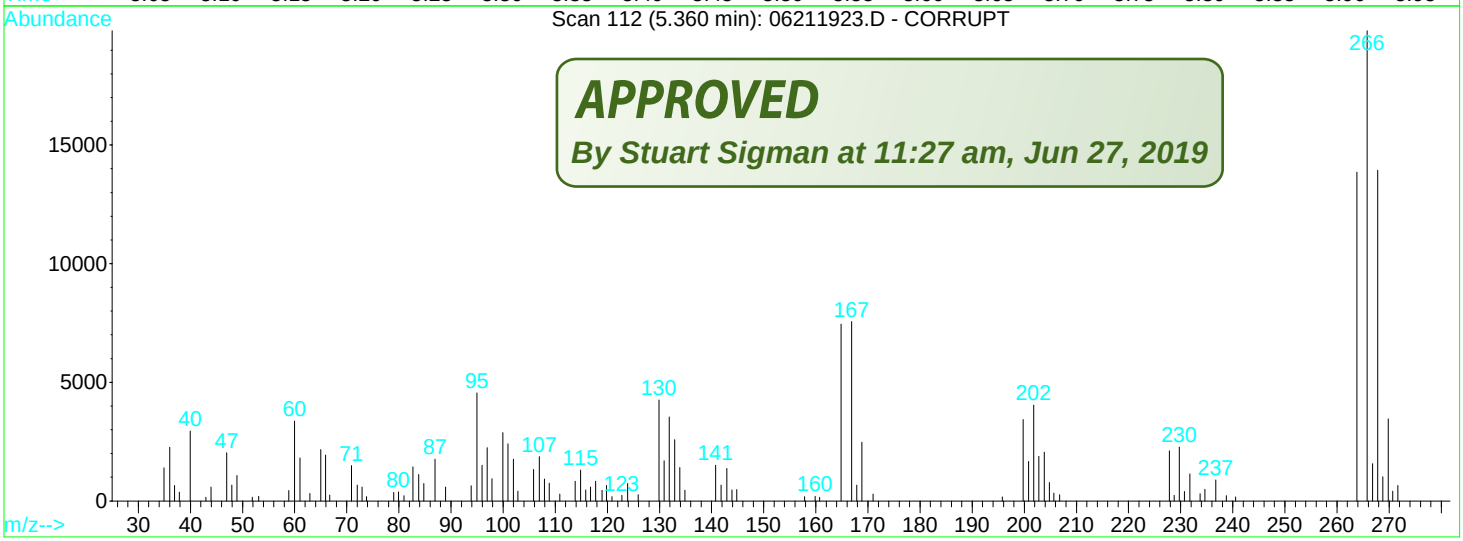
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211923.D Vial: 2
Acq On : 21 Jun 2019 10:31 pm Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 22:42 2019 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Multiple Level Calibration



REVIEWED
By Yelena P at 4:58 pm, Jun 24, 2019



APPROVED
By Stuart Sigman at 11:27 am, Jun 27, 2019

TIC: 06211923.D

(1) Pentachlorophenol (S)

5.36min 23.91mg/L

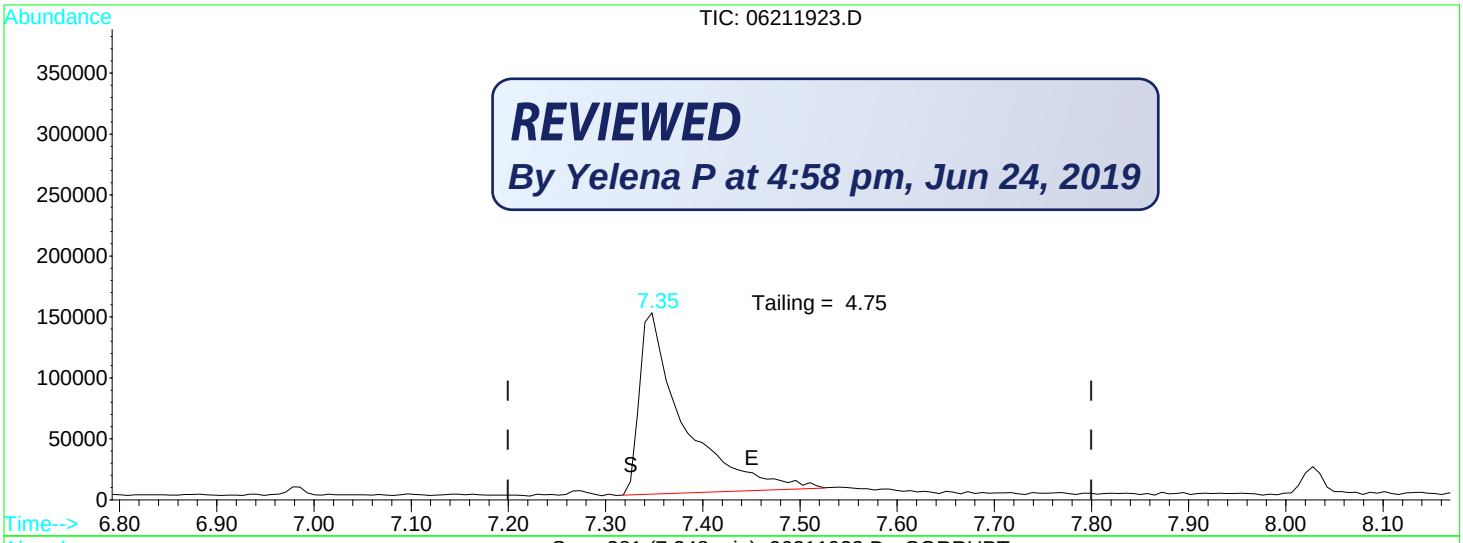
response 4756413

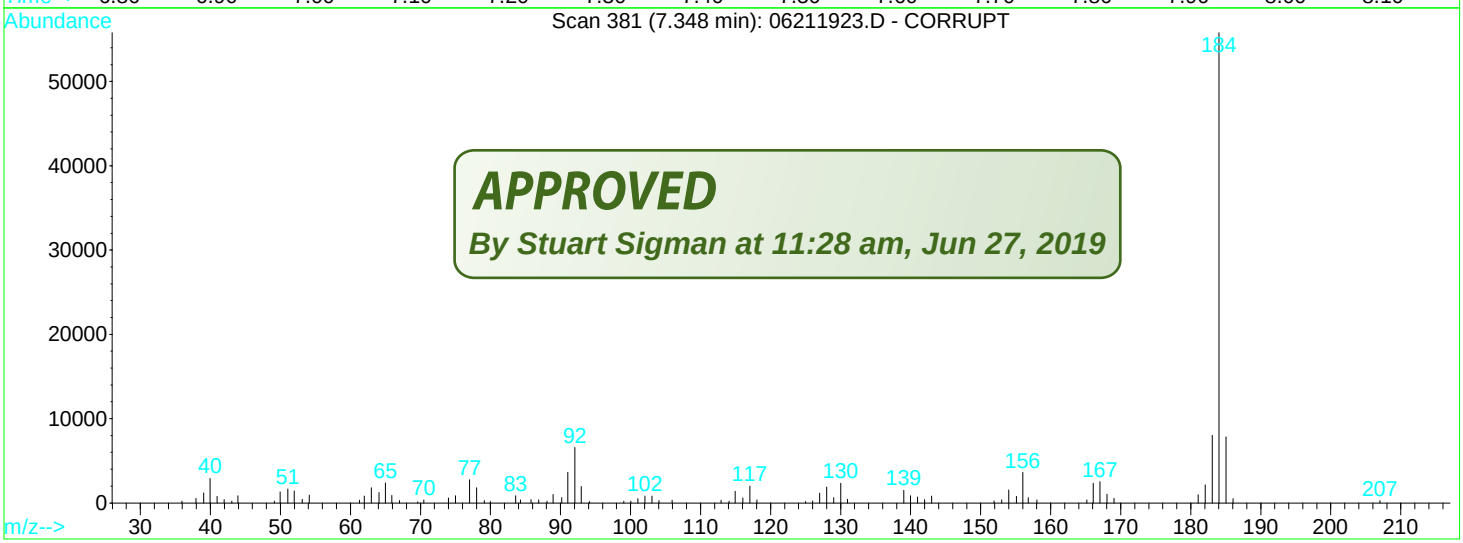
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211923.D Vial: 2
Acq On : 21 Jun 2019 10:31 pm Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 21 22:42 2019 Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Multiple Level Calibration





TIC: 06211923.D

(3) Benzidine (S)

7.35min 20.65mg/L

response 4697360

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211923.D Vial: 2
Acq On : 21 Jun 2019 10:31 pm Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 16:44 2019 Quant Results File: RDFTPP.RES

Quant Method : C:\HPCHEM\1\METHODS\RDFTPP.M (Chemstation Integrator)
Title : 8270C TUNE
Last Update : Fri Aug 31 12:47:31 2018
Response via : Initial Calibration
DataAcq Meth : RDFTPP

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
System Monitoring Compounds						
1) Pentachlorophenol	5.36	TIC	4756413	23.91	mg/L	-0.14
2) DFTPP	5.91	TIC	20969142	91.69	mg/L	-0.14
3) Benzidine	7.35	TIC	4697360	20.65	mg/L	-0.15
4) p,p'-DDD	8.03	TIC	355152m	2.71	mg/L	-0.16
5) p,p'-DDT	8.42	TIC	10707921	44.72	mg/L	-0.16

Target Compounds Qvalue

about 6%

REVIEWED
By Yelena P at 4:58 pm, Jun 24, 2019

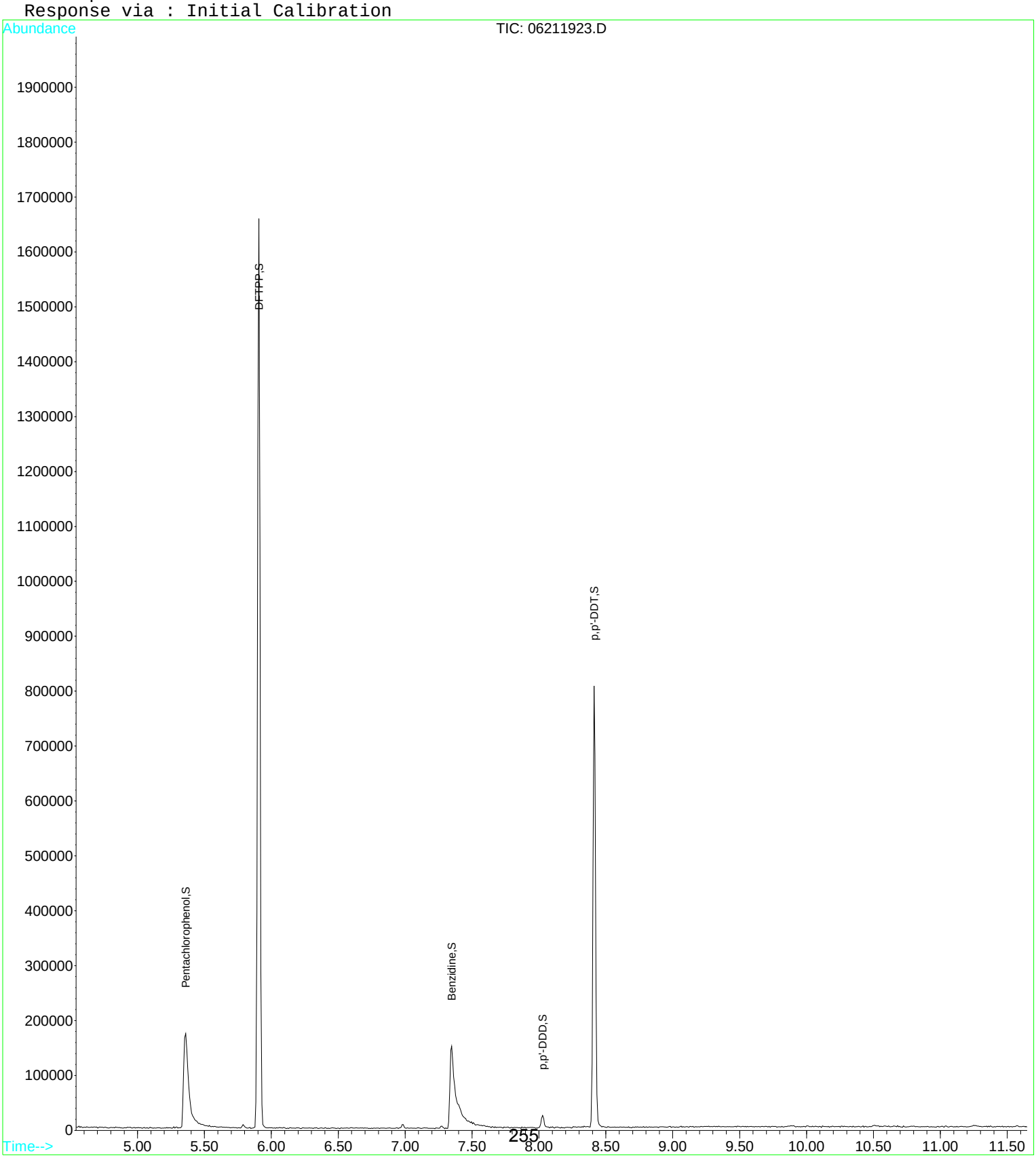
APPROVED
By Stuart Sigman at 11:28 am, Jun 27, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211923.D Vial: 2
Acq On : 21 Jun 2019 10:31 pm Operator: JB_MS-2
Sample : DFTPP 50ng Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: events.e
Quant Time: Jun 24 16:44 2019 Quant Results File: RDFTPP.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211924.D Vial: 3
Acq On : 21 Jun 2019 10:56 pm Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

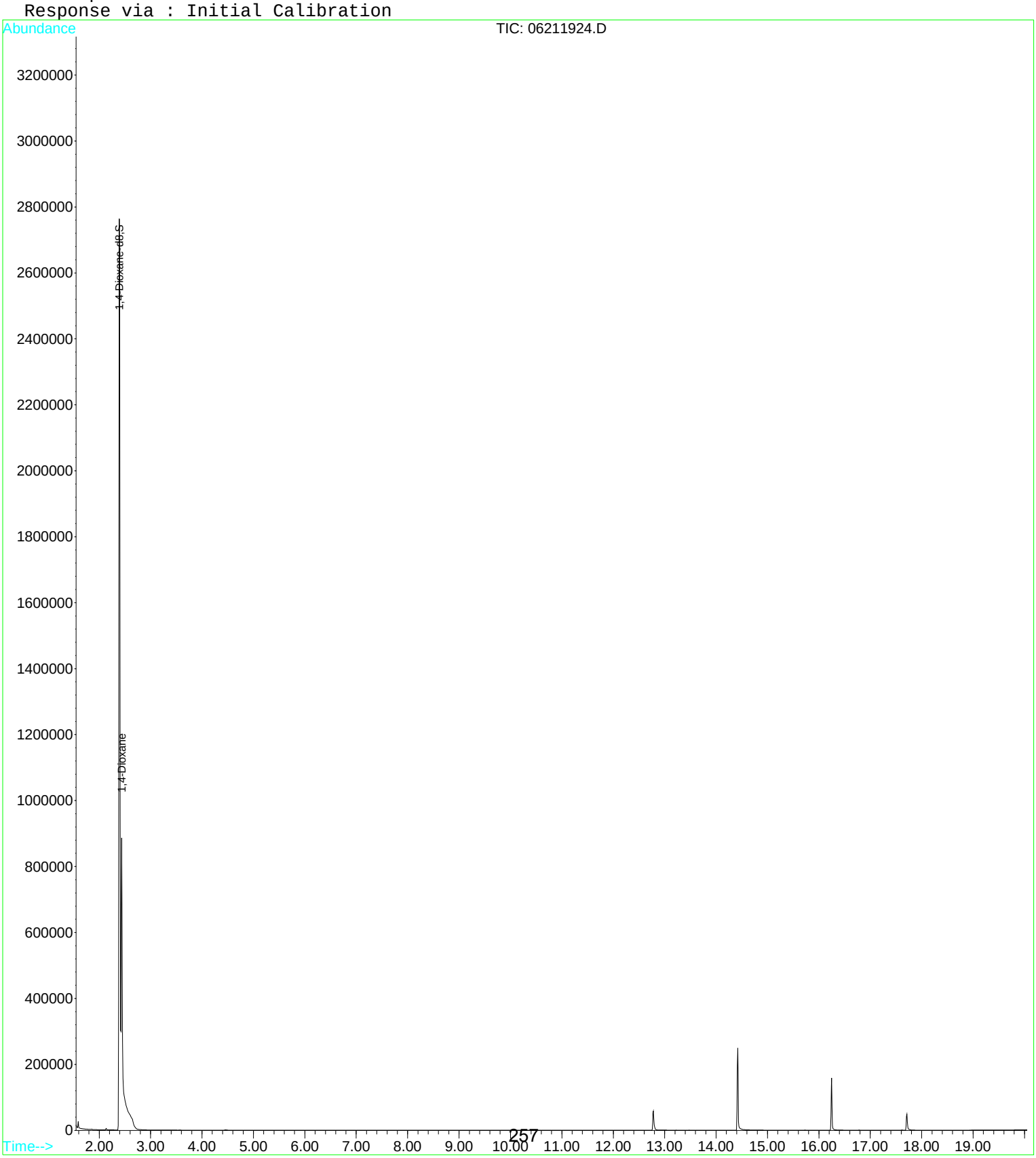
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	2875409	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	2875409	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	733820	10.55	mg/L	99

REVIEWED
By Yelena P at 4:58 pm, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211924.D Vial: 3
Acq On : 21 Jun 2019 10:56 pm Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211924.D Vial: 3
Acq On : 21 Jun 2019 10:56 pm Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	2875409	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	2875409	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	733820	10.55	mg/L	99

REVIEWED
By Yelena P at 4:59 pm, Jun 24, 2019

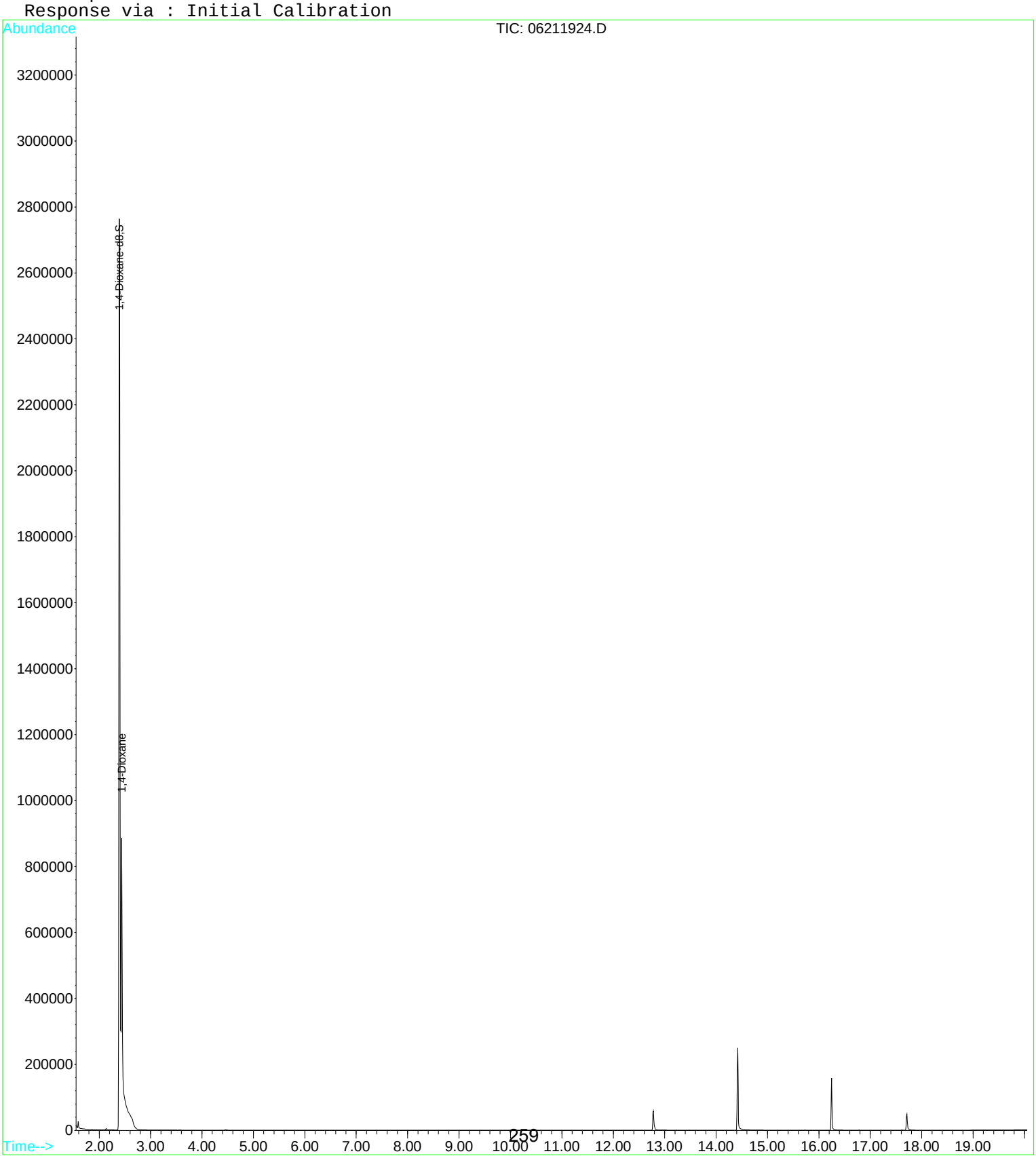
APPROVED
By Stuart Sigman at 11:28 am, Jun 27, 2019

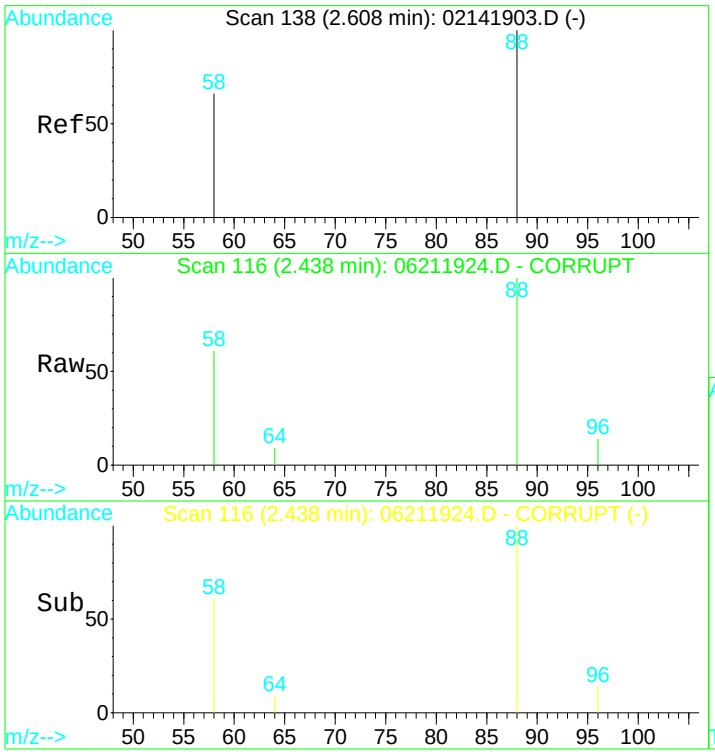
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211924.D Vial: 3
Acq On : 21 Jun 2019 10:56 pm Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

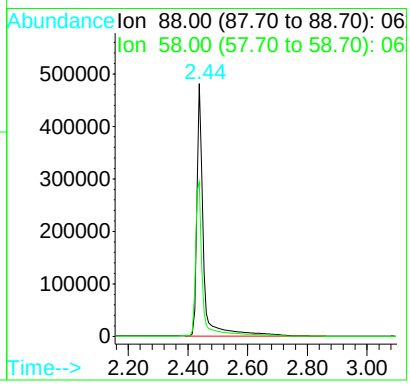




#2
1,4-Dioxane
Concen: 10.55 mg/L
RT: 2.44 min Scan# 116
Delta R.T. -0.25 min
Lab File: 06211924.D
Acq: 21 Jun 2019 10:56 pm

Tgt Ion: 88 Resp: 733820

Ion	Ratio	Lower	Upper
88	100		
58	67.0	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211930.D Vial: 3
Acq On : 22 Jun 2019 2:07 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

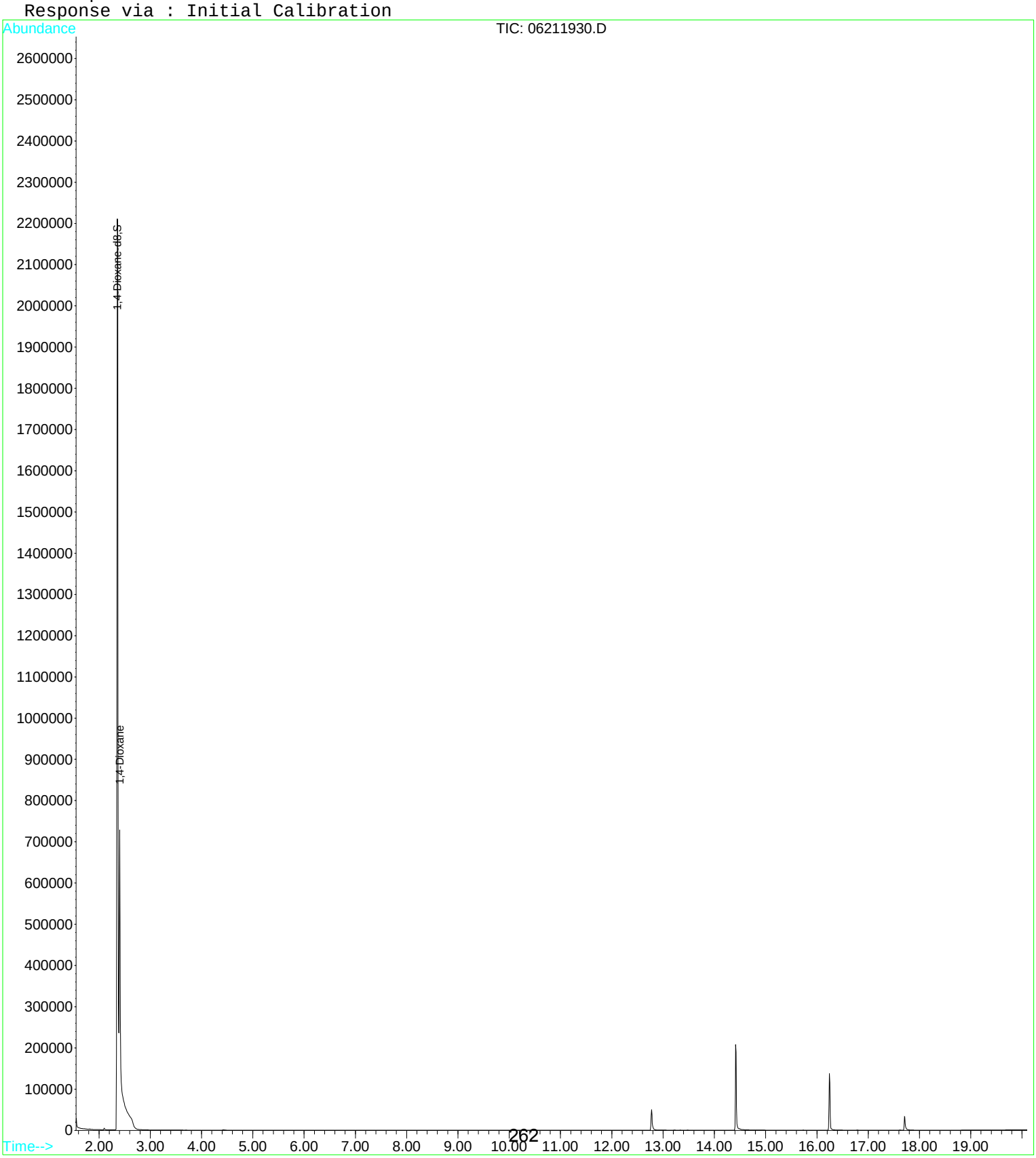
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.36	96	2422588	50.00	mg/L	-0.28
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.36	96	2422588	50.00	mg/L	-0.28
Target Compounds						Qvalue
2) 1,4-Dioxane	2.40	88	610406	10.41	mg/L	99

REVIEWED
By Yelena P at 4:59 pm, Jun 24, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211930.D Vial: 3
Acq On : 22 Jun 2019 2:07 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211930.D Vial: 3
Acq On : 22 Jun 2019 2:07 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.36	96	2422588	50.00	mg/L	-0.28
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.36	96	2422588	50.00	mg/L	-0.28
Target Compounds						Qvalue
2) 1,4-Dioxane	2.40	88	610406	10.41	mg/L	99

APPROVED
By Stuart Sigman at 11:29 am, Jun 27, 2019

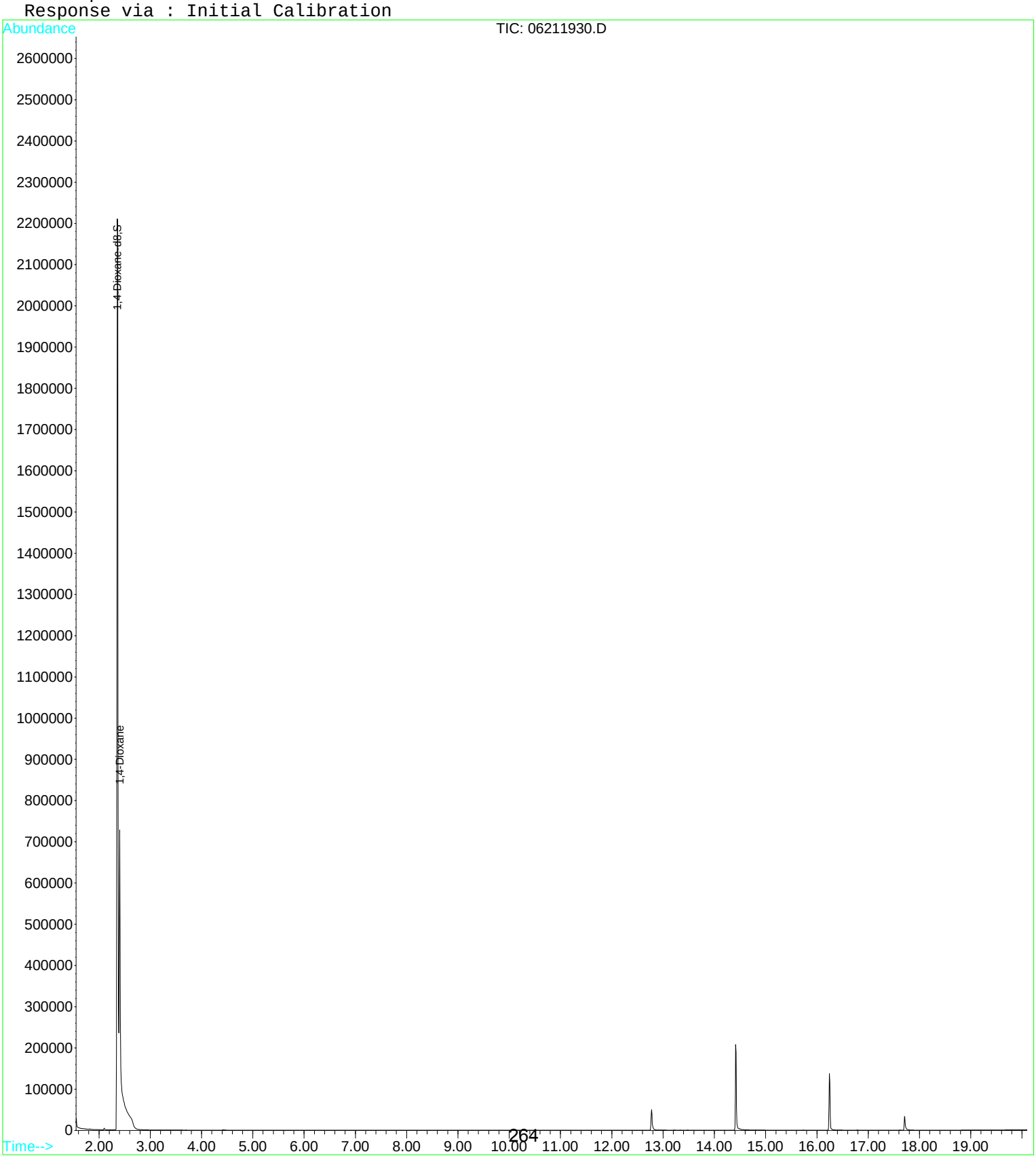
REVIEWED
By Yelena P at 4:59 pm, Jun 24, 2019

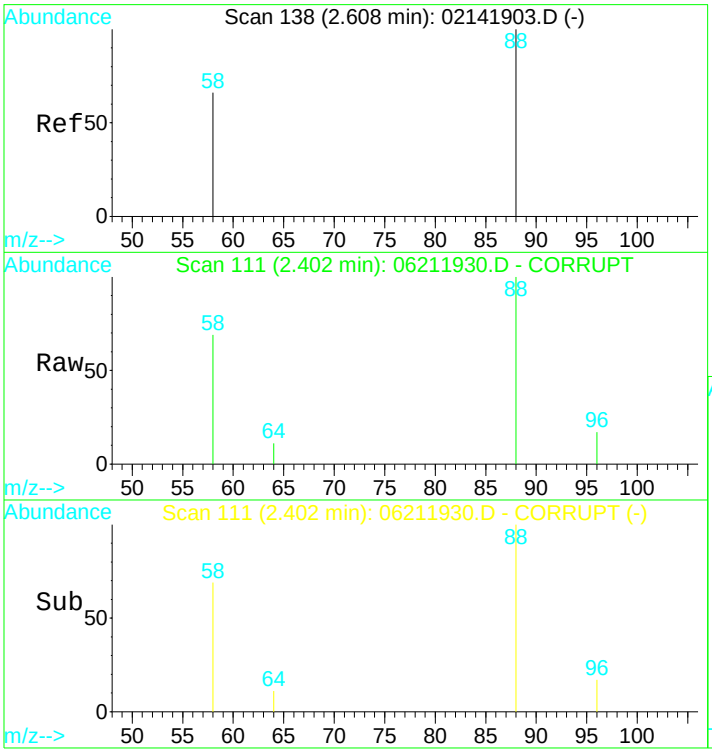
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211930.D Vial: 3
Acq On : 22 Jun 2019 2:07 am Operator: JB_MS-2
Sample : CCV 10.0 mg/L 1,4-Dioxane Inst : GC/MS Ins
Misc : 8062701, 8062702 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:44 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

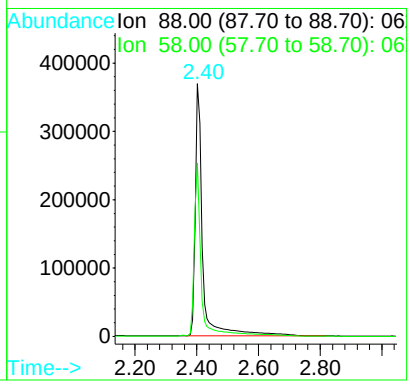




#2
1,4-Dioxane
Concen: 10.41 mg/L
RT: 2.40 min Scan# 111
Delta R.T. -0.28 min
Lab File: 06211930.D
Acq: 22 Jun 2019 2:07 am

Tgt Ion: 88 Resp: 610406

Ion	Ratio	Lower	Upper
88	100		
58	66.9	36.0	96.0



PREPARATION BENCH SHEET

B9F2002

American Analytics, Inc.

Matrix: Water **Prepared using: SVOCGCMS - EPA 3510C_MS** **Printed: 7/1/2019 2:20:28PM**

Lab Number	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments	
9F14004-01 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-02 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-03 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-04 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-05 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-06 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14004-07 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			THIS IS LEVEL IV	THIS IS LEVEL IV
9F14005-02 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-03 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-04 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-05 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-06 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-07 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-08 *8270CM 1,4-Dioxane On*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

PREPARATION BENCH SHEET

B9F2002

American Analytics, Inc.

Matrix: Water **Prepared using: SVOCGCMS - EPA 3510C_MS** **Printed: 7/1/2019 2:20:28PM**

Lab Number	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments	
9F14005-09 *8270CM 1,4-Dioxane Or*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-10 *8270CM 1,4-Dioxane Or*	06/20/19 10:36	980	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
9F14005-11 *8270CM 1,4-Dioxane Or*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			USE FOR MS/MSD	USE FOR MS/MSD
9F14005-12 *8270CM 1,4-Dioxane Or*	06/20/19 10:36	1000	1	Haley & Aldrich (Oakland)			J-flags; High profile!!!; Level 4!	J-flags; High profile!!!; Level 4!
B9F2002-BLK1	06/20/19 10:36	1000	1					
B9F2002-BS1	06/20/19 10:36	1000	1	9050704		10		
B9F2002-BSD1	06/20/19 10:36	1000	1	9050704		10		
B9F2002-MS1	06/20/19 10:36	1000	1	9050704	9F14005-11	10		
B9F2002-MSD1	06/20/19 10:36	1000	1	9050704	9F14005-11	10		

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211910.D Vial: 10
Acq On : 21 Jun 2019 3:33 pm Operator: JB_MS-2
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:36 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

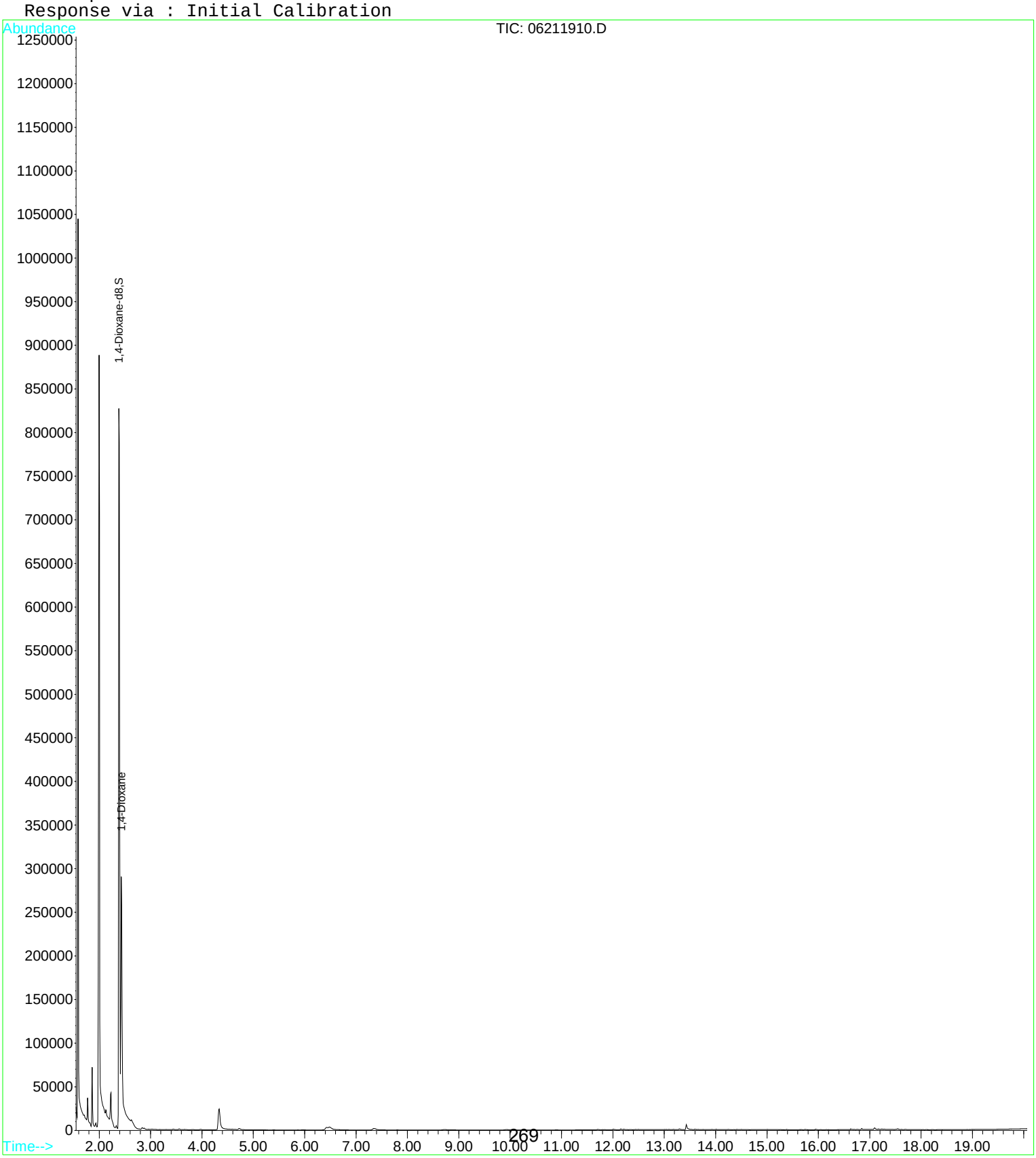
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.39	96	778406	50.00	mg/L	-0.25
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.39	96	778406	50.00	mg/L	-0.25
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	249430	13.24	mg/L	99

REVIEWED
By Yelena P at 10:13 am, Jun 25, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211910.D Vial: 10
Acq On : 21 Jun 2019 3:33 pm Operator: JB_MS-2
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:36 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211910.D Vial: 10
Acq On : 21 Jun 2019 3:33 pm Operator: JB_MS-2
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:36 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.39	96	778406	50.00	mg/L	-0.25
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.39	96	778406	50.00	mg/L	-0.25
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	249430	13.24	mg/L	99

REVIEWED
By Yelena P at 10:14 am, Jun 25, 2019

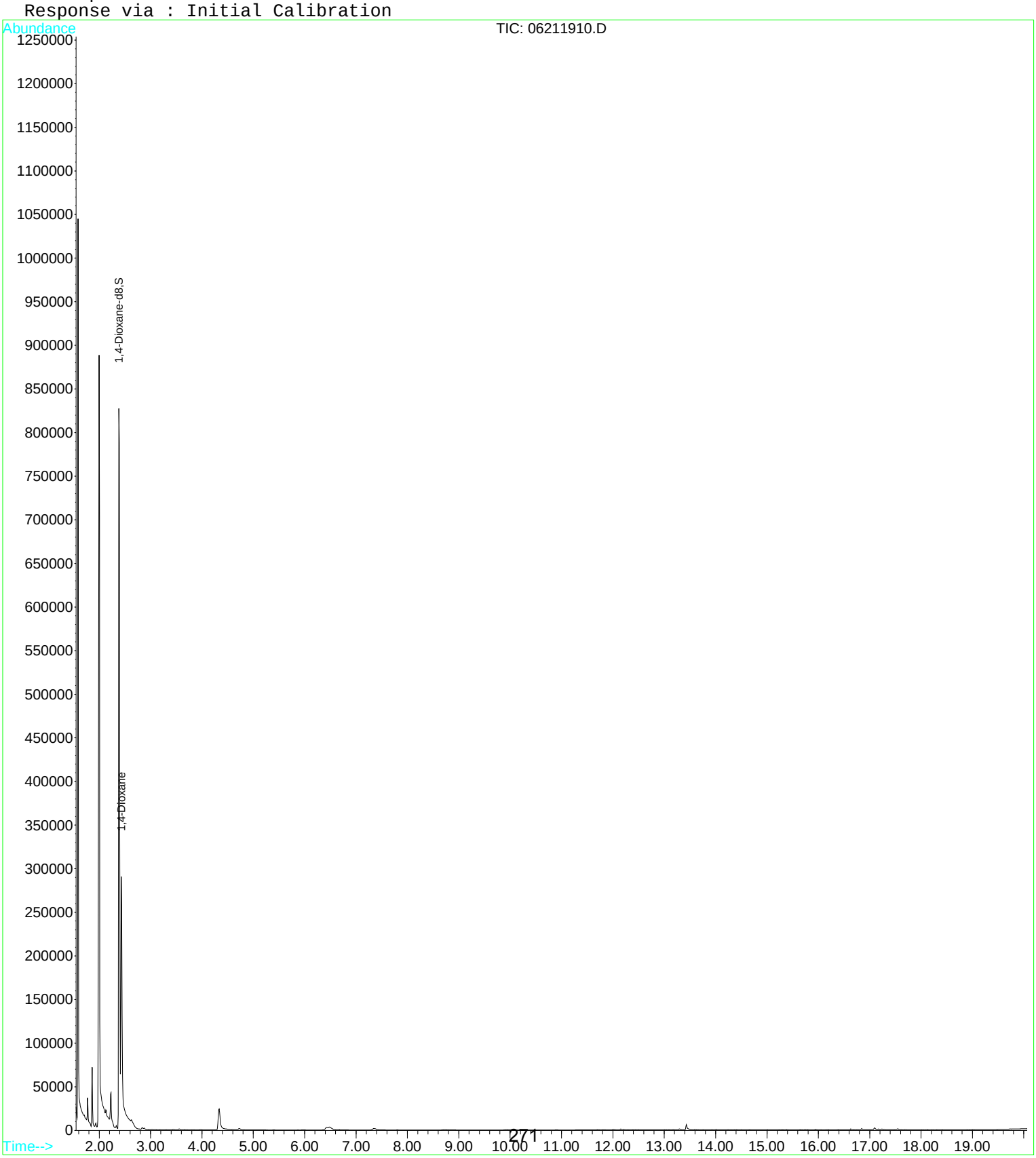
APPROVED
By Stuart Sigman at 9:35 am, Jul 01, 2019

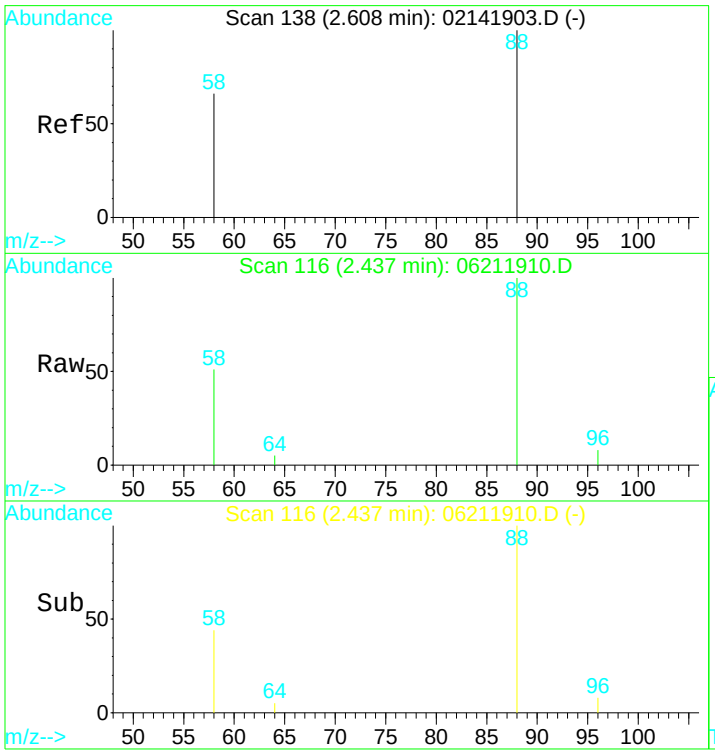
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211910.D Vial: 10
Acq On : 21 Jun 2019 3:33 pm Operator: JB_MS-2
Sample : 9F14004-01 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:36 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

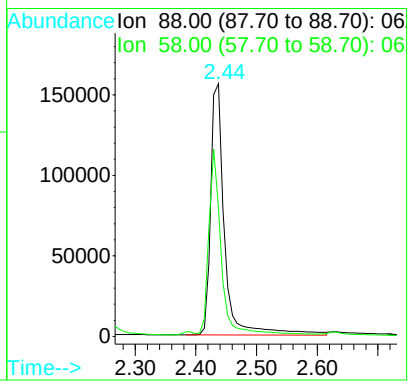




#2
1,4-Dioxane
Concen: 13.24 mg/L
RT: 2.44 min Scan# 116
Delta R.T. -0.25 min
Lab File: 06211910.D
Acq: 21 Jun 2019 3:33 pm

Tgt Ion: 88 Resp: 249430

Ion	Ratio	Lower	Upper
88	100		
58	66.9	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211911.D Vial: 11
Acq On : 21 Jun 2019 4:05 pm Operator: JB_MS-2
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.39	96	829626	50.00	mg/L	-0.25
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.39	96	829626	50.00	mg/L	-0.25
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	227223	11.32	mg/L	100

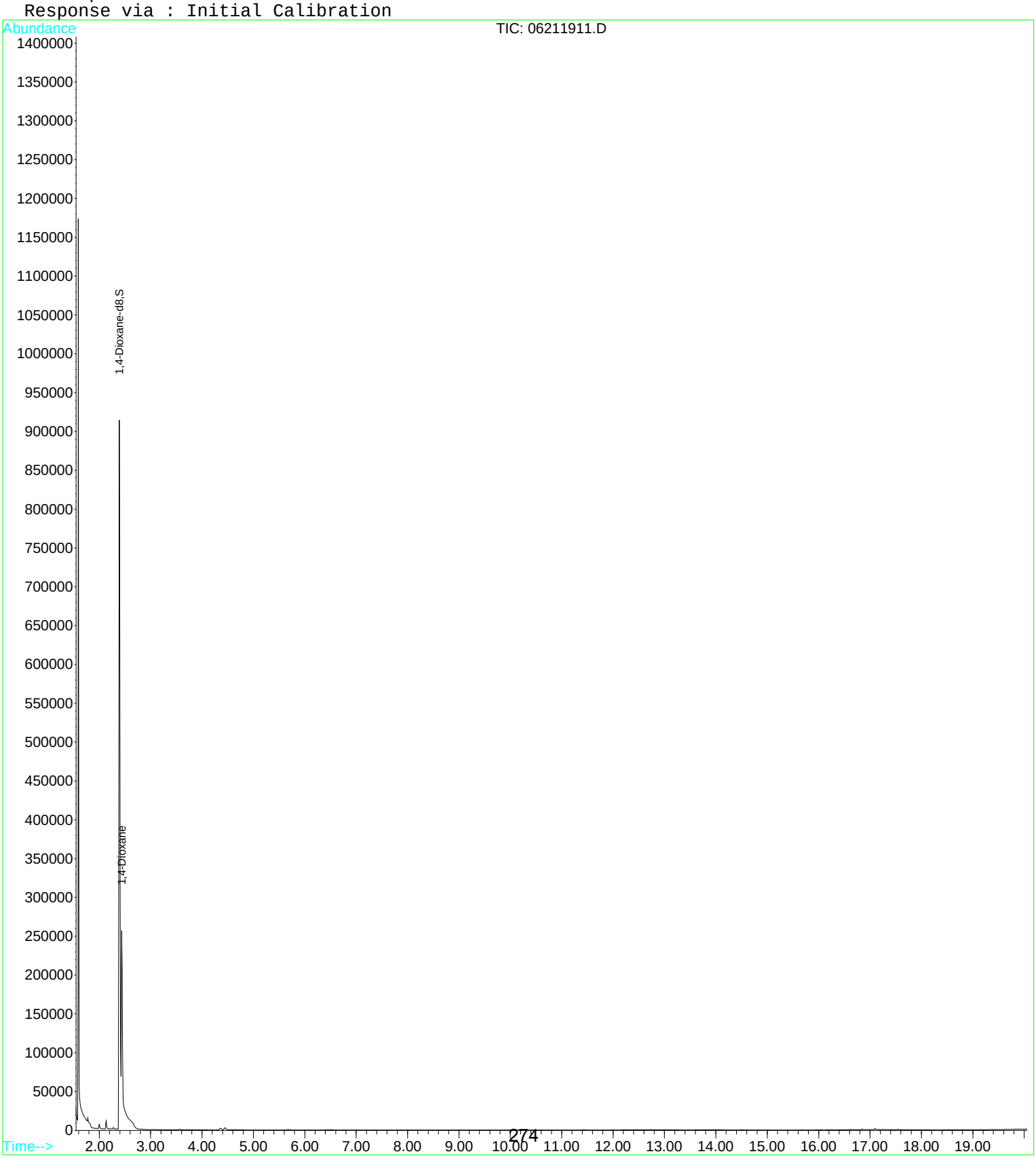
REVIEWED
By Yelena P at 10:14 am, Jun 25, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211911.D Vial: 11
Acq On : 21 Jun 2019 4:05 pm Operator: JB_MS-2
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211911.D Vial: 11
Acq On : 21 Jun 2019 4:05 pm Operator: JB_MS-2
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.39	96	829626	50.00	mg/L	-0.25
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.39	96	829626	50.00	mg/L	-0.25
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	227223	11.32	mg/L	100

REVIEWED
By Yelena P at 10:14 am, Jun 25, 2019

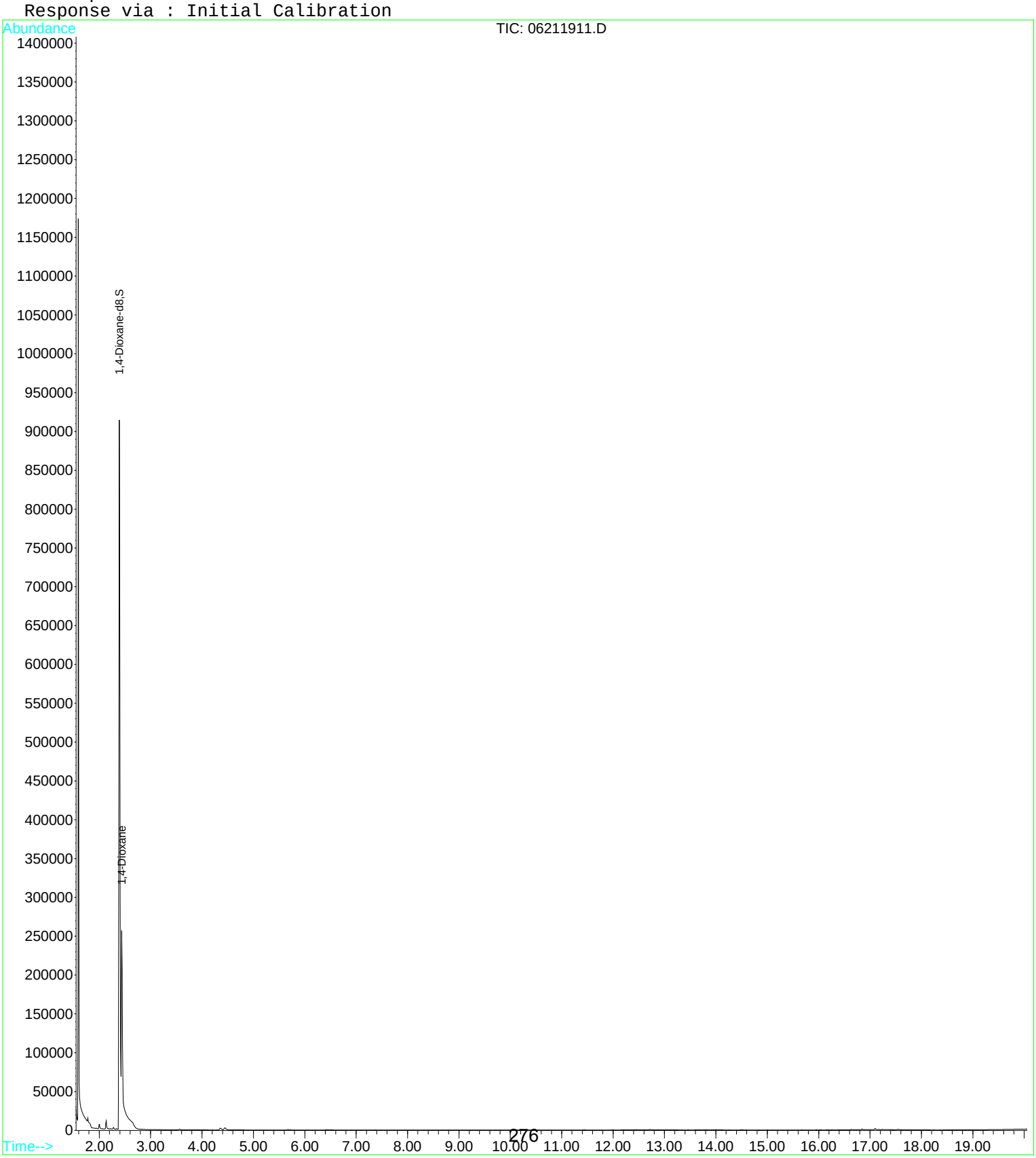
APPROVED
By Stuart Sigman at 9:35 am, Jul 01, 2019

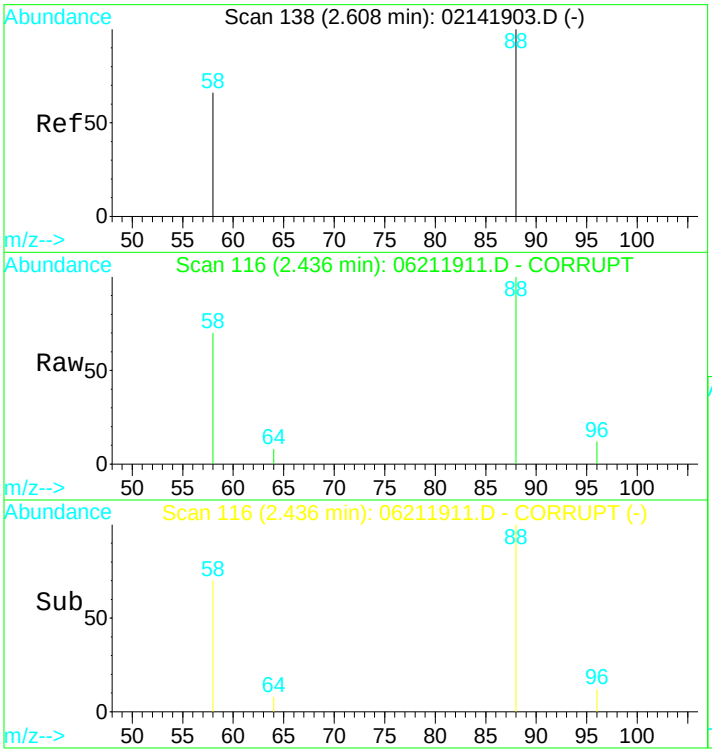
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211911.D Vial: 11
Acq On : 21 Jun 2019 4:05 pm Operator: JB_MS-2
Sample : 9F14004-02 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

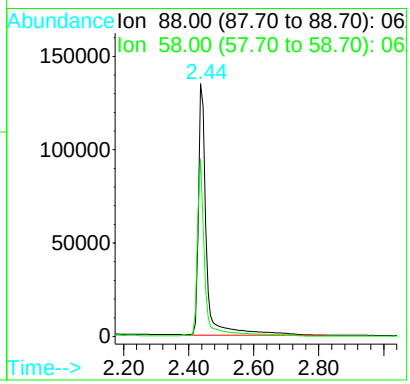




#2
1,4-Dioxane
Concen: 11.32 mg/L
RT: 2.44 min Scan# 116
Delta R.T. -0.25 min
Lab File: 06211911.D
Acq: 21 Jun 2019 4:05 pm

Tgt Ion: 88 Resp: 227223

Ion	Ratio	Lower	Upper
88	100		
58	66.2	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211912.D Vial: 12
Acq On : 21 Jun 2019 4:38 pm Operator: JB_MS-2
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

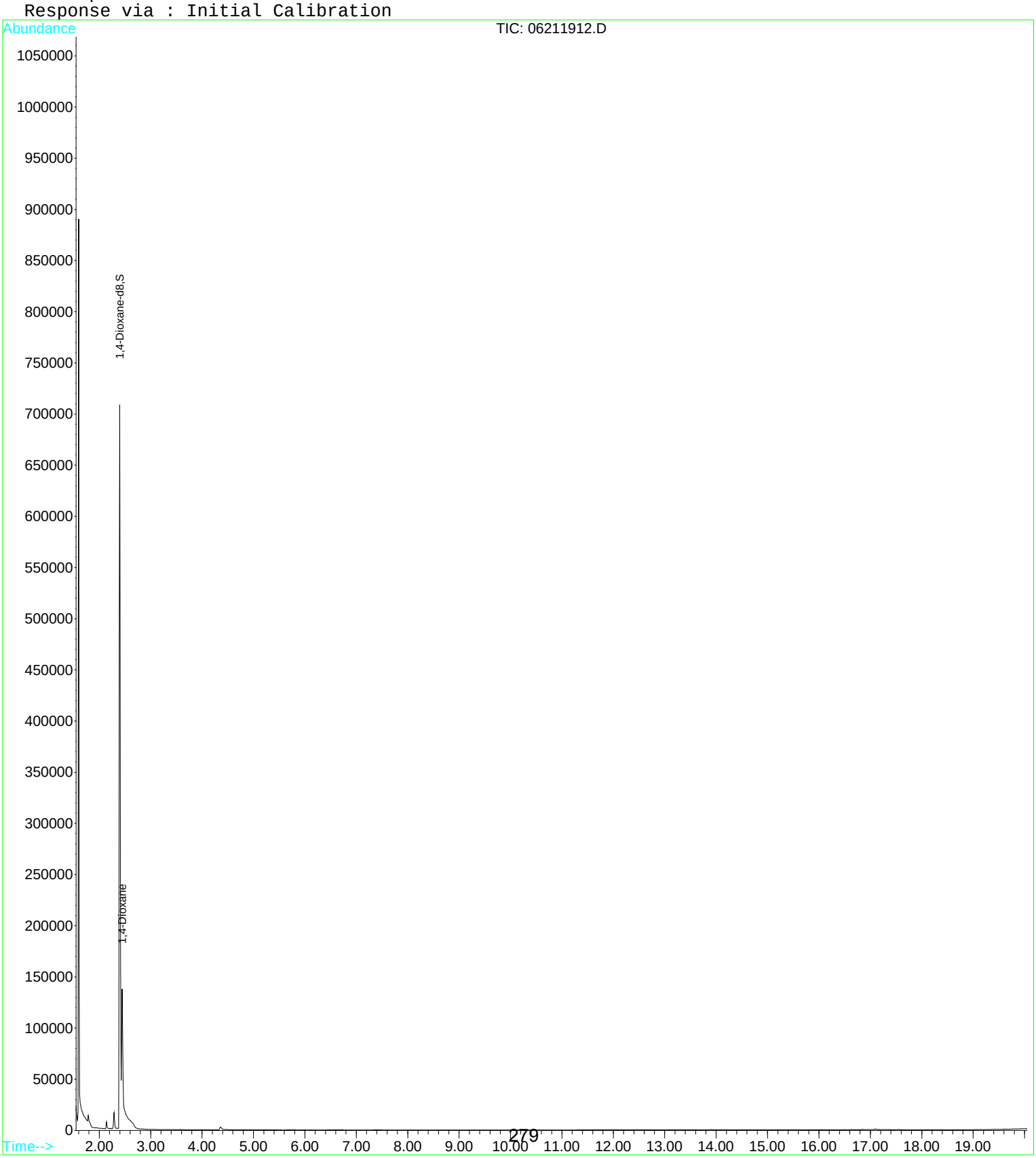
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	637662	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	637662	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	119524	7.75	mg/L	100

REVIEWED
By Yelena P at 10:15 am, Jun 25, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211912.D Vial: 12
Acq On : 21 Jun 2019 4:38 pm Operator: JB_MS-2
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211912.D Vial: 12
Acq On : 21 Jun 2019 4:38 pm Operator: JB_MS-2
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	637662	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	637662	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.44	88	119524	7.75	mg/L	100

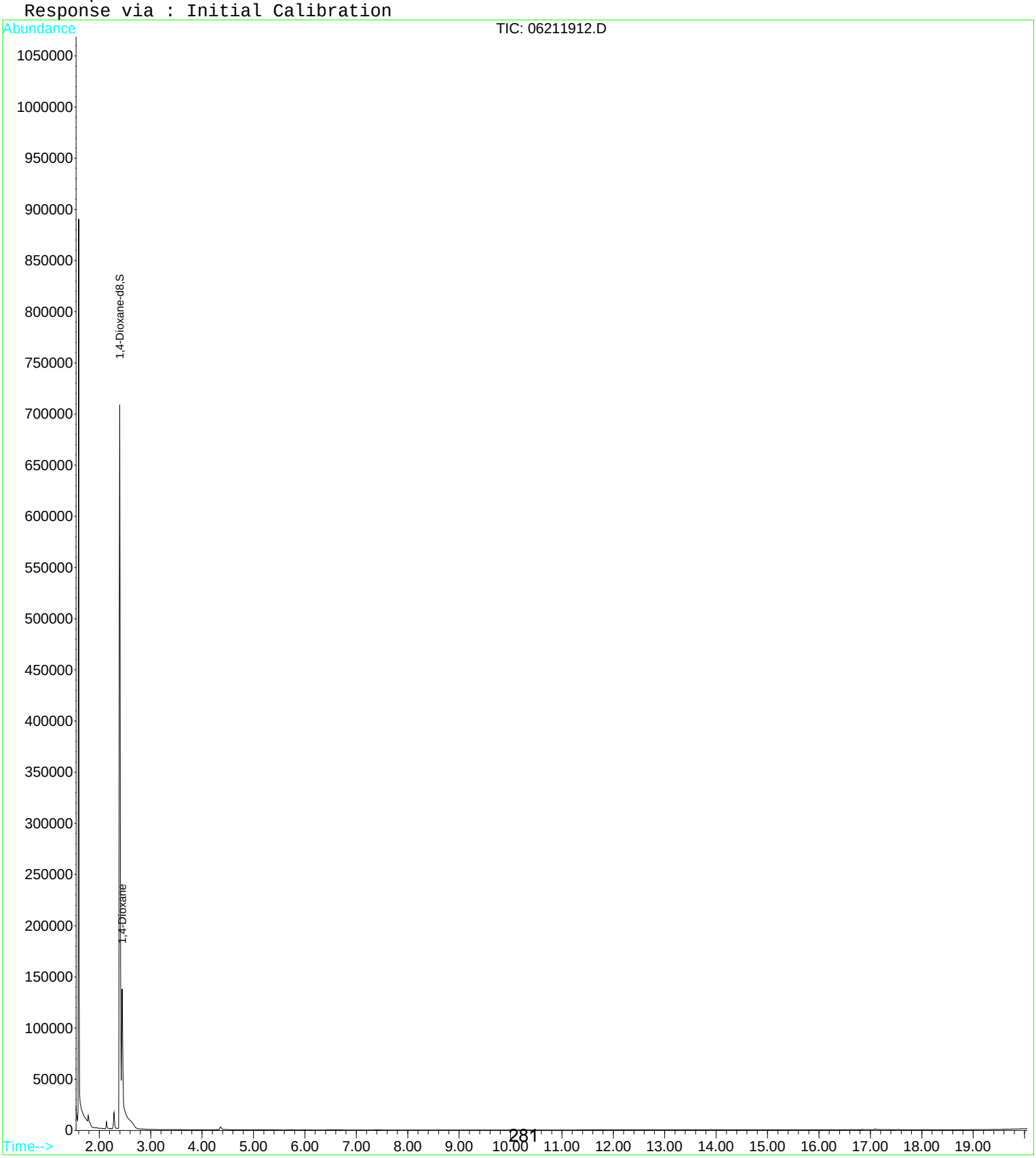
REVIEWED
By Yelena P at 10:15 am, Jun 25, 2019

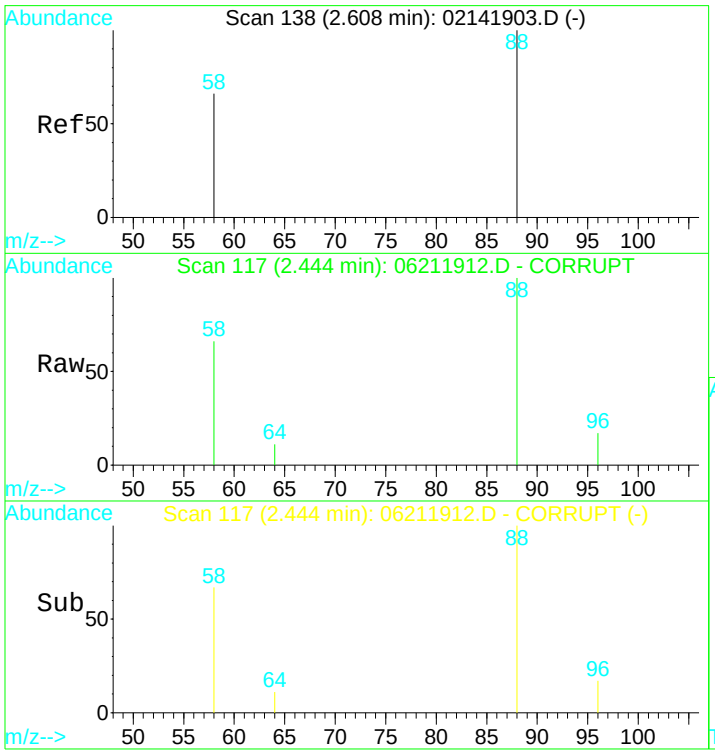
APPROVED
By Stuart Sigman at 9:36 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211912.D Vial: 12
Acq On : 21 Jun 2019 4:38 pm Operator: JB_MS-2
Sample : 9F14004-03 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

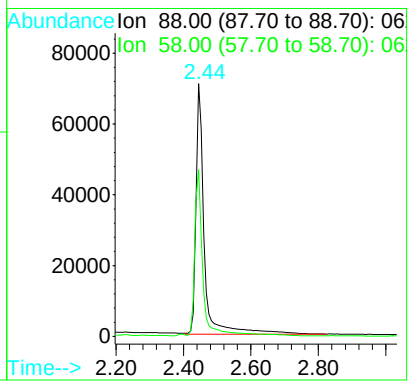




#2
1,4-Dioxane
Concen: 7.75 mg/L
RT: 2.44 min Scan# 117
Delta R.T. -0.24 min
Lab File: 06211912.D
Acq: 21 Jun 2019 4:38 pm

Tgt Ion: 88 Resp: 119524

Ion	Ratio	Lower	Upper
88	100		
58	66.2	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211913.D Vial: 13
Acq On : 21 Jun 2019 5:12 pm Operator: JB_MS-2
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

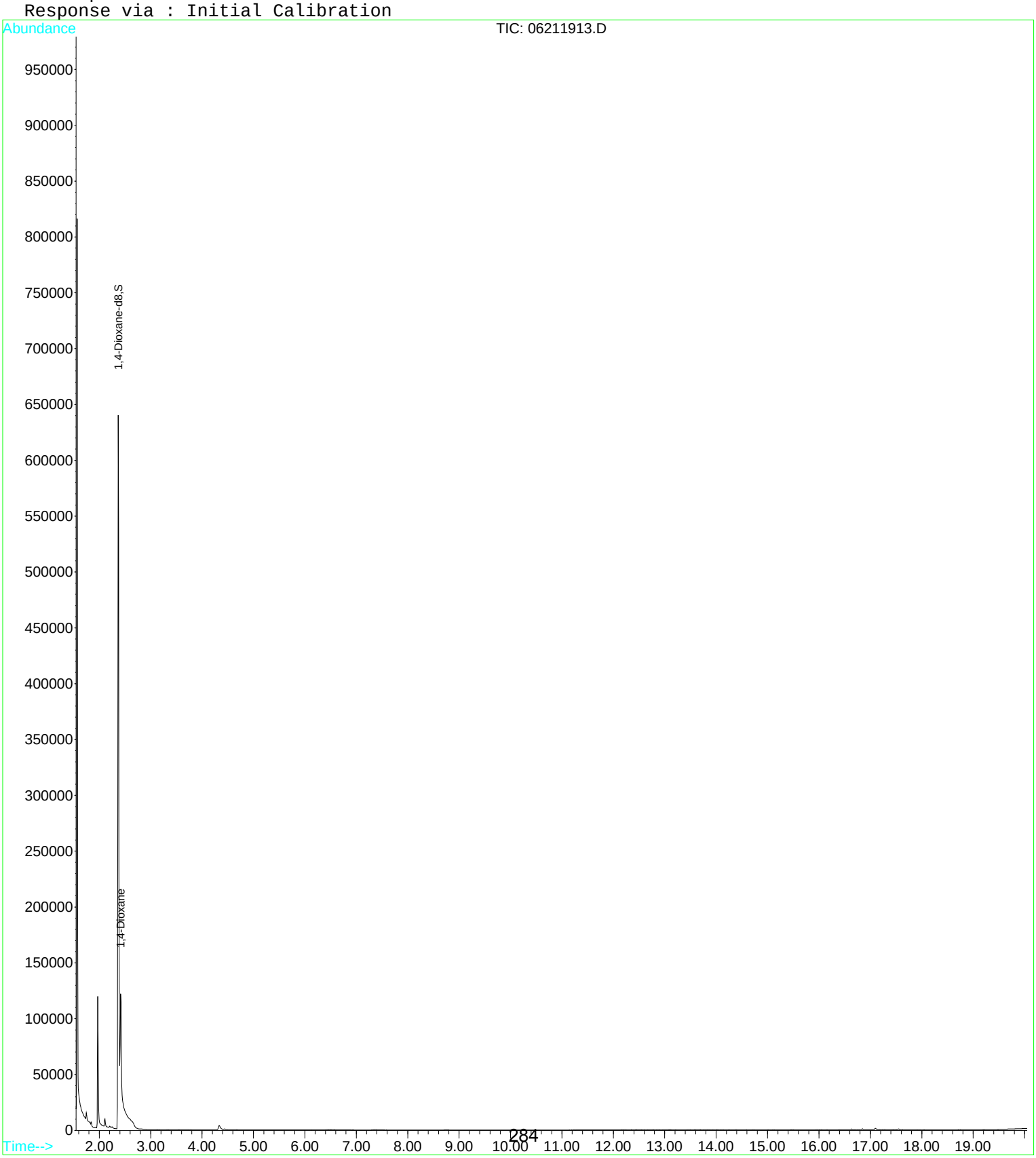
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	637713	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	637713	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	106840	6.92	mg/L	93

REVIEWED
By Yelena P at 10:15 am, Jun 25, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211913.D Vial: 13
Acq On : 21 Jun 2019 5:12 pm Operator: JB_MS-2
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211913.D Vial: 13
Acq On : 21 Jun 2019 5:12 pm Operator: JB_MS-2
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	637713	50.00	mg/L	-0.27
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	637713	50.00	mg/L	-0.27
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	106840	6.92	mg/L	93

REVIEWED
By Yelena P at 10:15 am, Jun 25, 2019

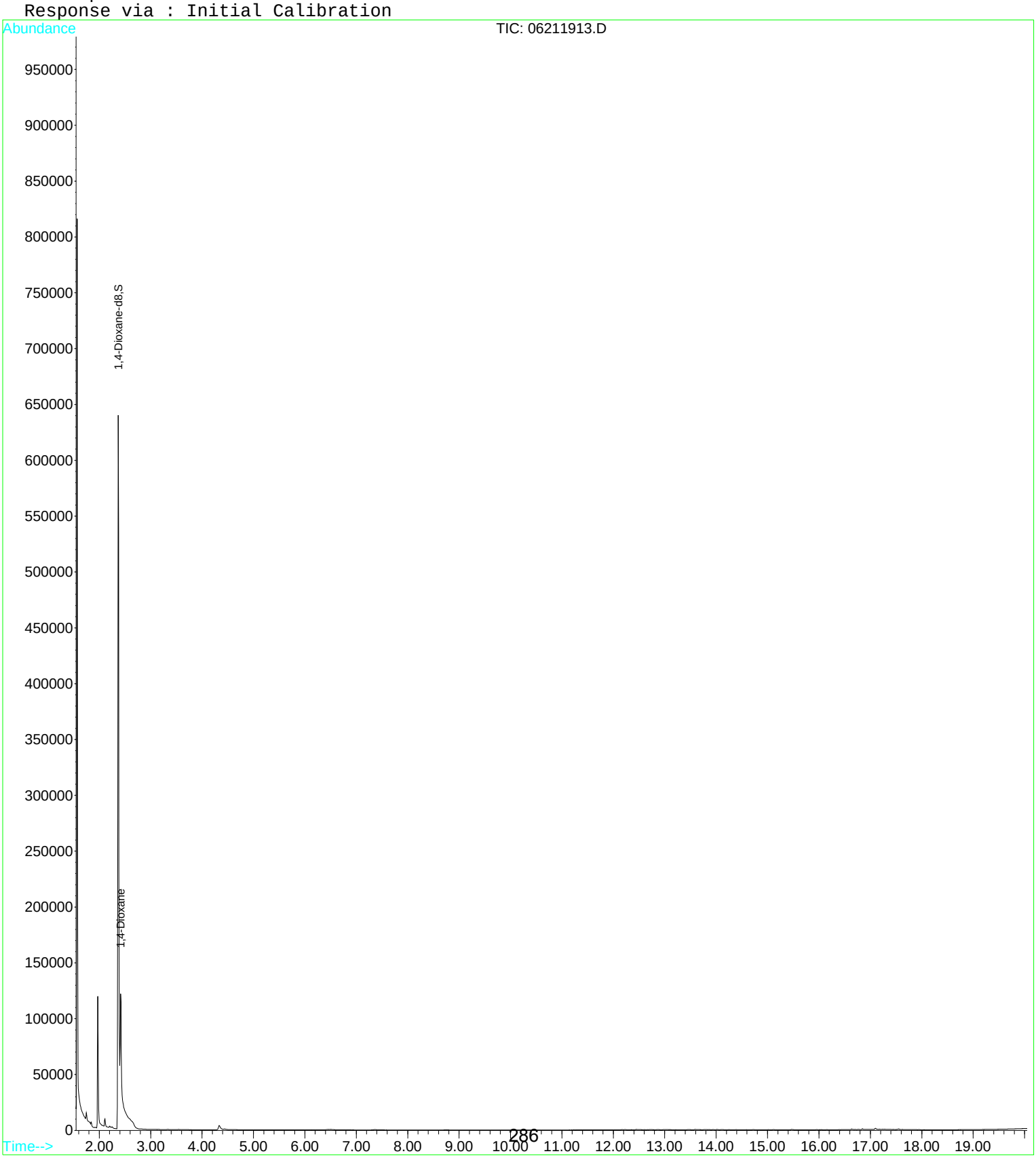
APPROVED
By Stuart Sigman at 9:36 am, Jul 01, 2019

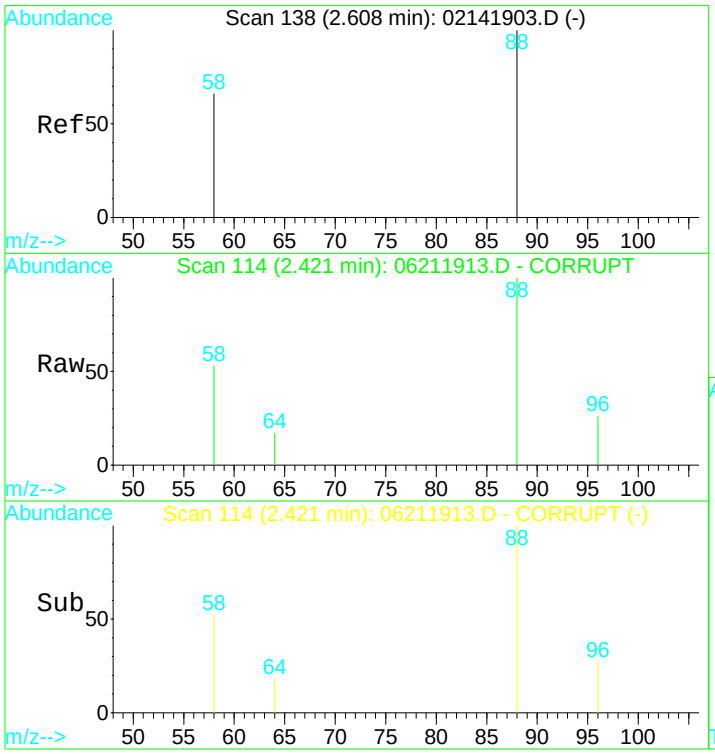
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211913.D Vial: 13
Acq On : 21 Jun 2019 5:12 pm Operator: JB_MS-2
Sample : 9F14004-04 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:37 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

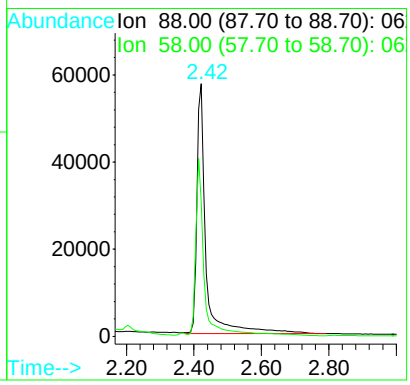




#2
1,4-Dioxane
Concen: 6.92 mg/L
RT: 2.42 min Scan# 114
Delta R.T. -0.27 min
Lab File: 06211913.D
Acq: 21 Jun 2019 5:12 pm

Tgt Ion: 88 Resp: 106840

Ion	Ratio	Lower	Upper
88	100		
58	60.6	36.0	96.0



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211914.D Vial: 14
Acq On : 21 Jun 2019 5:45 pm Operator: JB_MS-2
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	680762	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	680762	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.46	88	15117	0.92	mg/L	# 17

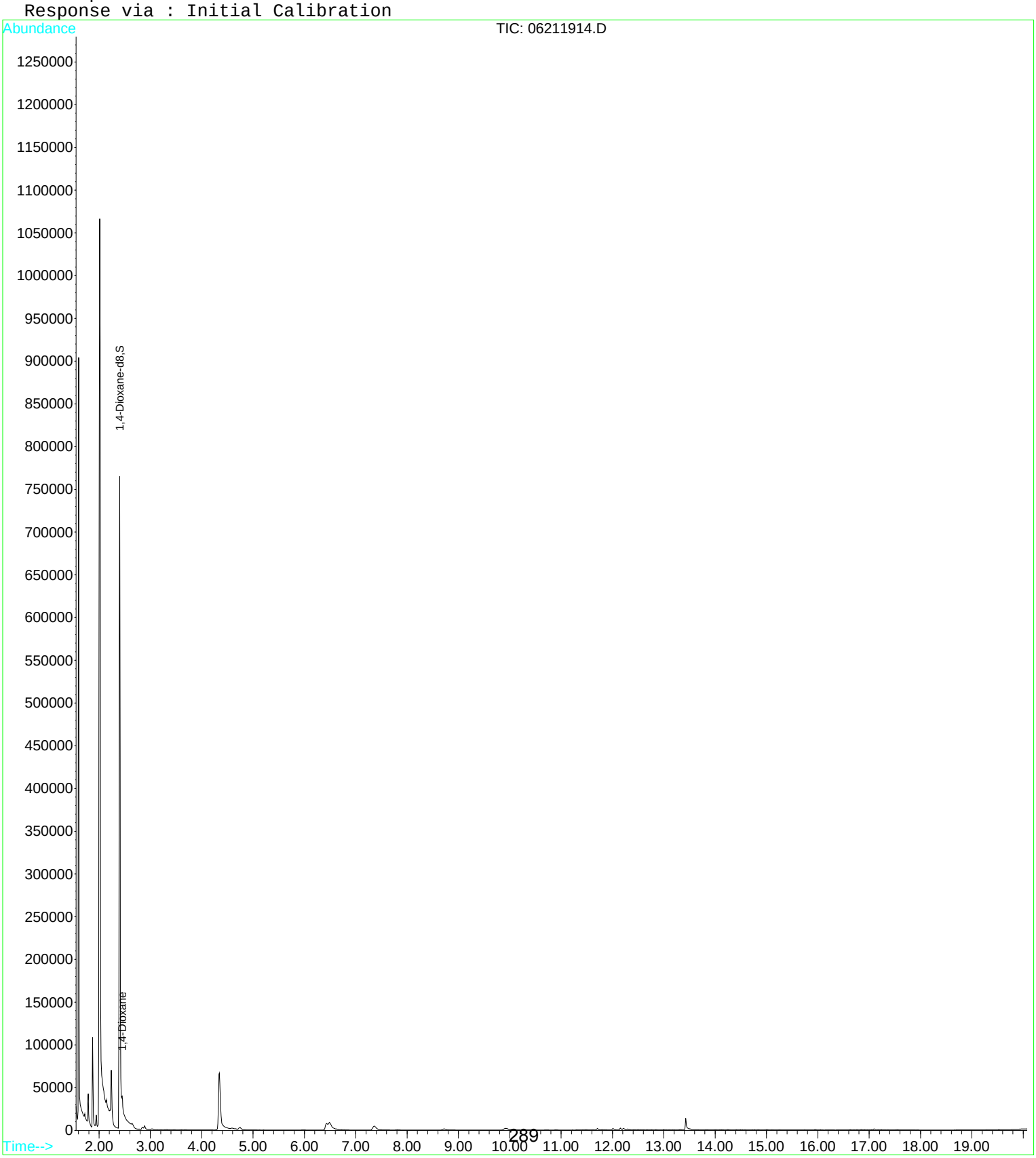
REVIEWED
By Yelena P at 10:15 am, Jun 25, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211914.D Vial: 14
Acq On : 21 Jun 2019 5:45 pm Operator: JB_MS-2
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211914.D Vial: 14
Acq On : 21 Jun 2019 5:45 pm Operator: JB_MS-2
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:17 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.40	96	680762	50.00	mg/L	-0.24
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.40	96	680762	50.00	mg/L	-0.24
Target Compounds						Qvalue
2) 1,4-Dioxane	2.46	88	15123m	0.92	mg/L	

APPROVED
By Stuart Sigman at 9:37 am, Jul 01, 2019

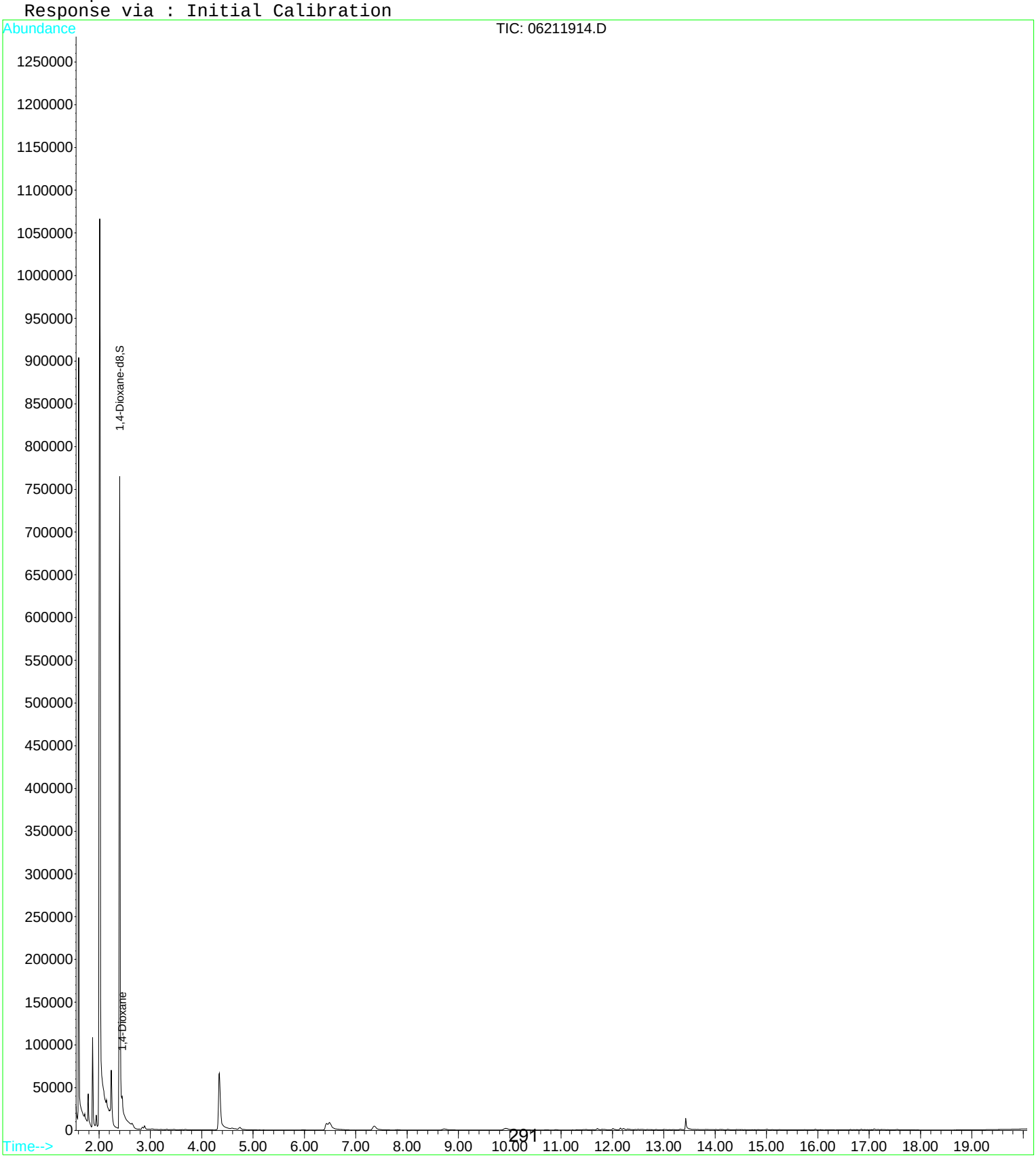
ND

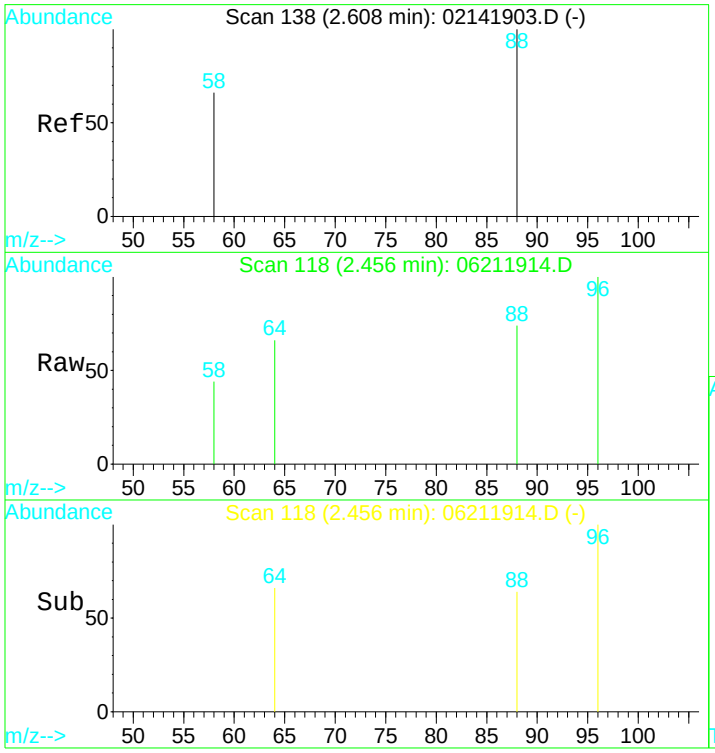
REVIEWED
By Yelena P at 10:20 am, Jun 25, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211914.D Vial: 14
Acq On : 21 Jun 2019 5:45 pm Operator: JB_MS-2
Sample : 9F14004-05 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:17 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

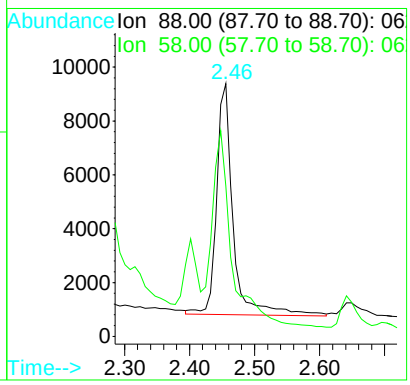




#2
1,4-Dioxane
Concen: 0.92 mg/L
RT: 2.46 min Scan# 118
Delta R.T. -0.23 min
Lab File: 06211914.D
Acq: 21 Jun 2019 5:45 pm

Tgt Ion: 88 Resp: 15117

Ion	Ratio	Lower	Upper
88	100		
58	0.0	36.0	96.0#



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211915.D Vial: 15
Acq On : 21 Jun 2019 6:18 pm Operator: JB_MS-2
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.38	96	605583	50.00	mg/L	-0.26
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.38	96	605583	50.00	mg/L	-0.26
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	12949	0.88	mg/L	# 17

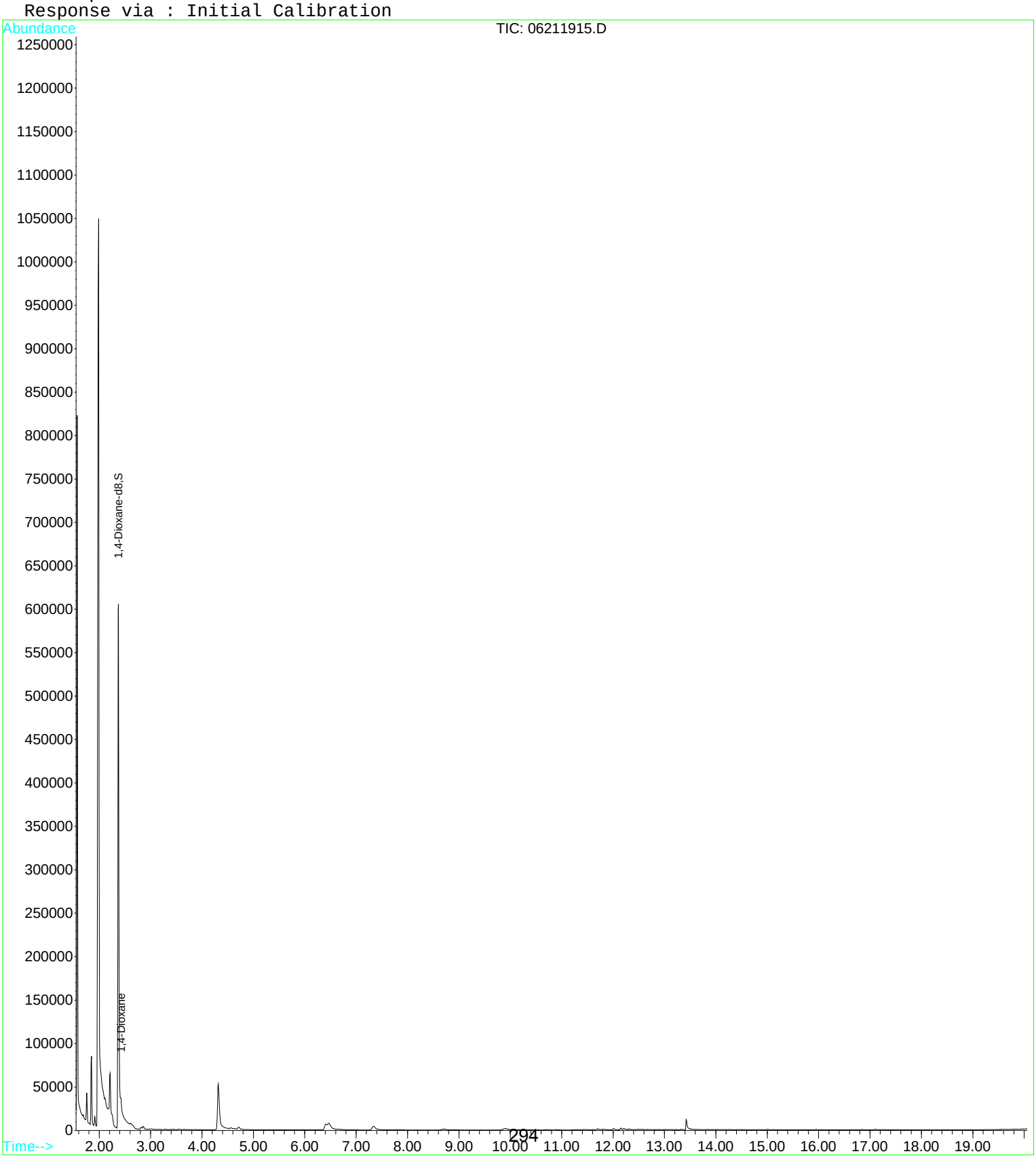
REVIEWED
By Yelena P at 10:21 am, Jun 25, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211915.D Vial: 15
Acq On : 21 Jun 2019 6:18 pm Operator: JB_MS-2
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211915.D Vial: 15
Acq On : 21 Jun 2019 6:18 pm Operator: JB_MS-2
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:18 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.38	96	605583	50.00	mg/L	-0.26
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.38	96	605583	50.00	mg/L	-0.26
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	12949m	0.88	mg/L	

APPROVED
By Stuart Sigman at 9:37 am, Jul 01, 2019

ND

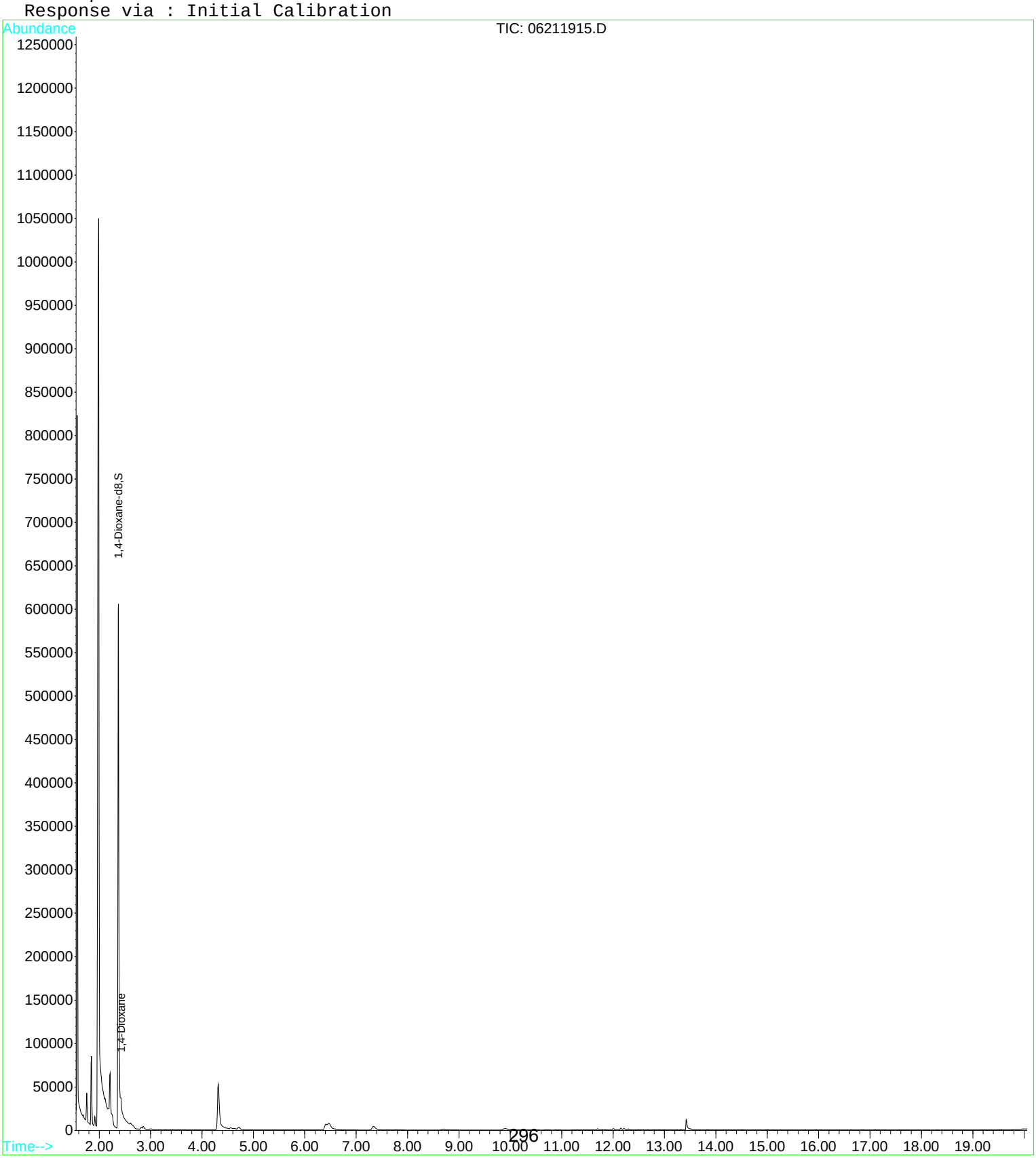
REVIEWED
By Yelena P at 10:21 am, Jun 25, 2019

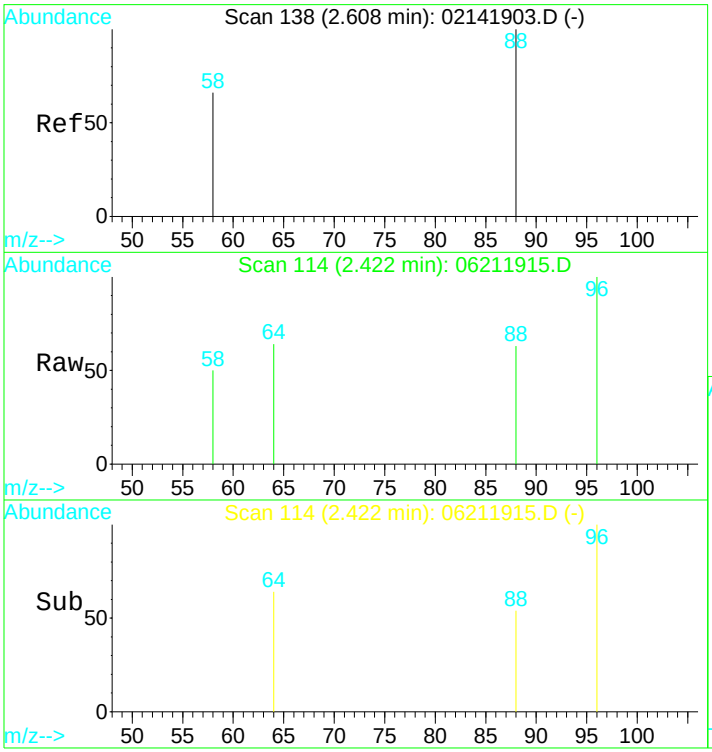
(#) = qualifier out of range (m) = manual integration
06211915.D DX082818.M Tue Jun 25 10:18:33 2019 PDFCREATOR Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211915.D Vial: 15
Acq On : 21 Jun 2019 6:18 pm Operator: JB_MS-2
Sample : 9F14004-06 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 25 10:18 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

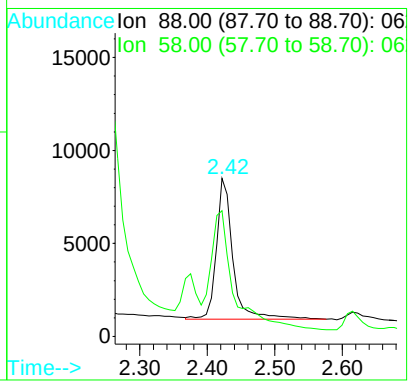




#2
1,4-Dioxane
Concen: 0.88 mg/L m
RT: 2.42 min Scan# 114
Delta R.T. -0.26 min
Lab File: 06211915.D
Acq: 21 Jun 2019 6:18 pm

Tgt Ion: 88 Resp: 12949

Ion	Ratio	Lower	Upper
88	100		
58	130.3	36.0	96.0#



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211916.D Vial: 16
Acq On : 21 Jun 2019 6:51 pm Operator: JB_MS-2
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	680557	50.00	mg/L	-0.26
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	680557	50.00	mg/L	-0.26
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	114806	6.97	mg/L	97

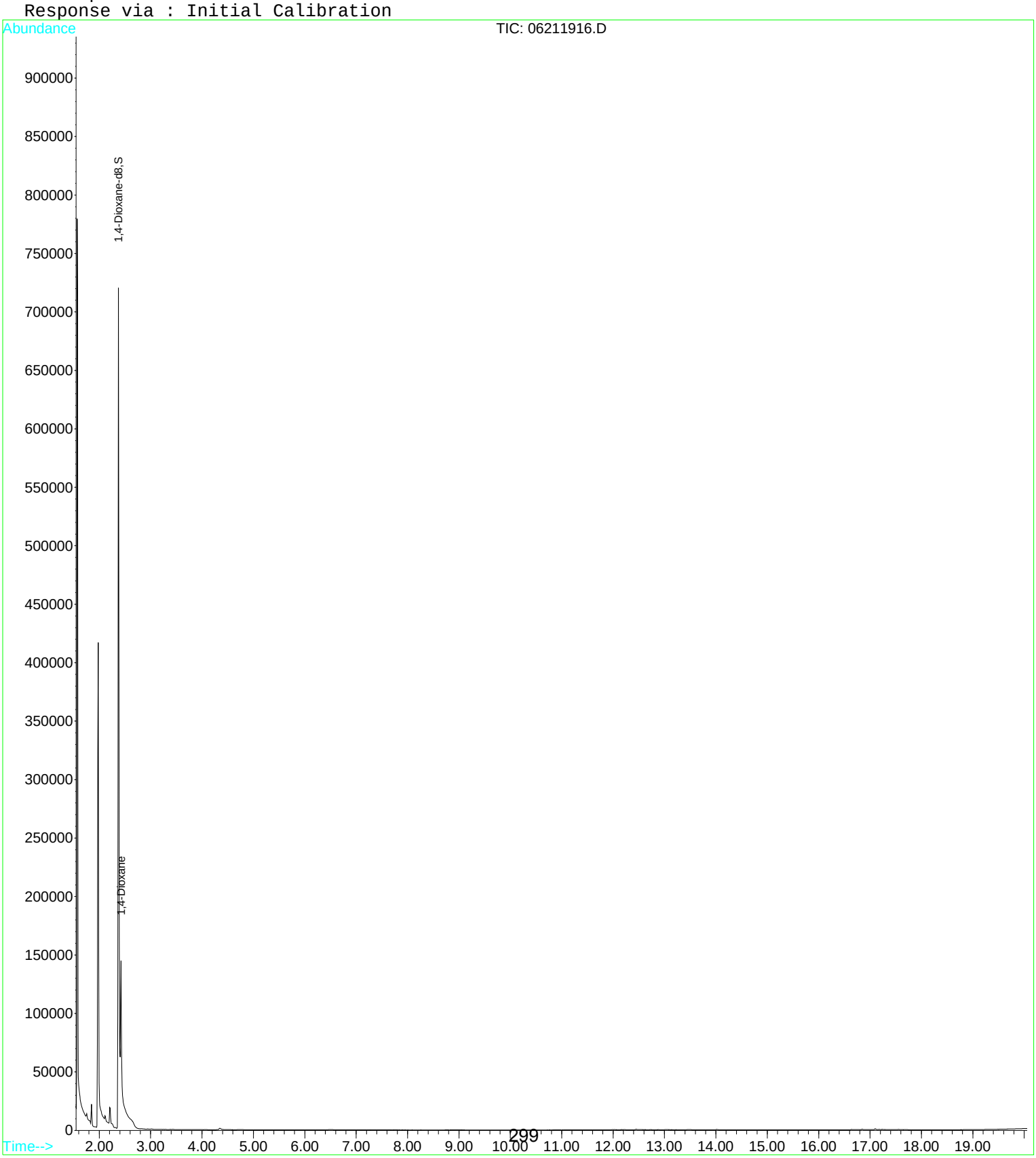
REVIEWED
By Yelena P at 10:22 am, Jun 25, 2019

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211916.D Vial: 16
Acq On : 21 Jun 2019 6:51 pm Operator: JB_MS-2
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2019\062119\06211916.D Vial: 16
Acq On : 21 Jun 2019 6:51 pm Operator: JB_MS-2
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Quant Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration
DataAcq Meth : DX082818

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.37	96	680557	50.00	mg/L	-0.26
System Monitoring Compounds						
1) 1,4-Dioxane-d8	2.37	96	680557	50.00	mg/L	-0.26
Target Compounds						Qvalue
2) 1,4-Dioxane	2.42	88	114806	6.97	mg/L	97

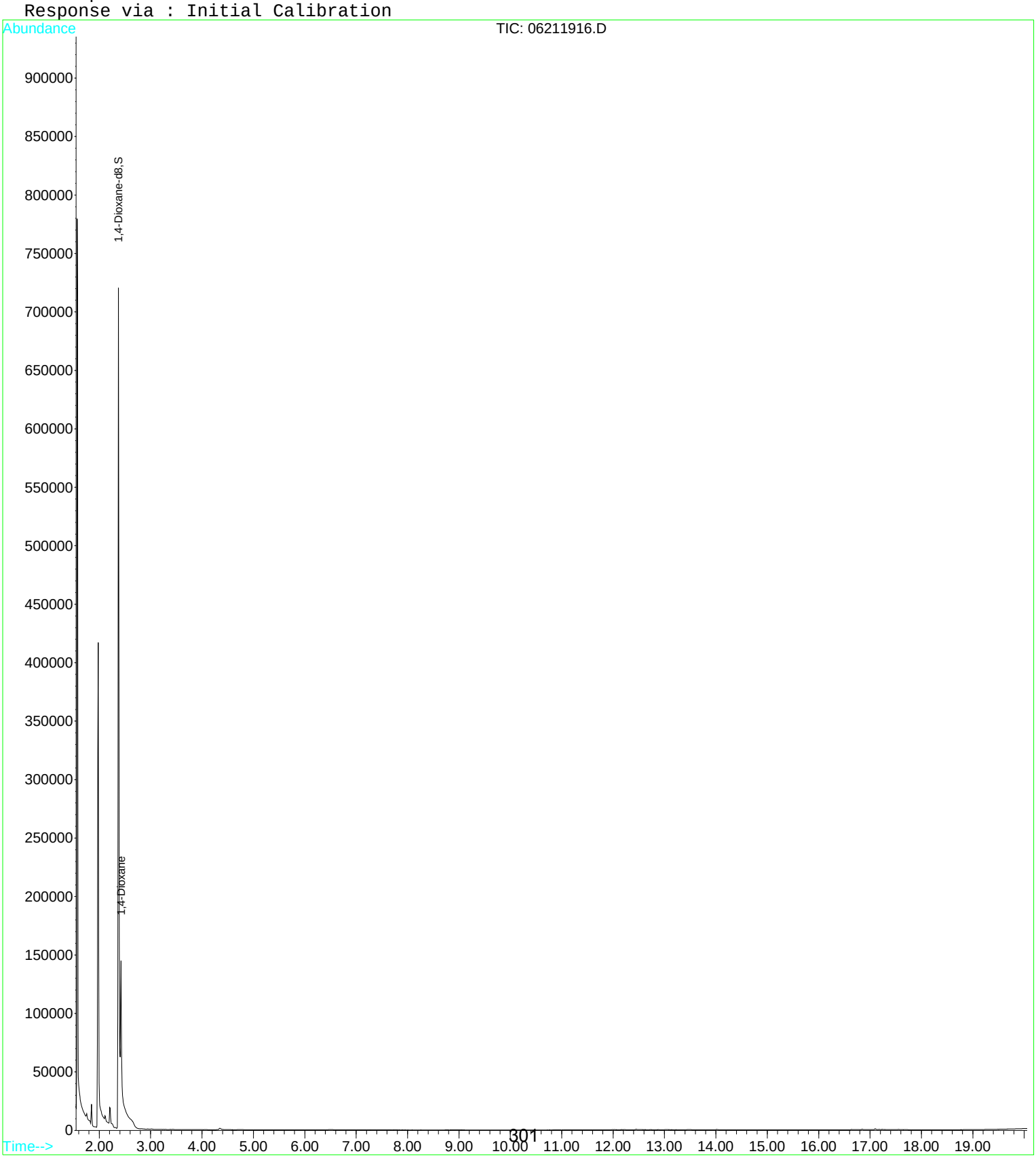
REVIEWED
By Yelena P at 10:22 am, Jun 25, 2019

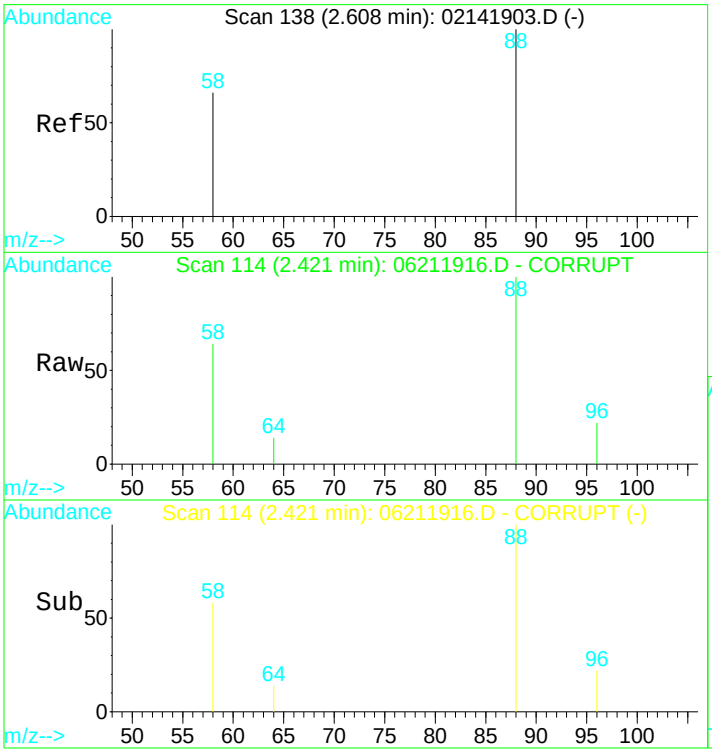
APPROVED
By Stuart Sigman at 9:38 am, Jul 01, 2019

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2019\062119\06211916.D Vial: 16
Acq On : 21 Jun 2019 6:51 pm Operator: JB_MS-2
Sample : 9F14004-07 Inst : GC/MS Ins
Misc : 9050703 Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jun 24 16:38 2019 Quant Results File: DX082818.RES

Method : C:\HPCHEM\1\METHODS\DX082818.M (RTE Integrator)
Title : EPA 8270CM 1,4-Dioxane
Last Update : Thu Feb 14 16:37:48 2019
Response via : Initial Calibration

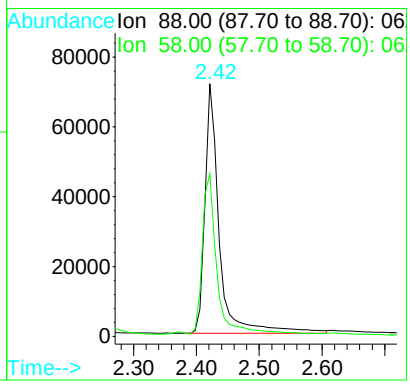




#2
1,4-Dioxane
Concen: 6.97 mg/L
RT: 2.42 min Scan# 114
Delta R.T. -0.26 min
Lab File: 06211916.D
Acq: 21 Jun 2019 6:51 pm

Tgt Ion: 88 Resp: 114806

Ion	Ratio	Lower	Upper
88	100		
58	63.5	36.0	96.0



AMERICAN ANALYTICS

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June 28, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874360 / 9F14005

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/14/19 16:00 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
QC11-061319	9F14005-01	Water	5	06/13/19 07:00	06/14/19 16:00
EW-8-061319	9F14005-02	Water	5	06/13/19 09:01	06/14/19 16:00
MW-16-061319	9F14005-03	Water	5	06/13/19 09:48	06/14/19 16:00
MW-15-061319	9F14005-04	Water	5	06/13/19 10:56	06/14/19 16:00
MW-15B-061319	9F14005-05	Water	5	06/13/19 11:46	06/14/19 16:00
MW-18-061319	9F14005-06	Water	5	06/13/19 12:46	06/14/19 16:00
MW-61A-061319	9F14005-07	Water	5	06/13/19 13:23	06/14/19 16:00
QC14-061319	9F14005-08	Water	5	06/13/19 13:33	06/14/19 16:00
MW-61B-061319	9F14005-09	Water	5	06/13/19 13:53	06/14/19 16:00
QC12-061319	9F14005-10	Water	5	06/13/19 14:15	06/14/19 16:00
MW-04-061319	9F14005-11	Water	5	06/13/19 13:19	06/14/19 16:00
QC13-061319	9F14005-12	Water	5	06/13/19 14:20	06/14/19 16:00
8270CM 1,4-Dioxane Only					
EW-8-061319	9F14005-02	Water	5	06/13/19 09:01	06/14/19 16:00
MW-16-061319	9F14005-03	Water	5	06/13/19 09:48	06/14/19 16:00
MW-15-061319	9F14005-04	Water	5	06/13/19 10:56	06/14/19 16:00
MW-15B-061319	9F14005-05	Water	5	06/13/19 11:46	06/14/19 16:00
MW-18-061319	9F14005-06	Water	5	06/13/19 12:46	06/14/19 16:00

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
MW-61A-061319	9F14005-07	Water	5	06/13/19 13:23	06/14/19 16:00
QC14-061319	9F14005-08	Water	5	06/13/19 13:33	06/14/19 16:00
MW-61B-061319	9F14005-09	Water	5	06/13/19 13:53	06/14/19 16:00
QC12-061319	9F14005-10	Water	5	06/13/19 14:15	06/14/19 16:00
MW-04-061319	9F14005-11	Water	5	06/13/19 13:19	06/14/19 16:00
QC13-061319	9F14005-12	Water	5	06/13/19 14:20	06/14/19 16:00

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F14005-02	EW-8-061319	06/13/19	06/20/19	06/21/19	1	**1.7**J	ug/L	1	2
9F14005-03	MW-16-061319	06/13/19	06/20/19	06/21/19	1	**2.8**	ug/L	1	2
9F14005-04	MW-15-061319	06/13/19	06/20/19	06/21/19	1	**1.6**J	ug/L	1	2
9F14005-05	MW-15B-061319	06/13/19	06/20/19	06/21/19	1	**2.0**	ug/L	1	2
9F14005-06	MW-18-061319	06/13/19	06/20/19	06/21/19	1	**2.6**	ug/L	1	2
9F14005-07	MW-61A-061319	06/13/19	06/20/19	06/21/19	1	**5.0**	ug/L	1	2
9F14005-08	QC14-061319	06/13/19	06/20/19	06/21/19	1	**4.9**	ug/L	1	2
9F14005-09	MW-61B-061319	06/13/19	06/20/19	06/21/19	1	<1.0	ug/L	1	2
9F14005-10	QC12-061319	06/13/19	06/20/19	06/21/19	1	<1.0	ug/L	1	2
9F14005-11	MW-04-061319	06/13/19	06/20/19	06/21/19	1	**3.2**	ug/L	1	2
9F14005-12	QC13-061319	06/13/19	06/20/19	06/22/19	1	<1.0	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/21/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/21/19		
AA ID No:	9F14005-01	9F14005-02	9F14005-03	9F14005-04		
Client ID No:	QC11-061319	EW-8-061319	MW-16-061319	MW-15-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	**8.5 J**	**10 J**	7.7	50
Benzene	<0.40	**2.1**	<0.40	**1.0**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/21/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/21/19		
AA ID No:	9F14005-01	9F14005-02	9F14005-03	9F14005-04		
Client ID No:	QC11-061319	EW-8-061319	MW-16-061319	MW-15-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	**2.6**	<0.20	**3.2**	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**32**	**3.4**	**26**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	**7.7**	<0.30	**4.9**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874360
Project No:	130072-025	**Date Received:**	06/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/28/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/21/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/21/19		
AA ID No:	9F14005-01	9F14005-02	9F14005-03	9F14005-04		
Client ID No:	QC11-061319	EW-8-061319	MW-16-061319	MW-15-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**0.49 J**	<0.30	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	**1.5**	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	95%	95%	97%	99%		80-129
Dibromofluoromethane	104%	100%	102%	103%		68-137
Toluene-d8	93%	95%	96%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/25/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/25/19	06/21/19		
AA ID No:	9F14005-05	9F14005-06	9F14005-07	9F14005-08		
Client ID No:	MW-15B-061319	MW-18-061319	MW-61A-061319	QC14-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	**11 J**	**13 J**	**9.2 J**	7.7	50
Benzene	**0.91**	<0.40	**2.8**	**2.8**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	**0.59**	**0.58**	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/25/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/25/19	06/21/19		
AA ID No:	9F14005-05	9F14005-06	9F14005-07	9F14005-08		
Client ID No:	MW-15B-061319	MW-18-061319	MW-61A-061319	QC14-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	**3.2**	**3.2**	0.20	0.50
1,2-Dichloroethane (EDC)	**2.3**	<0.20	**2.7**	**2.8**	0.20	0.50
cis-1,2-Dichloroethylene	**35**	**3.3**	**40**	**42**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	**0.98**	**0.89**	0.40	0.50
trans-1,2-Dichloroethylene	**2.9**	<0.30	**2.1**	**2.1**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/25/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/25/19	06/21/19		
AA ID No:	9F14005-05	9F14005-06	9F14005-07	9F14005-08		
Client ID No:	MW-15B-061319	MW-18-061319	MW-61A-061319	QC14-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.48 J**	<0.30	<0.30	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	**0.84**	<0.40	**0.74**	**0.71**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	100%	95%	99%	99%		80-129
Dibromofluoromethane	102%	102%	106%	107%		68-137
Toluene-d8	98%	95%	95%	97%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14005-09	9F14005-10	9F14005-11	9F14005-12		
Client ID No:	MW-61B-061319	QC12-061319	MW-04-061319	QC13-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	<7.7	<7.7	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14005-09	9F14005-10	9F14005-11	9F14005-12		
Client ID No:	MW-61B-061319	QC12-061319	MW-04-061319	QC13-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	**1.2**	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**5.2**	<0.20	**1.8**	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**7.8**	<0.30	**10**	<0.30	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	**0.45 J**	<0.30	**0.90**	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.20	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19
Units: ug/L

Date Sampled:	06/13/19	06/13/19	06/13/19	06/13/19		
Date Prepared:	06/21/19	06/21/19	06/21/19	06/21/19		
Date Analyzed:	06/21/19	06/21/19	06/21/19	06/21/19		
AA ID No:	9F14005-09	9F14005-10	9F14005-11	9F14005-12		
Client ID No:	MW-61B-061319	QC12-061319	MW-04-061319	QC13-061319		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	<0.30	**1.0**	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	98%	98%	98%	99%		80-129
Dibromofluoromethane	105%	101%	105%	104%		68-137
Toluene-d8	97%	96%	96%	98%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F2002 - EPA 3510C_MS										
Blank (B9F2002-BLK1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F2002-BS1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**9.80**	1.0	ug/L	10		98.0	75-125			
LCS Dup (B9F2002-BSD1)				Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**10.4**	1.0	ug/L	10		104	75-125	5.46	30	
Matrix Spike (B9F2002-MS1)		**Source: 9F14005-11**		Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**12.6**	1.0	ug/L	10	3.25	93.2	70-130			
Matrix Spike Dup (B9F2002-MSD1)		**Source: 9F14005-11**		Prepared: 06/20/19	Analyzed: 06/21/19					
1,4-Dioxane	**13.9**	1.0	ug/L	10	3.25	106	70-130	9.91	30	
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1)				Prepared & Analyzed: 06/21/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Blank (B9F2101-BLK1) Continued				Prepared & Analyzed: 06/21/19						
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.9*		*ug/L*	*50*		*97.9*	*80-129*			
Surrogate: Dibromofluoromethane	*49.4*		*ug/L*	*50*		*98.8*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			
LCS (B9F2101-BS1)				Prepared & Analyzed: 06/21/19						
Acetone	**16.7**	7.7	ug/L	20		83.3	27-123			J
Benzene	**18.6**	0.40	ug/L	20		93.2	60-134			
Bromobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
Bromochloromethane	**21.5**	0.20	ug/L	20		107	78-121			
Bromodichloromethane	**22.5**	0.40	ug/L	20		112	74-135			
Bromoform	**20.0**	0.40	ug/L	20		99.8	68-132			
Bromomethane	**18.2**	0.30	ug/L	20		90.8	58-142			
2-Butanone (MEK)	**18.7**	8.6	ug/L	20		93.4	62-138			J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**21.5**	0.20	ug/L	20		107	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
sec-Butylbenzene	**20.9**	0.20	ug/L	20		105	84-142			
Carbon Disulfide	**21.2**	0.20	ug/L	20		106	17-177			
Carbon Tetrachloride	**22.3**	0.30	ug/L	20		112	66-155			
Chlorobenzene	**20.6**	0.40	ug/L	20		103	70-130			
Chloroethane	**42.8**	0.40	ug/L	20		214	45-166			**
Chloroform	**21.5**	0.30	ug/L	20		108	71-131			
Chloromethane	**21.4**	0.40	ug/L	20		107	48-152			
4-Chlorotoluene	**20.9**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.7**	0.20	ug/L	20		103	70-130			
1,2-Dibromo-3-chloropropane	**21.7**	0.40	ug/L	20		108	53-145			
Dibromochloromethane	**21.6**	0.40	ug/L	20		108	72-133			
1,2-Dibromoethane (EDB)	**21.7**	0.40	ug/L	20		109	79-120			
Dibromomethane	**20.9**	0.40	ug/L	20		104	68-124			
1,3-Dichlorobenzene	**19.7**	0.40	ug/L	20		98.6	70-130			
1,4-Dichlorobenzene	**19.6**	0.30	ug/L	20		97.8	70-130			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		102	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20		101	16-148			
1,1-Dichloroethane	**21.4**	0.20	ug/L	20		107	67-120			
1,2-Dichloroethane (EDC)	**24.0**	0.20	ug/L	20		120	57-156			
cis-1,2-Dichloroethylene	**21.0**	0.30	ug/L	20		105	70-124			
1,1-Dichloroethylene	**21.3**	0.40	ug/L	20		106	50-149			
trans-1,2-Dichloroethylene	**21.5**	0.30	ug/L	20		108	66-126			
1,3-Dichloropropane	**22.3**	0.40	ug/L	20		111	79-113			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20		110	53-139			
2,2-Dichloropropane	**20.2**	0.30	ug/L	20		101	44-162			
trans-1,3-Dichloropropylene	**22.2**	0.30	ug/L	20		111	76-121			
1,1-Dichloropropylene	**21.9**	0.30	ug/L	20		110	84-124			
cis-1,3-Dichloropropylene	**22.4**	0.40	ug/L	20		112	67-127			
Ethylbenzene	**21.9**	0.30	ug/L	20		109	86-124			
Hexachlorobutadiene	**19.4**	0.50	ug/L	20		96.9	76-140			
2-Hexanone (MBK)	**21.0**	8.4	ug/L	20		105	52-123			
Isopropylbenzene	**21.1**	0.30	ug/L	20		105	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
LCS (B9F2101-BS1) Continued				Prepared & Analyzed: 06/21/19						
4-Isopropyltoluene	**20.5**	0.30	ug/L	20		102	70-130			
Methyl-tert-Butyl Ether (MTBE)	**43.4**	1.4	ug/L	40		108	58-144			
Methylene Chloride	**20.7**	4.4	ug/L	20		103	50-135			
4-Methyl-2-pentanone (MIBK)	**19.7**	9.8	ug/L	20		98.7	49-139			J
Naphthalene	**20.8**	0.40	ug/L	20		104	74-128			
n-Propylbenzene	**21.3**	0.20	ug/L	20		106	70-130			
Styrene	**21.5**	0.20	ug/L	20		108	84-123			
1,1,1,2-Tetrachloroethane	**20.7**	0.30	ug/L	20		103	70-130			
1,1,2,2-Tetrachloroethane	**23.1**	0.40	ug/L	20		115	58-126			
Tetrachloroethylene (PCE)	**20.4**	0.50	ug/L	20		102	70-130			
Toluene	**20.8**	0.20	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.0**	0.30	ug/L	20		100	84-128			
1,2,3-Trichlorobenzene	**19.5**	0.50	ug/L	20		97.4	77-134			
1,1,2-Trichloroethane	**22.0**	0.30	ug/L	20		110	75-115			
1,1,1-Trichloroethane	**23.0**	0.30	ug/L	20		115	66-158			
Trichloroethylene (TCE)	**22.0**	0.30	ug/L	20		110	82-128			
Trichlorofluoromethane (R11)	**18.3**	0.40	ug/L	20		91.4	65-137			
1,2,3-Trichloropropane	**22.9**	0.20	ug/L	20		114	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.2**	0.30	ug/L	20		75.8	62-130			
1,2,4-Trimethylbenzene	**20.9**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**20.7**	0.20	ug/L	20		104	70-130			
Vinyl chloride	**22.8**	0.40	ug/L	20		114	51-151			
o-Xylene	**21.5**	0.30	ug/L	20		108	70-130			
m,p-Xylenes	**43.2**	0.60	ug/L	40		108	70-130			
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.5*	*80-129*			
Surrogate: Dibromofluoromethane	*48.6*		*ug/L*	*50*		*97.3*	*68-137*			
Surrogate: Toluene-d8	*48.5*		*ug/L*	*50*		*96.9*	*83-134*			
Matrix Spike (B9F2101-MS1)		**Source: 9F14005-11**		Prepared & Analyzed: 06/21/19						
Acetone	**22.4**	7.7	ug/L	20	<50	112	11-169			J
Benzene	**18.3**	0.40	ug/L	20	<0.50	91.5	56-135			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued **Source: 9F14005-11** Prepared & Analyzed: 06/21/19										
Bromobenzene	**19.3**	0.40	ug/L	20	<0.50	96.3	70-130			
Bromochloromethane	**21.0**	0.20	ug/L	20	<0.50	105	74-125			
Bromodichloromethane	**22.7**	0.40	ug/L	20	<0.50	113	68-144			
Bromoform	**19.1**	0.40	ug/L	20	<0.50	95.3	68-151			
Bromomethane	**15.4**	0.30	ug/L	20	<0.50	76.8	54-142			
2-Butanone (MEK)	**20.6**	8.6	ug/L	20	<20	103	62-145			
tert-Butylbenzene	**19.4**	0.20	ug/L	20	<0.50	96.8	70-130			
n-Butylbenzene	**20.3**	0.20	ug/L	20	<0.50	101	70-130			
sec-Butylbenzene	**19.5**	0.20	ug/L	20	<0.50	97.7	84-145			
Carbon Disulfide	**20.5**	0.20	ug/L	20	<0.50	103	28-151			
Carbon Tetrachloride	**22.0**	0.30	ug/L	20	<0.50	110	58-164			
Chlorobenzene	**19.5**	0.40	ug/L	20	<0.50	97.3	70-130			
Chloroethane	**42.6**	0.40	ug/L	20	<0.50	213	42-164			**
Chloroform	**21.3**	0.30	ug/L	20	<0.50	106	65-138			
Chloromethane	**20.8**	0.40	ug/L	20	<0.50	104	50-152			
4-Chlorotoluene	**19.8**	0.20	ug/L	20	<0.50	98.9	70-130			
2-Chlorotoluene	**19.6**	0.20	ug/L	20	<0.50	98.2	70-130			
1,2-Dibromo-3-chloropropane	**22.2**	0.40	ug/L	20	<1.0	111	53-161			
Dibromochloromethane	**20.8**	0.40	ug/L	20	<0.50	104	70-130			
1,2-Dibromoethane (EDB)	**21.1**	0.40	ug/L	20	<0.50	106	76-130			
Dibromomethane	**21.7**	0.40	ug/L	20	<0.50	108	62-135			
1,3-Dichlorobenzene	**19.0**	0.40	ug/L	20	<0.50	95.2	70-130			
1,4-Dichlorobenzene	**18.8**	0.30	ug/L	20	<0.50	94.1	70-130			
1,2-Dichlorobenzene	**19.8**	0.30	ug/L	20	<0.50	98.8	70-130			
Dichlorodifluoromethane (R12)	**20.2**	0.40	ug/L	20	<0.50	101	17-153			
1,1-Dichloroethane	**22.6**	0.20	ug/L	20	1.21	107	55-131			
1,2-Dichloroethane (EDC)	**25.4**	0.20	ug/L	20	1.75	118	52-168			
cis-1,2-Dichloroethylene	**30.6**	0.30	ug/L	20	10.1	103	70-130			
1,1-Dichloroethylene	**20.3**	0.40	ug/L	20	<0.50	102	51-140			
trans-1,2-Dichloroethylene	**21.3**	0.30	ug/L	20	0.900	102	59-127			
1,3-Dichloropropane	**21.3**	0.40	ug/L	20	<0.50	107	80-121			
1,2-Dichloropropane	**21.9**	0.30	ug/L	20	<0.50	109	52-142			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued Source: 9F14005-11 Prepared & Analyzed: 06/21/19										
2,2-Dichloropropane	**18.5**	0.30	ug/L	20	<0.50	92.7	36-168			
trans-1,3-Dichloropropylene	**21.5**	0.30	ug/L	20	<0.50	107	78-130			
1,1-Dichloropropylene	**21.5**	0.30	ug/L	20	<0.50	107	76-132			
cis-1,3-Dichloropropylene	**21.8**	0.40	ug/L	20	<0.50	109	66-130			
Ethylbenzene	**20.4**	0.30	ug/L	20	<0.50	102	86-128			
Hexachlorobutadiene	**18.4**	0.50	ug/L	20	<1.0	91.8	70-130			
2-Hexanone (MBK)	**22.4**	8.4	ug/L	20	<20	112	52-141			
Isopropylbenzene	**19.6**	0.30	ug/L	20	<0.50	97.8	70-130			
4-Isopropyltoluene	**19.8**	0.30	ug/L	20	<1.0	98.9	83-149			
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40	<2.0	112	56-150			
Methylene Chloride	**24.7**	4.4	ug/L	20	<5.0	123	70-130			
4-Methyl-2-pentanone (MIBK)	**21.0**	9.8	ug/L	20	<20	105	60-148			
Naphthalene	**20.6**	0.40	ug/L	20	<2.0	103	70-130			
n-Propylbenzene	**19.9**	0.20	ug/L	20	<0.50	99.4	70-130			
Styrene	**20.3**	0.20	ug/L	20	<0.50	102	65-141			
1,1,1,2-Tetrachloroethane	**19.6**	0.30	ug/L	20	<0.50	97.8	70-130			
1,1,2,2-Tetrachloroethane	**23.4**	0.40	ug/L	20	<0.50	117	62-134			
Tetrachloroethylene (PCE)	**18.9**	0.50	ug/L	20	<0.50	94.6	70-130			
Toluene	**19.5**	0.20	ug/L	20	<0.50	97.4	81-123			
1,2,4-Trichlorobenzene	**19.1**	0.30	ug/L	20	<0.50	95.4	80-137			
1,2,3-Trichlorobenzene	**19.0**	0.50	ug/L	20	<0.50	95.0	73-144			
1,1,2-Trichloroethane	**21.4**	0.30	ug/L	20	<0.50	107	76-122			
1,1,1-Trichloroethane	**22.2**	0.30	ug/L	20	<0.50	111	62-164			
Trichloroethylene (TCE)	**22.6**	0.30	ug/L	20	1.05	108	72-136			
Trichlorofluoromethane (R11)	**18.7**	0.40	ug/L	20	<0.50	93.4	59-144			
1,2,3-Trichloropropane	**23.2**	0.20	ug/L	20	<0.50	116	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.5**	0.30	ug/L	20	<0.50	77.6	62-126			
1,2,4-Trimethylbenzene	**19.9**	0.30	ug/L	20	<0.50	99.5	89-134			
1,3,5-Trimethylbenzene	**19.8**	0.20	ug/L	20	<0.50	98.8	70-130			
Vinyl chloride	**22.0**	0.40	ug/L	20	<0.50	110	54-150			
o-Xylene	**20.6**	0.30	ug/L	20	<0.50	103	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike (B9F2101-MS1) Continued	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
m,p-Xylenes	**40.8**	0.60	ug/L	40	<1.0	102	70-130			
Surrogate: 4-Bromofluorobenzene	*47.5*		*ug/L*	*50*		*95.1*	*80-129*			
Surrogate: Dibromofluoromethane	*49.1*		*ug/L*	*50*		*98.2*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.9*	*83-134*			
Matrix Spike Dup (B9F2101-MSD1)	**Source: 9F14005-11**			Prepared & Analyzed: 06/21/19						
Acetone	**24.3**	7.7	ug/L	20	<50	122	11-169	8.30	30	J
Benzene	**18.6**	0.40	ug/L	20	<0.50	92.8	56-135	1.46	30	
Bromobenzene	**19.5**	0.40	ug/L	20	<0.50	97.6	70-130	1.39	30	
Bromochloromethane	**20.6**	0.20	ug/L	20	<0.50	103	74-125	1.83	30	
Bromodichloromethane	**22.2**	0.40	ug/L	20	<0.50	111	68-144	2.19	30	
Bromoform	**19.7**	0.40	ug/L	20	<0.50	98.6	68-151	3.35	30	
Bromomethane	**25.2**	0.30	ug/L	20	<0.50	126	54-142	48.3	30	AA-C1
2-Butanone (MEK)	**20.3**	8.6	ug/L	20	<20	102	62-145	1.22	30	
tert-Butylbenzene	**19.8**	0.20	ug/L	20	<0.50	99.1	70-130	2.30	30	
n-Butylbenzene	**20.6**	0.20	ug/L	20	<0.50	103	70-130	1.71	30	
sec-Butylbenzene	**19.8**	0.20	ug/L	20	<0.50	99.0	84-145	1.37	30	
Carbon Disulfide	**20.2**	0.20	ug/L	20	<0.50	101	28-151	1.62	30	
Carbon Tetrachloride	**21.9**	0.30	ug/L	20	<0.50	110	58-164	0.455	30	
Chlorobenzene	**20.1**	0.40	ug/L	20	<0.50	101	70-130	3.43	30	
Chloroethane	**46.5**	0.40	ug/L	20	<0.50	232	42-164	8.71	30	**
Chloroform	**20.6**	0.30	ug/L	20	<0.50	103	65-138	3.39	30	
Chloromethane	**20.4**	0.40	ug/L	20	<0.50	102	50-152	1.70	30	
4-Chlorotoluene	**20.1**	0.20	ug/L	20	<0.50	101	70-130	1.75	30	
2-Chlorotoluene	**19.8**	0.20	ug/L	20	<0.50	99.2	70-130	1.06	30	
1,2-Dibromo-3-chloropropane	**22.6**	0.40	ug/L	20	<1.0	113	53-161	1.61	30	
Dibromochloromethane	**21.5**	0.40	ug/L	20	<0.50	108	70-130	3.26	30	
1,2-Dibromoethane (EDB)	**22.0**	0.40	ug/L	20	<0.50	110	76-130	3.90	30	
Dibromomethane	**21.1**	0.40	ug/L	20	<0.50	106	62-135	2.43	30	
1,3-Dichlorobenzene	**19.1**	0.40	ug/L	20	<0.50	95.4	70-130	0.262	30	
1,4-Dichlorobenzene	**19.0**	0.30	ug/L	20	<0.50	95.0	70-130	0.899	30	
1,2-Dichlorobenzene	**20.3**	0.30	ug/L	20	<0.50	102	70-130	2.75	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued		**Source: 9F14005-11**	Prepared & Analyzed: 06/21/19							
Dichlorodifluoromethane (R12)	**18.6**	0.40	ug/L	20	<0.50	93.0	17-153	8.30	30	
1,1-Dichloroethane	**22.5**	0.20	ug/L	20	1.21	107	55-131	0.133	30	
1,2-Dichloroethane (EDC)	**23.8**	0.20	ug/L	20	1.75	110	52-168	6.46	30	
cis-1,2-Dichloroethylene	**30.3**	0.30	ug/L	20	10.1	101	70-130	1.05	30	
1,1-Dichloroethylene	**20.5**	0.40	ug/L	20	<0.50	102	51-140	0.735	30	
trans-1,2-Dichloroethylene	**21.2**	0.30	ug/L	20	0.900	102	59-127	0.564	30	
1,3-Dichloropropane	**22.2**	0.40	ug/L	20	<0.50	111	80-121	4.18	30	
1,2-Dichloropropane	**21.8**	0.30	ug/L	20	<0.50	109	52-142	0.412	30	
2,2-Dichloropropane	**17.0**	0.30	ug/L	20	<0.50	85.2	36-168	8.49	30	
trans-1,3-Dichloropropylene	**21.8**	0.30	ug/L	20	<0.50	109	78-130	1.48	30	
1,1-Dichloropropylene	**21.4**	0.30	ug/L	20	<0.50	107	76-132	0.233	30	
cis-1,3-Dichloropropylene	**22.0**	0.40	ug/L	20	<0.50	110	66-130	0.960	30	
Ethylbenzene	**20.8**	0.30	ug/L	20	<0.50	104	86-128	2.04	30	
Hexachlorobutadiene	**19.3**	0.50	ug/L	20	<1.0	96.5	70-130	4.94	30	
2-Hexanone (MBK)	**23.3**	8.4	ug/L	20	<20	116	52-141	3.99	30	
Isopropylbenzene	**20.3**	0.30	ug/L	20	<0.50	102	70-130	3.76	30	
4-Isopropyltoluene	**19.8**	0.30	ug/L	20	<1.0	98.9	83-149	0.00	30	
Methyl-tert-Butyl Ether (MTBE)	**44.8**	1.4	ug/L	40	<2.0	112	56-150	0.0223	30	
Methylene Chloride	**24.0**	4.4	ug/L	20	<5.0	120	70-130	2.79	30	
4-Methyl-2-pentanone (MIBK)	**21.8**	9.8	ug/L	20	<20	109	60-148	3.79	30	
Naphthalene	**21.3**	0.40	ug/L	20	<2.0	107	70-130	3.29	30	
n-Propylbenzene	**20.3**	0.20	ug/L	20	<0.50	101	70-130	1.89	30	
Styrene	**20.7**	0.20	ug/L	20	<0.50	104	65-141	2.14	30	
1,1,1,2-Tetrachloroethane	**20.2**	0.30	ug/L	20	<0.50	101	70-130	3.02	30	
1,1,2,2-Tetrachloroethane	**24.0**	0.40	ug/L	20	<0.50	120	62-134	2.70	30	
Tetrachloroethylene (PCE)	**19.7**	0.50	ug/L	20	<0.50	98.6	70-130	4.19	30	
Toluene	**20.0**	0.20	ug/L	20	<0.50	100	81-123	2.68	30	
1,2,4-Trichlorobenzene	**19.7**	0.30	ug/L	20	<0.50	98.5	80-137	3.25	30	
1,2,3-Trichlorobenzene	**19.4**	0.50	ug/L	20	<0.50	97.2	73-144	2.34	30	
1,1,2-Trichloroethane	**22.2**	0.30	ug/L	20	<0.50	111	76-122	3.71	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20	<0.50	107	62-164	3.62	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2101 - EPA 5030B										
Matrix Spike Dup (B9F2101-MSD1) Continued			**Source: 9F14005-11**		Prepared & Analyzed: 06/21/19					
Trichloroethylene (TCE)	**22.3**	0.30	ug/L	20	1.05	106	72-136	1.34	30	
Trichlorofluoromethane (R11)	**17.7**	0.40	ug/L	20	<0.50	88.6	59-144	5.27	30	
1,2,3-Trichloropropane	**23.9**	0.20	ug/L	20	<0.50	119	69-135	2.84	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**14.7**	0.30	ug/L	20	<0.50	73.6	62-126	5.29	30	
1,2,4-Trimethylbenzene	**20.1**	0.30	ug/L	20	<0.50	100	89-134	1.00	30	
1,3,5-Trimethylbenzene	**20.0**	0.20	ug/L	20	<0.50	99.8	70-130	0.956	30	
Vinyl chloride	**22.2**	0.40	ug/L	20	<0.50	111	54-150	0.906	30	
o-Xylene	**21.0**	0.30	ug/L	20	<0.50	105	70-130	2.12	30	
m,p-Xylenes	**41.5**	0.60	ug/L	40	<1.0	104	70-130	1.60	30	
Surrogate: 4-Bromofluorobenzene	*47.3*		*ug/L*	*50*		*94.6*	*80-129*			
Surrogate: Dibromofluoromethane	*49.0*		*ug/L*	*50*		*98.1*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1)					Prepared & Analyzed: 06/24/19					
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1) Continued				Prepared & Analyzed: 06/24/19						
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1) Continued				Prepared & Analyzed: 06/24/19						
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*47.1*		*ug/L*	*50*		*94.3*	*80-129*			
Surrogate: Dibromofluoromethane	*50.7*		*ug/L*	*50*		*101*	*68-137*			
Surrogate: Toluene-d8	*47.6*		*ug/L*	*50*		*95.2*	*83-134*			
LCS (B9F2416-BS1)				Prepared & Analyzed: 06/24/19						
Acetone	**15.7**	7.7	ug/L	20		78.6	27-123			J
Benzene	**17.8**	0.40	ug/L	20		88.8	60-134			
Bromobenzene	**20.4**	0.40	ug/L	20		102	70-130			
Bromochloromethane	**21.0**	0.20	ug/L	20		105	78-121			
Bromodichloromethane	**22.4**	0.40	ug/L	20		112	74-135			
Bromoform	**21.3**	0.40	ug/L	20		107	68-132			
Bromomethane	**17.1**	0.30	ug/L	20		85.4	58-142			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
2-Butanone (MEK)	**19.6**	8.6	ug/L	20		98.0	62-138			J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		103	70-130			
n-Butylbenzene	**21.2**	0.20	ug/L	20		106	70-130			
sec-Butylbenzene	**20.5**	0.20	ug/L	20		103	84-142			
Carbon Disulfide	**20.7**	0.20	ug/L	20		104	17-177			
Carbon Tetrachloride	**22.5**	0.30	ug/L	20		112	66-155			
Chlorobenzene	**20.7**	0.40	ug/L	20		103	70-130			
Chloroethane	**41.1**	0.40	ug/L	20		205	45-166			**
Chloroform	**20.8**	0.30	ug/L	20		104	71-131			
Chloromethane	**20.6**	0.40	ug/L	20		103	48-152			
4-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130			
1,2-Dibromo-3-chloropropane	**23.2**	0.40	ug/L	20		116	53-145			
Dibromochloromethane	**22.4**	0.40	ug/L	20		112	72-133			
1,2-Dibromoethane (EDB)	**22.6**	0.40	ug/L	20		113	79-120			
Dibromomethane	**20.8**	0.40	ug/L	20		104	68-124			
1,3-Dichlorobenzene	**20.4**	0.40	ug/L	20		102	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		99.0	70-130			
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		105	70-130			
Dichlorodifluoromethane (R12)	**17.7**	0.40	ug/L	20		88.6	16-148			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		106	67-120			
1,2-Dichloroethane (EDC)	**23.2**	0.20	ug/L	20		116	57-156			
cis-1,2-Dichloroethylene	**20.6**	0.30	ug/L	20		103	70-124			
1,1-Dichloroethylene	**20.4**	0.40	ug/L	20		102	50-149			
trans-1,2-Dichloroethylene	**20.9**	0.30	ug/L	20		104	66-126			
1,3-Dichloropropane	**22.0**	0.40	ug/L	20		110	79-113			
1,2-Dichloropropane	**21.5**	0.30	ug/L	20		108	53-139			
2,2-Dichloropropane	**20.0**	0.30	ug/L	20		100	44-162			
trans-1,3-Dichloropropylene	**22.6**	0.30	ug/L	20		113	76-121			
1,1-Dichloropropylene	**21.6**	0.30	ug/L	20		108	84-124			
cis-1,3-Dichloropropylene	**21.9**	0.40	ug/L	20		109	67-127			
Ethylbenzene	**21.4**	0.30	ug/L	20		107	86-124			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
Hexachlorobutadiene	**19.9**	0.50	ug/L	20		99.4	76-140			
2-Hexanone (MBK)	**23.4**	8.4	ug/L	20		117	52-123			
Isopropylbenzene	**21.1**	0.30	ug/L	20		106	70-130			
4-Isopropyltoluene	**20.7**	0.30	ug/L	20		104	70-130			
Methyl-tert-Butyl Ether (MTBE)	**44.0**	1.4	ug/L	40		110	58-144			
Methylene Chloride	**28.6**	4.4	ug/L	20		143	50-135			**
4-Methyl-2-pentanone (MIBK)	**21.4**	9.8	ug/L	20		107	49-139			
Naphthalene	**22.4**	0.40	ug/L	20		112	74-128			
n-Propylbenzene	**21.1**	0.20	ug/L	20		106	70-130			
Styrene	**21.6**	0.20	ug/L	20		108	84-123			
1,1,1,2-Tetrachloroethane	**21.2**	0.30	ug/L	20		106	70-130			
1,1,2,2-Tetrachloroethane	**24.1**	0.40	ug/L	20		121	58-126			
Tetrachloroethylene (PCE)	**20.6**	0.50	ug/L	20		103	70-130			
Toluene	**20.8**	0.20	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.3**	0.30	ug/L	20		101	84-128			
1,2,3-Trichlorobenzene	**20.0**	0.50	ug/L	20		100	77-134			
1,1,2-Trichloroethane	**22.5**	0.30	ug/L	20		113	75-115			
1,1,1-Trichloroethane	**22.3**	0.30	ug/L	20		111	66-158			
Trichloroethylene (TCE)	**21.5**	0.30	ug/L	20		108	82-128			
Trichlorofluoromethane (R11)	**18.5**	0.40	ug/L	20		92.3	65-137			
1,2,3-Trichloropropane	**23.6**	0.20	ug/L	20		118	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.7**	0.30	ug/L	20		78.6	62-130			
1,2,4-Trimethylbenzene	**20.9**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**21.0**	0.20	ug/L	20		105	70-130			
Vinyl chloride	**21.0**	0.40	ug/L	20		105	51-151			
o-Xylene	**21.8**	0.30	ug/L	20		109	70-130			
m,p-Xylenes	**42.2**	0.60	ug/L	40		105	70-130			
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.2*	*80-129*			
Surrogate: Dibromofluoromethane	*48.7*		*ug/L*	*50*		*97.4*	*68-137*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.1*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1)				Prepared: 06/24/19 Analyzed: 06/25/19						
Acetone	**14.7**	7.7	ug/L	20		73.5	27-123	6.77	30	J
Benzene	**16.3**	0.40	ug/L	20		81.5	60-134	8.57	30	
Bromobenzene	**18.1**	0.40	ug/L	20		90.4	70-130	12.3	30	
Bromochloromethane	**19.5**	0.20	ug/L	20		97.3	78-121	7.42	30	
Bromodichloromethane	**20.6**	0.40	ug/L	20		103	74-135	8.52	30	
Bromoform	**16.1**	0.40	ug/L	20		80.6	68-132	27.7	30	
Bromomethane	**18.3**	0.30	ug/L	20		91.4	58-142	6.73	30	
2-Butanone (MEK)	**17.8**	8.6	ug/L	20		88.8	62-138	9.91	30	J
tert-Butylbenzene	**18.3**	0.20	ug/L	20		91.7	70-130	11.2	30	
n-Butylbenzene	**19.7**	0.20	ug/L	20		98.4	70-130	7.63	30	
sec-Butylbenzene	**18.9**	0.20	ug/L	20		94.5	84-142	8.27	30	
Carbon Disulfide	**21.6**	0.20	ug/L	20		108	17-177	4.39	30	
Carbon Tetrachloride	**19.7**	0.30	ug/L	20		98.7	66-155	12.9	30	
Chlorobenzene	**16.6**	0.40	ug/L	20		82.8	70-130	22.1	30	
Chloroethane	**46.5**	0.40	ug/L	20		232	45-166	12.3	30	**
Chloroform	**19.3**	0.30	ug/L	20		96.5	71-131	7.29	30	
Chloromethane	**22.0**	0.40	ug/L	20		110	48-152	6.67	30	
4-Chlorotoluene	**19.0**	0.20	ug/L	20		95.2	70-130	9.02	30	
2-Chlorotoluene	**18.8**	0.20	ug/L	20		94.2	70-130	10.0	30	
1,2-Dibromo-3-chloropropane	**20.0**	0.40	ug/L	20		100	53-145	14.7	30	
Dibromochloromethane	**17.4**	0.40	ug/L	20		87.0	72-133	25.0	30	
1,2-Dibromoethane (EDB)	**17.5**	0.40	ug/L	20		87.3	79-120	25.7	30	
Dibromomethane	**18.8**	0.40	ug/L	20		93.8	68-124	10.1	30	
1,3-Dichlorobenzene	**18.2**	0.40	ug/L	20		90.8	70-130	11.4	30	
1,4-Dichlorobenzene	**18.1**	0.30	ug/L	20		90.5	70-130	8.97	30	
1,2-Dichlorobenzene	**18.7**	0.30	ug/L	20		93.6	70-130	11.1	30	
Dichlorodifluoromethane (R12)	**19.2**	0.40	ug/L	20		95.8	16-148	7.76	30	
1,1-Dichloroethane	**19.1**	0.20	ug/L	20		95.4	67-120	10.9	30	
1,2-Dichloroethane (EDC)	**21.4**	0.20	ug/L	20		107	57-156	8.34	30	
cis-1,2-Dichloroethylene	**18.4**	0.30	ug/L	20		92.0	70-124	11.2	30	
1,1-Dichloroethylene	**19.9**	0.40	ug/L	20		99.6	50-149	2.38	30	
trans-1,2-Dichloroethylene	**19.0**	0.30	ug/L	20		95.0	66-126	9.47	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
1,3-Dichloropropane	**17.7**	0.40	ug/L	20		88.3	79-113	21.8	30	
1,2-Dichloropropane	**19.6**	0.30	ug/L	20		98.2	53-139	8.99	30	
2,2-Dichloropropane	**15.5**	0.30	ug/L	20		77.4	44-162	25.6	30	
trans-1,3-Dichloropropylene	**17.5**	0.30	ug/L	20		87.6	76-121	25.3	30	
1,1-Dichloropropylene	**19.4**	0.30	ug/L	20		97.2	84-124	10.3	30	
cis-1,3-Dichloropropylene	**19.1**	0.40	ug/L	20		95.4	67-127	13.8	30	
Ethylbenzene	**17.5**	0.30	ug/L	20		87.3	86-124	20.0	30	
Hexachlorobutadiene	**18.4**	0.50	ug/L	20		92.1	76-140	7.57	30	
2-Hexanone (MBK)	**17.8**	8.4	ug/L	20		89.2	52-123	27.2	30	J
Isopropylbenzene	**18.8**	0.30	ug/L	20		94.2	70-130	11.4	30	
4-Isopropyltoluene	**18.8**	0.30	ug/L	20		94.2	70-130	9.61	30	
Methyl-tert-Butyl Ether (MTBE)	**38.1**	1.4	ug/L	40		95.3	58-144	14.3	30	
Methylene Chloride	**30.3**	4.4	ug/L	20		152	50-135	5.63	30	**
4-Methyl-2-pentanone (MIBK)	**16.7**	9.8	ug/L	20		83.4	49-139	24.7	30	J
Naphthalene	**19.6**	0.40	ug/L	20		97.8	74-128	13.4	30	
n-Propylbenzene	**18.9**	0.20	ug/L	20		94.3	70-130	11.4	30	
Styrene	**17.0**	0.20	ug/L	20		85.2	84-123	23.6	30	
1,1,1,2-Tetrachloroethane	**16.2**	0.30	ug/L	20		81.2	70-130	26.3	30	
1,1,2,2-Tetrachloroethane	**19.3**	0.40	ug/L	20		96.4	58-126	22.4	30	
Tetrachloroethylene (PCE)	**15.9**	0.50	ug/L	20		79.3	70-130	26.0	30	
Toluene	**16.9**	0.20	ug/L	20		84.5	83-118	20.5	30	
1,2,4-Trichlorobenzene	**18.4**	0.30	ug/L	20		92.2	84-128	9.50	30	
1,2,3-Trichlorobenzene	**18.3**	0.50	ug/L	20		91.4	77-134	9.03	30	
1,1,2-Trichloroethane	**17.9**	0.30	ug/L	20		89.6	75-115	22.7	30	
1,1,1-Trichloroethane	**20.2**	0.30	ug/L	20		101	66-158	9.69	30	
Trichloroethylene (TCE)	**19.8**	0.30	ug/L	20		98.8	82-128	8.53	30	
Trichlorofluoromethane (R11)	**19.8**	0.40	ug/L	20		98.9	65-137	6.90	30	
1,2,3-Trichloropropane	**18.7**	0.20	ug/L	20		93.5	68-123	23.1	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.8**	0.30	ug/L	20		79.2	62-130	0.697	30	
1,2,4-Trimethylbenzene	**18.8**	0.30	ug/L	20		94.1	70-130	10.4	30	
1,3,5-Trimethylbenzene	**19.0**	0.20	ug/L	20		95.2	70-130	9.84	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
Vinyl chloride	**24.1**	0.40	ug/L	20		120	51-151	13.6	30	
o-Xylene	**17.2**	0.30	ug/L	20		85.8	70-130	23.7	30	
m,p-Xylenes	**34.4**	0.60	ug/L	40		86.1	70-130	20.2	30	
Surrogate: 4-Bromofluorobenzene	*48.4*		*ug/L*	*50*		*96.8*	*80-129*			
Surrogate: Dibromofluoromethane	*49.5*		*ug/L*	*50*		*99.0*	*68-137*			
Surrogate: Toluene-d8	*44.3*		*ug/L*	*50*		*88.6*	*83-134*			
Matrix Spike (B9F2416-MS1)				**Source: 9F17012-06** Prepared & Analyzed: 06/24/19						
Acetone	**16.0**	7.7	ug/L	20		80.0	11-169			J
Benzene	**18.3**	0.40	ug/L	20		91.5	56-135			
Bromobenzene	**19.8**	0.40	ug/L	20		99.2	70-130			
Bromochloromethane	**19.6**	0.20	ug/L	20		98.0	74-125			
Bromodichloromethane	**22.6**	0.40	ug/L	20		113	68-144			
Bromoform	**17.9**	0.40	ug/L	20		89.6	68-151			
Bromomethane	**21.8**	0.30	ug/L	20		109	54-142			
2-Butanone (MEK)	**16.9**	8.6	ug/L	20		84.6	62-145			J
tert-Butylbenzene	**20.9**	0.20	ug/L	20		105	70-130			
n-Butylbenzene	**21.9**	0.20	ug/L	20		109	70-130			
sec-Butylbenzene	**21.0**	0.20	ug/L	20		105	84-145			
Carbon Disulfide	**21.1**	0.20	ug/L	20		105	28-151			
Carbon Tetrachloride	**23.0**	0.30	ug/L	20		115	58-164			
Chlorobenzene	**20.3**	0.40	ug/L	20		101	70-130			
Chloroethane	**47.1**	0.40	ug/L	20		235	42-164			**
Chloroform	**22.1**	0.30	ug/L	20		110	65-138			
Chloromethane	**20.5**	0.40	ug/L	20		102	50-152			
4-Chlorotoluene	**21.0**	0.20	ug/L	20		105	70-130			
2-Chlorotoluene	**21.3**	0.20	ug/L	20		107	70-130			
1,2-Dibromo-3-chloropropane	**20.3**	0.40	ug/L	20		102	53-161			
Dibromochloromethane	**20.4**	0.40	ug/L	20		102	70-130			
1,2-Dibromoethane (EDB)	**20.4**	0.40	ug/L	20		102	76-130			
Dibromomethane	**19.8**	0.40	ug/L	20		98.8	62-135			
1,3-Dichlorobenzene	**19.9**	0.40	ug/L	20		99.6	70-130			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike (B9F2416-MS1) Continued Source: 9F17012-06 Prepared & Analyzed: 06/24/19										
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		98.8	70-130			
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20		102	70-130			
Dichlorodifluoromethane (R12)	**19.2**	0.40	ug/L	20		95.9	17-153			
1,1-Dichloroethane	**22.3**	0.20	ug/L	20		112	55-131			
1,2-Dichloroethane (EDC)	**23.7**	0.20	ug/L	20		118	52-168			
cis-1,2-Dichloroethylene	**21.7**	0.30	ug/L	20	1.07	103	70-130			
1,1-Dichloroethylene	**20.2**	0.40	ug/L	20		101	51-140			
trans-1,2-Dichloroethylene	**20.9**	0.30	ug/L	20		105	59-127			
1,3-Dichloropropane	**21.1**	0.40	ug/L	20		106	80-121			
1,2-Dichloropropane	**22.4**	0.30	ug/L	20		112	52-142			
2,2-Dichloropropane	**17.7**	0.30	ug/L	20		88.3	36-168			
trans-1,3-Dichloropropylene	**20.6**	0.30	ug/L	20		103	78-130			
1,1-Dichloropropylene	**22.4**	0.30	ug/L	20		112	76-132			
cis-1,3-Dichloropropylene	**21.0**	0.40	ug/L	20		105	66-130			
Ethylbenzene	**21.6**	0.30	ug/L	20		108	86-128			
Hexachlorobutadiene	**20.6**	0.50	ug/L	20		103	70-130			
2-Hexanone (MBK)	**19.3**	8.4	ug/L	20		96.4	52-141			J
Isopropylbenzene	**21.0**	0.30	ug/L	20		105	70-130			
4-Isopropyltoluene	**21.0**	0.30	ug/L	20		105	83-149			
Methyl-tert-Butyl Ether (MTBE)	**41.0**	1.4	ug/L	40		102	56-150			
Methylene Chloride	**19.2**	4.4	ug/L	20		96.2	70-130			
4-Methyl-2-pentanone (MIBK)	**18.2**	9.8	ug/L	20		91.2	60-148			J
Naphthalene	**18.2**	0.40	ug/L	20		91.2	70-130			
n-Propylbenzene	**21.5**	0.20	ug/L	20		107	70-130			
Styrene	**20.2**	0.20	ug/L	20		101	65-141			
1,1,1,2-Tetrachloroethane	**20.4**	0.30	ug/L	20		102	70-130			
1,1,2,2-Tetrachloroethane	**21.9**	0.40	ug/L	20		109	62-134			
Tetrachloroethylene (PCE)	**20.1**	0.50	ug/L	20		100	70-130			
Toluene	**20.4**	0.20	ug/L	20		102	81-123			
1,2,4-Trichlorobenzene	**19.0**	0.30	ug/L	20		95.2	80-137			
1,2,3-Trichlorobenzene	**18.6**	0.50	ug/L	20		92.8	73-144			
1,1,2-Trichloroethane	**20.7**	0.30	ug/L	20		104	76-122			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike (B9F2416-MS1) Continued	**Source: 9F17012-06**		Prepared & Analyzed: 06/24/19							
1,1,1-Trichloroethane	**23.3**	0.30	ug/L	20		116	62-164			
Trichloroethylene (TCE)	**21.9**	0.30	ug/L	20		110	72-136			
Trichlorofluoromethane (R11)	**19.8**	0.40	ug/L	20		98.9	59-144			
1,2,3-Trichloropropane	**21.0**	0.20	ug/L	20		105	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.5**	0.30	ug/L	20		82.4	62-126			
1,2,4-Trimethylbenzene	**21.0**	0.30	ug/L	20		105	89-134			
1,3,5-Trimethylbenzene	**21.4**	0.20	ug/L	20		107	70-130			
Vinyl chloride	**22.8**	0.40	ug/L	20		114	54-150			
o-Xylene	**21.5**	0.30	ug/L	20		107	70-130			
m,p-Xylenes	**42.2**	0.60	ug/L	40		106	70-130			
Surrogate: 4-Bromofluorobenzene	*47.8*		*ug/L*	*50*		*95.5*	*80-129*			
Surrogate: Dibromofluoromethane	*49.6*		*ug/L*	*50*		*99.1*	*68-137*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.3*	*83-134*			
Matrix Spike Dup (B9F2416-MSD1)	**Source: 9F17012-06**		Prepared: 06/24/19 Analyzed: 06/25/19							
Acetone	**18.4**	7.7	ug/L	20		92.2	11-169	14.2	30	J
Benzene	**17.1**	0.40	ug/L	20		85.4	56-135	6.84	30	
Bromobenzene	**18.4**	0.40	ug/L	20		91.8	70-130	7.80	30	
Bromochloromethane	**20.0**	0.20	ug/L	20		100	74-125	2.17	30	
Bromodichloromethane	**21.6**	0.40	ug/L	20		108	68-144	4.66	30	
Bromoform	**18.8**	0.40	ug/L	20		94.2	68-151	4.90	30	
Bromomethane	**18.0**	0.30	ug/L	20		89.8	54-142	19.3	30	
2-Butanone (MEK)	**21.0**	8.6	ug/L	20		105	62-145	21.6	30	
tert-Butylbenzene	**18.9**	0.20	ug/L	20		94.4	70-130	10.4	30	
n-Butylbenzene	**19.7**	0.20	ug/L	20		98.4	70-130	10.5	30	
sec-Butylbenzene	**19.1**	0.20	ug/L	20		95.6	84-145	9.13	30	
Carbon Disulfide	**23.0**	0.20	ug/L	20		115	28-151	8.68	30	
Carbon Tetrachloride	**21.1**	0.30	ug/L	20		106	58-164	8.44	30	
Chlorobenzene	**18.5**	0.40	ug/L	20		92.4	70-130	9.19	30	
Chloroethane	**24.1**	0.40	ug/L	20		120	42-164	64.7	30	AA-C1
Chloroform	**20.2**	0.30	ug/L	20		101	65-138	8.75	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike Dup (B9F2416-MSD1) Continued	**Source: 9F17012-06**				Prepared: 06/24/19		Analyzed: 06/25/19			
Chloromethane	**22.5**	0.40	ug/L	20		112	50-152	9.31	30	
4-Chlorotoluene	**19.2**	0.20	ug/L	20		95.8	70-130	9.30	30	
2-Chlorotoluene	**18.8**	0.20	ug/L	20		94.0	70-130	12.6	30	
1,2-Dibromo-3-chloropropane	**22.5**	0.40	ug/L	20		113	53-161	10.4	30	
Dibromochloromethane	**20.6**	0.40	ug/L	20		103	70-130	0.877	30	
1,2-Dibromoethane (EDB)	**20.5**	0.40	ug/L	20		103	76-130	0.929	30	
Dibromomethane	**20.0**	0.40	ug/L	20		100	62-135	1.21	30	
1,3-Dichlorobenzene	**18.4**	0.40	ug/L	20		92.2	70-130	7.72	30	
1,4-Dichlorobenzene	**18.5**	0.30	ug/L	20		92.3	70-130	6.85	30	
1,2-Dichlorobenzene	**19.4**	0.30	ug/L	20		97.1	70-130	4.92	30	
Dichlorodifluoromethane (R12)	**19.3**	0.40	ug/L	20		96.6	17-153	0.675	30	
1,1-Dichloroethane	**20.5**	0.20	ug/L	20		102	55-131	8.74	30	
1,2-Dichloroethane (EDC)	**23.0**	0.20	ug/L	20		115	52-168	2.78	30	
cis-1,2-Dichloroethylene	**20.4**	0.30	ug/L	20	1.07	96.7	70-130	6.26	30	
1,1-Dichloroethylene	**20.6**	0.40	ug/L	20		103	51-140	2.30	30	
trans-1,2-Dichloroethylene	**19.3**	0.30	ug/L	20		96.5	59-127	8.10	30	
1,3-Dichloropropane	**21.0**	0.40	ug/L	20		105	80-121	0.665	30	
1,2-Dichloropropane	**20.6**	0.30	ug/L	20		103	52-142	8.14	30	
2,2-Dichloropropane	**17.6**	0.30	ug/L	20		87.8	36-168	0.625	30	
trans-1,3-Dichloropropylene	**20.4**	0.30	ug/L	20		102	78-130	1.32	30	
1,1-Dichloropropylene	**20.6**	0.30	ug/L	20		103	76-132	8.00	30	
cis-1,3-Dichloropropylene	**20.5**	0.40	ug/L	20		102	66-130	2.55	30	
Ethylbenzene	**19.2**	0.30	ug/L	20		96.0	86-128	11.7	30	
Hexachlorobutadiene	**18.0**	0.50	ug/L	20		90.0	70-130	13.5	30	
2-Hexanone (MBK)	**21.3**	8.4	ug/L	20		107	52-141	10.0	30	
Isopropylbenzene	**19.0**	0.30	ug/L	20		95.2	70-130	9.50	30	
4-Isopropyltoluene	**18.9**	0.30	ug/L	20		94.6	83-149	10.7	30	
Methyl-tert-Butyl Ether (MTBE)	**42.4**	1.4	ug/L	40		106	56-150	3.36	30	
Methylene Chloride	**19.6**	4.4	ug/L	20		98.0	70-130	1.91	30	
4-Methyl-2-pentanone (MIBK)	**20.8**	9.8	ug/L	20		104	60-148	13.2	30	
Naphthalene	**21.8**	0.40	ug/L	20		109	70-130	17.8	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike Dup (B9F2416-MSD1) Continued	**Source: 9F17012-06**				Prepared: 06/24/19		Analyzed: 06/25/19			
n-Propylbenzene	**19.2**	0.20	ug/L	20		96.1	70-130	11.1	30	
Styrene	**19.0**	0.20	ug/L	20		94.9	65-141	6.43	30	
1,1,1,2-Tetrachloroethane	**19.4**	0.30	ug/L	20		96.8	70-130	5.13	30	
1,1,2,2-Tetrachloroethane	**23.7**	0.40	ug/L	20		119	62-134	8.25	30	
Tetrachloroethylene (PCE)	**17.7**	0.50	ug/L	20		88.6	70-130	12.6	30	
Toluene	**18.5**	0.20	ug/L	20		92.4	81-123	9.97	30	
1,2,4-Trichlorobenzene	**19.2**	0.30	ug/L	20		95.8	80-137	0.628	30	
1,2,3-Trichlorobenzene	**19.7**	0.50	ug/L	20		98.6	73-144	6.01	30	
1,1,2-Trichloroethane	**20.6**	0.30	ug/L	20		103	76-122	0.242	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20		107	62-164	8.38	30	
Trichloroethylene (TCE)	**20.4**	0.30	ug/L	20		102	72-136	7.03	30	
Trichlorofluoromethane (R11)	**20.3**	0.40	ug/L	20		102	59-144	2.64	30	
1,2,3-Trichloropropane	**23.0**	0.20	ug/L	20		115	69-135	9.27	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20		80.0	62-126	2.89	30	
1,2,4-Trimethylbenzene	**19.0**	0.30	ug/L	20		94.9	89-134	9.87	30	
1,3,5-Trimethylbenzene	**19.1**	0.20	ug/L	20		95.6	70-130	11.2	30	
Vinyl chloride	**21.9**	0.40	ug/L	20		109	54-150	3.94	30	
o-Xylene	**19.4**	0.30	ug/L	20		97.1	70-130	10.1	30	
m,p-Xylenes	**38.5**	0.60	ug/L	40		96.2	70-130	9.37	30	
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.0*	*80-129*			
Surrogate: Dibromofluoromethane	*51.0*		*ug/L*	*50*		*102*	*68-137*			
Surrogate: Toluene-d8	*48.3*		*ug/L*	*50*		*96.6*	*83-134*			
Batch B9F2512 - EPA 5030B										
Blank (B9F2512-BLK1)					Prepared & Analyzed: 06/25/19					
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
Blank (B9F2512-BLK1) Continued				Prepared & Analyzed: 06/25/19						
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
Blank (B9F2512-BLK1) Continued				Prepared & Analyzed: 06/25/19						
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*48.4*		*ug/L*	*50*		*96.7*	*80-129*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
Blank (B9F2512-BLK1) Continued				Prepared & Analyzed: 06/25/19						
Surrogate: Dibromofluoromethane	*50.3*		*ug/L*	*50*		*101*	*68-137*			
Surrogate: Toluene-d8	*47.9*		*ug/L*	*50*		*95.8*	*83-134*			
LCS (B9F2512-BS1)				Prepared & Analyzed: 06/25/19						
Acetone	**15.8**	7.7	ug/L	20		78.8	27-123			J
Benzene	**18.5**	0.40	ug/L	20		92.4	60-134			
Bromobenzene	**20.2**	0.40	ug/L	20		101	70-130			
Bromochloromethane	**21.5**	0.20	ug/L	20		107	78-121			
Bromodichloromethane	**23.2**	0.40	ug/L	20		116	74-135			
Bromoform	**20.2**	0.40	ug/L	20		101	68-132			
Bromomethane	**17.7**	0.30	ug/L	20		88.6	58-142			
2-Butanone (MEK)	**20.1**	8.6	ug/L	20		100	62-138			
tert-Butylbenzene	**20.5**	0.20	ug/L	20		102	70-130			
n-Butylbenzene	**21.3**	0.20	ug/L	20		107	70-130			
sec-Butylbenzene	**20.7**	0.20	ug/L	20		104	84-142			
Carbon Disulfide	**20.8**	0.20	ug/L	20		104	17-177			
Carbon Tetrachloride	**22.6**	0.30	ug/L	20		113	66-155			
Chlorobenzene	**20.2**	0.40	ug/L	20		101	70-130			
Chloroethane	**43.6**	0.40	ug/L	20		218	45-166			**
Chloroform	**21.6**	0.30	ug/L	20		108	71-131			
Chloromethane	**20.8**	0.40	ug/L	20		104	48-152			
4-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.6**	0.20	ug/L	20		103	70-130			
1,2-Dibromo-3-chloropropane	**22.5**	0.40	ug/L	20		112	53-145			
Dibromochloromethane	**21.7**	0.40	ug/L	20		109	72-133			
1,2-Dibromoethane (EDB)	**21.8**	0.40	ug/L	20		109	79-120			
Dibromomethane	**21.0**	0.40	ug/L	20		105	68-124			
1,3-Dichlorobenzene	**19.9**	0.40	ug/L	20		99.4	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		98.8	70-130			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		102	70-130			
Dichlorodifluoromethane (R12)	**18.5**	0.40	ug/L	20		92.5	16-148			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		106	67-120			
1,2-Dichloroethane (EDC)	**17.6**	0.20	ug/L	20		88.0	57-156			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
LCS (B9F2512-BS1) Continued				Prepared & Analyzed: 06/25/19						
cis-1,2-Dichloroethylene	**21.2**	0.30	ug/L	20		106	70-124			
1,1-Dichloroethylene	**20.9**	0.40	ug/L	20		105	50-149			
trans-1,2-Dichloroethylene	**21.3**	0.30	ug/L	20		107	66-126			
1,3-Dichloropropane	**22.1**	0.40	ug/L	20		111	79-113			
1,2-Dichloropropane	**22.2**	0.30	ug/L	20		111	53-139			
2,2-Dichloropropane	**20.1**	0.30	ug/L	20		100	44-162			
trans-1,3-Dichloropropylene	**22.6**	0.30	ug/L	20		113	76-121			
1,1-Dichloropropylene	**22.1**	0.30	ug/L	20		110	84-124			
cis-1,3-Dichloropropylene	**22.9**	0.40	ug/L	20		114	67-127			
Ethylbenzene	**21.4**	0.30	ug/L	20		107	86-124			
Hexachlorobutadiene	**20.4**	0.50	ug/L	20		102	76-140			
2-Hexanone (MBK)	**22.8**	8.4	ug/L	20		114	52-123			
Isopropylbenzene	**20.8**	0.30	ug/L	20		104	70-130			
4-Isopropyltoluene	**20.7**	0.30	ug/L	20		103	70-130			
Methyl-tert-Butyl Ether (MTBE)	**44.2**	1.4	ug/L	40		111	58-144			
Methylene Chloride	**30.0**	4.4	ug/L	20		150	50-135			**
4-Methyl-2-pentanone (MIBK)	**20.3**	9.8	ug/L	20		102	49-139			
Naphthalene	**21.3**	0.40	ug/L	20		106	74-128			
n-Propylbenzene	**21.1**	0.20	ug/L	20		105	70-130			
Styrene	**21.4**	0.20	ug/L	20		107	84-123			
1,1,1,2-Tetrachloroethane	**20.9**	0.30	ug/L	20		104	70-130			
1,1,2,2-Tetrachloroethane	**23.6**	0.40	ug/L	20		118	58-126			
Tetrachloroethylene (PCE)	**20.5**	0.50	ug/L	20		102	70-130			
Toluene	**20.7**	0.20	ug/L	20		103	83-118			
1,2,4-Trichlorobenzene	**20.2**	0.30	ug/L	20		101	84-128			
1,2,3-Trichlorobenzene	**20.2**	0.50	ug/L	20		101	77-134			
1,1,2-Trichloroethane	**22.3**	0.30	ug/L	20		112	75-115			
1,1,1-Trichloroethane	**23.0**	0.30	ug/L	20		115	66-158			
Trichloroethylene (TCE)	**21.6**	0.30	ug/L	20		108	82-128			
Trichlorofluoromethane (R11)	**18.3**	0.40	ug/L	20		91.4	65-137			
1,2,3-Trichloropropane	**23.1**	0.20	ug/L	20		115	68-123			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
LCS (B9F2512-BS1) Continued				Prepared & Analyzed: 06/25/19						
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.1**	0.30	ug/L	20		80.4	62-130			
1,2,4-Trimethylbenzene	**20.8**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**21.1**	0.20	ug/L	20		105	70-130			
Vinyl chloride	**22.4**	0.40	ug/L	20		112	51-151			
o-Xylene	**21.4**	0.30	ug/L	20		107	70-130			
m,p-Xylenes	**42.5**	0.60	ug/L	40		106	70-130			
Surrogate: 4-Bromofluorobenzene	*48.0*		*ug/L*	*50*		*96.0*	*80-129*			
Surrogate: Dibromofluoromethane	*48.3*		*ug/L*	*50*		*96.6*	*68-137*			
Surrogate: Toluene-d8	*47.4*		*ug/L*	*50*		*94.9*	*83-134*			
LCS Dup (B9F2512-BSD1)				Prepared: 06/25/19 Analyzed: 06/26/19						
Acetone	**19.4**	7.7	ug/L	20		97.1	27-123	20.7	30	J
Benzene	**17.1**	0.40	ug/L	20		85.6	60-134	7.69	30	
Bromobenzene	**19.9**	0.40	ug/L	20		99.3	70-130	1.90	30	
Bromochloromethane	**20.7**	0.20	ug/L	20		103	78-121	3.94	30	
Bromodichloromethane	**20.5**	0.40	ug/L	20		103	74-135	12.0	30	
Bromoform	**19.3**	0.40	ug/L	20		96.4	68-132	4.81	30	
Bromomethane	**17.7**	0.30	ug/L	20		88.6	58-142	0.113	30	
2-Butanone (MEK)	**18.8**	8.6	ug/L	20		94.2	62-138	6.43	30	J
tert-Butylbenzene	**20.1**	0.20	ug/L	20		101	70-130	1.82	30	
n-Butylbenzene	**20.1**	0.20	ug/L	20		101	70-130	5.74	30	
sec-Butylbenzene	**20.1**	0.20	ug/L	20		100	84-142	3.19	30	
Carbon Disulfide	**19.7**	0.20	ug/L	20		98.4	17-177	5.53	30	
Carbon Tetrachloride	**20.9**	0.30	ug/L	20		104	66-155	7.64	30	
Chlorobenzene	**19.8**	0.40	ug/L	20		98.8	70-130	1.90	30	
Chloroethane	**42.3**	0.40	ug/L	20		212	45-166	2.98	30	**
Chloroform	**20.3**	0.30	ug/L	20		101	71-131	6.54	30	
Chloromethane	**20.2**	0.40	ug/L	20		101	48-152	2.92	30	
4-Chlorotoluene	**20.1**	0.20	ug/L	20		100	70-130	3.38	30	
2-Chlorotoluene	**19.8**	0.20	ug/L	20		99.2	70-130	3.95	30	
1,2-Dibromo-3-chloropropane	**20.6**	0.40	ug/L	20		103	53-145	8.97	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
LCS Dup (B9F2512-BSD1) Continued				Prepared: 06/25/19 Analyzed: 06/26/19						
Dibromochloromethane	**21.1**	0.40	ug/L	20		106	72-133	2.85	30	
1,2-Dibromoethane (EDB)	**21.1**	0.40	ug/L	20		106	79-120	3.36	30	
Dibromomethane	**19.8**	0.40	ug/L	20		98.8	68-124	6.18	30	
1,3-Dichlorobenzene	**19.5**	0.40	ug/L	20		97.6	70-130	1.83	30	
1,4-Dichlorobenzene	**18.9**	0.30	ug/L	20		94.3	70-130	4.61	30	
1,2-Dichlorobenzene	**19.7**	0.30	ug/L	20		98.4	70-130	4.13	30	
Dichlorodifluoromethane (R12)	**16.3**	0.40	ug/L	20		81.6	16-148	12.5	30	
1,1-Dichloroethane	**19.8**	0.20	ug/L	20		98.8	67-120	7.45	30	
1,2-Dichloroethane (EDC)	**19.2**	0.20	ug/L	20		95.8	57-156	8.48	30	
cis-1,2-Dichloroethylene	**20.2**	0.30	ug/L	20		101	70-124	4.79	30	
1,1-Dichloroethylene	**20.1**	0.40	ug/L	20		101	50-149	3.99	30	
trans-1,2-Dichloroethylene	**19.4**	0.30	ug/L	20		96.8	66-126	9.68	30	
1,3-Dichloropropane	**20.8**	0.40	ug/L	20		104	79-113	6.39	30	
1,2-Dichloropropane	**20.4**	0.30	ug/L	20		102	53-139	8.39	30	
2,2-Dichloropropane	**15.8**	0.30	ug/L	20		79.1	44-162	23.7	30	
trans-1,3-Dichloropropylene	**20.6**	0.30	ug/L	20		103	76-121	8.89	30	
1,1-Dichloropropylene	**20.2**	0.30	ug/L	20		101	84-124	8.84	30	
cis-1,3-Dichloropropylene	**20.4**	0.40	ug/L	20		102	67-127	11.5	30	
Ethylbenzene	**20.4**	0.30	ug/L	20		102	86-124	4.64	30	
Hexachlorobutadiene	**19.3**	0.50	ug/L	20		96.4	76-140	5.74	30	
2-Hexanone (MBK)	**19.6**	8.4	ug/L	20		97.9	52-123	15.4	30	J
Isopropylbenzene	**20.5**	0.30	ug/L	20		102	70-130	1.65	30	
4-Isopropyltoluene	**19.9**	0.30	ug/L	20		99.7	70-130	3.69	30	
Methyl-tert-Butyl Ether (MTBE)	**40.7**	1.4	ug/L	40		102	58-144	8.27	30	
Methylene Chloride	**18.2**	4.4	ug/L	20		91.0	50-135	49.1	30	AA-C1
4-Methyl-2-pentanone (MIBK)	**20.2**	9.8	ug/L	20		101	49-139	0.839	30	
Naphthalene	**20.0**	0.40	ug/L	20		99.8	74-128	6.50	30	
n-Propylbenzene	**20.2**	0.20	ug/L	20		101	70-130	4.12	30	
Styrene	**20.3**	0.20	ug/L	20		101	84-123	5.56	30	
1,1,1,2-Tetrachloroethane	**20.1**	0.30	ug/L	20		101	70-130	3.76	30	
1,1,2,2-Tetrachloroethane	**16.7**	0.40	ug/L	20		83.4	58-126	34.5	30	AA-C1
Tetrachloroethylene (PCE)	**20.2**	0.50	ug/L	20		101	70-130	1.67	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874360
Date Received: 06/14/19
Date Reported: 06/28/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2512 - EPA 5030B										
LCS Dup (B9F2512-BSD1) Continued				Prepared: 06/25/19 Analyzed: 06/26/19						
Toluene	**20.0**	0.20	ug/L	20		100	83-118	3.34	30	
1,2,4-Trichlorobenzene	**18.7**	0.30	ug/L	20		93.4	84-128	7.72	30	
1,2,3-Trichlorobenzene	**18.8**	0.50	ug/L	20		94.0	77-134	7.23	30	
1,1,2-Trichloroethane	**21.0**	0.30	ug/L	20		105	75-115	6.33	30	
1,1,1-Trichloroethane	**20.7**	0.30	ug/L	20		103	66-158	10.4	30	
Trichloroethylene (TCE)	**24.0**	0.30	ug/L	20		120	82-128	10.6	30	
Trichlorofluoromethane (R11)	**17.6**	0.40	ug/L	20		88.0	65-137	3.90	30	
1,2,3-Trichloropropane	**20.7**	0.20	ug/L	20		104	68-123	10.8	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.8**	0.30	ug/L	20		79.2	62-130	1.44	30	
1,2,4-Trimethylbenzene	**20.1**	0.30	ug/L	20		100	70-130	3.47	30	
1,3,5-Trimethylbenzene	**20.1**	0.20	ug/L	20		100	70-130	4.91	30	
Vinyl chloride	**21.2**	0.40	ug/L	20		106	51-151	5.87	30	
o-Xylene	**20.6**	0.30	ug/L	20		103	70-130	3.52	30	
m,p-Xylenes	**40.8**	0.60	ug/L	40		102	70-130	4.25	30	
Surrogate: 4-Bromofluorobenzene	*48.1*		*ug/L*	*50*		*96.2*	*80-129*			
Surrogate: Dibromofluoromethane	*45.9*		*ug/L*	*50*		*91.8*	*68-137*			
Surrogate: Toluene-d8	*47.8*		*ug/L*	*50*		*95.6*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874360
Project No:	130072-025	**Date Received:**	06/14/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	06/28/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

18359

BLAINE
TECH SERVICES, INC.

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CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 1 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874360/9F14005

SAMPLE I.D.	DATE	TIME	MATRIX AQ=Water	CONTAINERS #	Preservative	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
QC11-061319	6/13/19	0900	AQ	2	HCL	VOA	X									9F14005-01
EW-3-061319		0901	AQ	4	HCL/NP	VOA/Amber	X	X								-02
MW-16-061319		0948	AQ	4	HCL/NP	VOA/Amber	X	X								-03
MW-15-061319		1056	AQ	4	HCL/NP	VOA/Amber	X	X								-04
MW-15B-061319		1146	AQ	4	HCL/NP	VOA/Amber	X	X								-05
MW-18-061319		1246	AQ	4	HCL/NP	VOA/Amber	X	X								-06
MW-61A-061319		1323	AQ	4	HCL/NP	VOA/Amber	X	X								-07
QC14-061319		1333	AQ	4	HCL/NP	VOA/Amber	X	X								-08
MW-61B-061319		1353	AQ	4	HCL/NP	VOA/Amber	X	X								-09
QC12-061319		1415	AQ	4	HCL/NP	VOA/Amber	X	X								-10

REVIEWED Time 0730 Date 6/17/19 Sign: TAT N Days

SAMPLE INTEGRITY INTACT (Y) N TEMP 4.0

SAMPLING COMPLETED	DATE	TIME

SAMPLING PERFORMED BY: Phil Alonzo

RESULTS NEEDED NO LATER THAN: Standard

RELEASED BY		TIME 1525	RECEIVED BY		DATE 6/13/19	TIME 1525
RELEASED BY		TIME 1153	RECEIVED BY		DATE 6/14/19	TIME 11:53
RELEASED BY		TIME 16:00	RECEIVED BY		DATE 6/14/19	TIME 1600
SHIPPED VIA		TIME SENT	COOLER #			

18360

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 2 of 2

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874360/9F14005

SAMPLE I.D.	DATE	TIME	MATRIX (AQ= Water)	CONTAINERS #	Preservation	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-04-060319	6/13/19	1319	AQ	6	HCl/ice	VOA/amber	X	X					MS/MSD			9F14005-01
QC13-060319	6/13/19	1420	AQ	4	↓	↓	X	X								-12

REVIEWED Date 6/17/19 Time 0730 Sign: TAT N Days

SAMPLING COMPLETED	DATE 6/13/19	TIME 1500	SAMPLING PERFORMED BY	Jordan Terrazas	RESULTS NEEDED NO LATER THAN: Standard

RELEASED BY		TIME 1525	RECEIVED BY	DATE 6/13/19	TIME 1525
RELEASED BY		TIME 1153	RECEIVED BY	DATE 6/14/19	TIME 11:53
RELEASED BY		TIME 16:00	RECEIVED BY	DATE 6/14/19	TIME 1600
SHIPPED VIA		TIME SENT	COOLER #		

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

July 01, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum GW - South Gate / 130072-025

A874361 / 9F17012

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/17/19 15:02 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
8260B					
QC17-061419	9F17012-01	Water	5	06/14/19 07:00	06/17/19 15:02
MW-1-061419	9F17012-02	Water	5	06/14/19 08:46	06/17/19 15:02
QC19-061419	9F17012-03	Water	5	06/14/19 08:56	06/17/19 15:02
MW-2B-061419	9F17012-04	Water	5	06/14/19 09:50	06/17/19 15:02
MW-2C-061419	9F17012-05	Water	5	06/14/19 10:28	06/17/19 15:02
EW-4-061419	9F17012-06	Water	5	06/14/19 11:40	06/17/19 15:02
QC21-061419	9F17012-07	Water	5	06/14/19 12:45	06/17/19 15:02
MW-23A-061419	9F17012-08	Water	5	06/14/19 12:00	06/17/19 15:02
QC18-061419	9F17012-09	Water	5	06/14/19 12:20	06/17/19 15:02
MW-55-061419	9F17012-10	Water	5	06/14/19 11:33	06/17/19 15:02
MW-26-061419	9F17012-11	Water	5	06/14/19 10:42	06/17/19 15:02
MW-25-061419	9F17012-12	Water	5	06/14/19 09:37	06/17/19 15:02
QC20-061419	9F17012-13	Water	5	06/14/19 09:47	06/17/19 15:02
MW-25B-061419	9F17012-14	Water	5	06/14/19 08:40	06/17/19 15:02
8270CM 1,4-Dioxane Only					
MW-1-061419	9F17012-02	Water	5	06/14/19 08:46	06/17/19 15:02
QC19-061419	9F17012-03	Water	5	06/14/19 08:56	06/17/19 15:02
MW-2B-061419	9F17012-04	Water	5	06/14/19 09:50	06/17/19 15:02

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
MW-2C-061419	9F17012-05	Water	5	06/14/19 10:28	06/17/19 15:02
EW-4-061419	9F17012-06	Water	5	06/14/19 11:40	06/17/19 15:02
QC21-061419	9F17012-07	Water	5	06/14/19 12:45	06/17/19 15:02
MW-23A-061419	9F17012-08	Water	5	06/14/19 12:00	06/17/19 15:02
QC18-061419	9F17012-09	Water	5	06/14/19 12:20	06/17/19 15:02
MW-55-061419	9F17012-10	Water	5	06/14/19 11:33	06/17/19 15:02
MW-26-061419	9F17012-11	Water	5	06/14/19 10:42	06/17/19 15:02
MW-25-061419	9F17012-12	Water	5	06/14/19 09:37	06/17/19 15:02
QC20-061419	9F17012-13	Water	5	06/14/19 09:47	06/17/19 15:02
MW-25B-061419	9F17012-14	Water	5	06/14/19 08:40	06/17/19 15:02

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: EPA 8270CM 1,4-Dioxane

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
8270CM 1,4-Dioxane Only (EPA 8270CM)									
9F17012-02	MW-1-061419	06/14/19	06/21/19	06/24/19	1	**1.2**J	ug/L	1	2
9F17012-03	QC19-061419	06/14/19	06/21/19	06/24/19	1	**1.4**J	ug/L	1	2
9F17012-04	MW-2B-061419	06/14/19	06/21/19	06/24/19	1	**1.7**J	ug/L	1	2
9F17012-05	MW-2C-061419	06/14/19	06/21/19	06/24/19	1	<1.0	ug/L	1	2
9F17012-06	EW-4-061419	06/14/19	06/21/19	06/24/19	1	<1.0	ug/L	1	2
9F17012-07	QC21-061419	06/14/19	06/21/19	06/24/19	1	<1.0	ug/L	1	2
9F17012-08	MW-23A-061419	06/14/19	06/21/19	06/24/19	1	**1.6**J	ug/L	1	2
9F17012-09	QC18-061419	06/14/19	06/21/19	06/24/19	1	<1.0	ug/L	1	2
9F17012-10	MW-55-061419	06/14/19	06/21/19	06/24/19	1	**4.1**	ug/L	1	2
9F17012-11	MW-26-061419	06/14/19	06/21/19	06/24/19	1	<1.0	ug/L	1	2
9F17012-12	MW-25-061419	06/14/19	06/21/19	06/24/19	1	**2.0**	ug/L	1	2
9F17012-13	QC20-061419	06/14/19	06/21/19	06/24/19	1	**2.1**	ug/L	1	2
9F17012-14	MW-25B-061419	06/14/19	06/21/19	06/24/19	1	**1.2**J	ug/L	1	2

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874361
Project No:	130072-025	**Date Received:**	06/17/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	07/01/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-01	9F17012-02	9F17012-03	9F17012-04		
Client ID No:	QC17-061419	MW-1-061419	QC19-061419	MW-2B-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	<7.7	<7.7	7.7	50
Benzene	<0.40	<0.40	<0.40	**8.0**	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-01	9F17012-02	9F17012-03	9F17012-04		
Client ID No:	QC17-061419	MW-1-061419	QC19-061419	MW-2B-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	<0.20	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	<0.30	<0.30	**18**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	**0.88**	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	<0.30	**0.81**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-01	9F17012-02	9F17012-03	9F17012-04		
Client ID No:	QC17-061419	MW-1-061419	QC19-061419	MW-2B-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	<0.30	<0.30	**2.5**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	**0.56**	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	94%	96%	98%	97%		80-129
Dibromofluoromethane	99%	104%	102%	104%		68-137
Toluene-d8	96%	96%	98%	97%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-05	9F17012-06	9F17012-07	9F17012-08		
Client ID No:	MW-2C-061419	EW-4-061419	QC21-061419	MW-23A-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	<7.7	<7.7	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-05	9F17012-06	9F17012-07	9F17012-08		
Client ID No:	MW-2C-061419	EW-4-061419	QC21-061419	MW-23A-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	<0.20	**0.91**	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**1.1**	<0.30	**1.7**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-05	9F17012-06	9F17012-07	9F17012-08		
Client ID No:	MW-2C-061419	EW-4-061419	QC21-061419	MW-23A-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	<0.30	<0.30	**2.0**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	99%	98%	97%	98%		80-129
Dibromofluoromethane	102%	101%	107%	99%		68-137
Toluene-d8	96%	97%	94%	97%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-09	9F17012-10	9F17012-11	9F17012-12		
Client ID No:	QC18-061419	MW-55-061419	MW-26-061419	MW-25-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B)						
Acetone	<7.7	<7.7	<7.7	<7.7	7.7	50
Benzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-09	9F17012-10	9F17012-11	9F17012-12		
Client ID No:	QC18-061419	MW-55-061419	MW-26-061419	MW-25-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,1-Dichloroethane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	**1.4**	<0.20	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	<0.30	**78**	<0.30	**22**	0.30	0.50
1,1-Dichloroethylene	<0.40	**0.62**	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	<0.30	**4.7**	<0.30	**5.7**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19	06/24/19	06/24/19		
AA ID No:	9F17012-09	9F17012-10	9F17012-11	9F17012-12		
Client ID No:	QC18-061419	MW-55-061419	MW-26-061419	MW-25-061419		
Matrix:	Water	Water	Water	Water		
Dilution Factor:	1	1	1	1	MDL	MRL
8260B (EPA 8260B) (continued)						
1,2,3-Trichlorobenzene	<0.50	<0.50	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	<0.30	**1.4**	<0.30	**0.48 J**	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	**3.4**	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	<0.60	<0.60	0.60	1.0
Surrogates						**%REC Limits**
4-Bromofluorobenzene	99%	98%	97%	96%		80-129
Dibromofluoromethane	106%	99%	101%	102%		68-137
Toluene-d8	94%	96%	96%	95%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19		
AA ID No:	9F17012-13	9F17012-14		
Client ID No:	QC20-061419	MW-25B-061419		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B)				
Acetone	<7.7	<7.7	7.7	50
Benzene	<0.40	<0.40	0.40	0.50
Bromobenzene	<0.40	<0.40	0.40	0.50
Bromochloromethane	<0.20	<0.20	0.20	0.50
Bromodichloromethane	<0.40	<0.40	0.40	0.50
Bromoform	<0.40	<0.40	0.40	0.50
Bromomethane	<0.30	<0.30	0.30	0.50
2-Butanone (MEK)	<8.6	<8.6	8.6	20
tert-Butylbenzene	<0.20	<0.20	0.20	0.50
n-Butylbenzene	<0.20	<0.20	0.20	0.50
sec-Butylbenzene	<0.20	<0.20	0.20	0.50
Carbon Disulfide	<0.20	<0.20	0.20	0.50
Carbon Tetrachloride	<0.30	<0.30	0.30	0.50
Chlorobenzene	<0.40	<0.40	0.40	0.50
Chloroethane	<0.40	<0.40	0.40	0.50
Chloroform	<0.30	<0.30	0.30	0.50
Chloromethane	<0.40	<0.40	0.40	0.50
4-Chlorotoluene	<0.20	<0.20	0.20	0.50
2-Chlorotoluene	<0.20	<0.20	0.20	0.50
1,2-Dibromo-3-chloropropane	<0.40	<0.40	0.40	1.0
Dibromochloromethane	<0.40	<0.40	0.40	0.50
1,2-Dibromoethane (EDB)	<0.40	<0.40	0.40	0.50
Dibromomethane	<0.40	<0.40	0.40	0.50
1,3-Dichlorobenzene	<0.40	<0.40	0.40	0.50
1,4-Dichlorobenzene	<0.30	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	<0.30	0.30	0.50
Dichlorodifluoromethane (R12)	<0.40	<0.40	0.40	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate
Method: VOCs by GC/MS

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19
Units: ug/L

Date Sampled:	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19		
AA ID No:	9F17012-13	9F17012-14		
Client ID No:	QC20-061419	MW-25B-061419		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
1,1-Dichloroethane	<0.20	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	<0.20	<0.20	0.20	0.50
cis-1,2-Dichloroethylene	**24**	**16**	0.30	0.50
1,1-Dichloroethylene	<0.40	<0.40	0.40	0.50
trans-1,2-Dichloroethylene	**6.4**	**3.5**	0.30	0.50
1,3-Dichloropropane	<0.40	<0.40	0.40	0.50
1,2-Dichloropropane	<0.30	<0.30	0.30	0.50
2,2-Dichloropropane	<0.30	<0.30	0.30	0.50
trans-1,3-Dichloropropylene	<0.30	<0.30	0.30	0.50
1,1-Dichloropropylene	<0.30	<0.30	0.30	0.50
cis-1,3-Dichloropropylene	<0.40	<0.40	0.40	0.50
Ethylbenzene	<0.30	<0.30	0.30	0.50
Hexachlorobutadiene	<0.50	<0.50	0.50	1.0
2-Hexanone (MBK)	<8.4	<8.4	8.4	20
Isopropylbenzene	<0.30	<0.30	0.30	0.50
4-Isopropyltoluene	<0.30	<0.30	0.30	1.0
Methyl-tert-Butyl Ether (MTBE)	<1.4	<1.4	1.4	2.0
Methylene Chloride	<4.4	<4.4	4.4	5.0
4-Methyl-2-pentanone (MIBK)	<9.8	<9.8	9.8	20
Naphthalene	<0.40	<0.40	0.40	2.0
n-Propylbenzene	<0.20	<0.20	0.20	0.50
Styrene	<0.20	<0.20	0.20	0.50
1,1,1,2-Tetrachloroethane	<0.30	<0.30	0.30	0.50
1,1,2,2-Tetrachloroethane	<0.40	<0.40	0.40	0.50
Tetrachloroethylene (PCE)	<0.50	<0.50	0.50	0.50
Toluene	<0.20	<0.20	0.20	0.50
1,2,4-Trichlorobenzene	<0.30	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874361
Project No:	130072-025	**Date Received:**	06/17/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	07/01/19
Method:	VOCs by GC/MS	**Units:**	ug/L

Date Sampled:	06/14/19	06/14/19		
Date Prepared:	06/24/19	06/24/19		
Date Analyzed:	06/24/19	06/24/19		
AA ID No:	9F17012-13	9F17012-14		
Client ID No:	QC20-061419	MW-25B-061419		
Matrix:	Water	Water		
Dilution Factor:	1	1	MDL	MRL
8260B (EPA 8260B) (continued)				
1,2,3-Trichlorobenzene	<0.50	<0.50	0.50	0.50
1,1,2-Trichloroethane	<0.30	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.46 J**	<0.30	0.30	0.50
Trichlorofluoromethane (R11)	<0.40	<0.40	0.40	0.50
1,2,3-Trichloropropane	<0.20	<0.20	0.20	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	<0.30	0.30	0.50
1,2,4-Trimethylbenzene	<0.30	<0.30	0.30	0.50
1,3,5-Trimethylbenzene	<0.20	<0.20	0.20	0.50
Vinyl chloride	<0.40	<0.40	0.40	0.50
o-Xylene	<0.30	<0.30	0.30	0.50
m,p-Xylenes	<0.60	<0.60	0.60	1.0
Surrogates				**%REC Limits**
4-Bromofluorobenzene	99%	98%		80-129
Dibromofluoromethane	103%	104%		68-137
Toluene-d8	97%	96%		83-134

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 8270CM 1,4-Dioxane - Quality Control										
Batch B9F2107 - EPA 3510C_MS										
Blank (B9F2107-BLK1)				Prepared: 06/21/19	Analyzed: 06/24/19					
1,4-Dioxane	<1.0	1.0	ug/L							
LCS (B9F2107-BS1)				Prepared: 06/21/19	Analyzed: 06/24/19					
1,4-Dioxane	**9.02**	1.0	ug/L	10		90.2	75-125			
LCS Dup (B9F2107-BSD1)				Prepared: 06/21/19	Analyzed: 06/24/19					
1,4-Dioxane	**9.61**	1.0	ug/L	10		96.1	75-125	6.33	30	
Matrix Spike (B9F2107-MS1)		**Source: 9F17012-06**		Prepared: 06/21/19	Analyzed: 06/24/19					
1,4-Dioxane	**8.96**	1.0	ug/L	10	<2.0	89.6	70-130			
Matrix Spike Dup (B9F2107-MSD1)		**Source: 9F17012-06**		Prepared: 06/21/19	Analyzed: 06/24/19					
1,4-Dioxane	**10.5**	1.0	ug/L	10	<2.0	105	70-130	16.0	30	
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1)				Prepared & Analyzed: 06/24/19						
Acetone	<7.7	7.7	ug/L							
Benzene	<0.40	0.40	ug/L							
Bromobenzene	<0.40	0.40	ug/L							
Bromochloromethane	<0.20	0.20	ug/L							
Bromodichloromethane	<0.40	0.40	ug/L							
Bromoform	<0.40	0.40	ug/L							
Bromomethane	<0.30	0.30	ug/L							
2-Butanone (MEK)	<8.6	8.6	ug/L							
tert-Butylbenzene	<0.20	0.20	ug/L							
n-Butylbenzene	<0.20	0.20	ug/L							
sec-Butylbenzene	<0.20	0.20	ug/L							
Carbon Disulfide	<0.20	0.20	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.40	0.40	ug/L							
Chloroethane	<0.40	0.40	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
4-Chlorotoluene	<0.20	0.20	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1) Continued				Prepared & Analyzed: 06/24/19						
2-Chlorotoluene	<0.20	0.20	ug/L							
1,2-Dibromo-3-chloropropane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.40	0.40	ug/L							
1,2-Dibromoethane (EDB)	<0.40	0.40	ug/L							
Dibromomethane	<0.40	0.40	ug/L							
1,3-Dichlorobenzene	<0.40	0.40	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
Dichlorodifluoromethane (R12)	<0.40	0.40	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.20	0.20	ug/L							
cis-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,1-Dichloroethylene	<0.40	0.40	ug/L							
trans-1,2-Dichloroethylene	<0.30	0.30	ug/L							
1,3-Dichloropropane	<0.40	0.40	ug/L							
1,2-Dichloropropane	<0.30	0.30	ug/L							
2,2-Dichloropropane	<0.30	0.30	ug/L							
trans-1,3-Dichloropropylene	<0.30	0.30	ug/L							
1,1-Dichloropropylene	<0.30	0.30	ug/L							
cis-1,3-Dichloropropylene	<0.40	0.40	ug/L							
Ethylbenzene	<0.30	0.30	ug/L							
Hexachlorobutadiene	<0.50	0.50	ug/L							
2-Hexanone (MBK)	<8.4	8.4	ug/L							
Isopropylbenzene	<0.30	0.30	ug/L							
4-Isopropyltoluene	<0.30	0.30	ug/L							
Methyl-tert-Butyl Ether (MTBE)	<1.4	1.4	ug/L							
Methylene Chloride	<4.4	4.4	ug/L							
4-Methyl-2-pentanone (MIBK)	<9.8	9.8	ug/L							
Naphthalene	<0.40	0.40	ug/L							
n-Propylbenzene	<0.20	0.20	ug/L							
Styrene	<0.20	0.20	ug/L							
1,1,1,2-Tetrachloroethane	<0.30	0.30	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1) Continued				Prepared & Analyzed: 06/24/19						
1,1,2,2-Tetrachloroethane	<0.40	0.40	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.20	0.20	ug/L							
1,2,4-Trichlorobenzene	<0.30	0.30	ug/L							
1,2,3-Trichlorobenzene	<0.50	0.50	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.30	0.30	ug/L							
Trichlorofluoromethane (R11)	<0.40	0.40	ug/L							
1,2,3-Trichloropropane	<0.20	0.20	ug/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.30	0.30	ug/L							
1,2,4-Trimethylbenzene	<0.30	0.30	ug/L							
1,3,5-Trimethylbenzene	<0.20	0.20	ug/L							
Vinyl chloride	<0.40	0.40	ug/L							
o-Xylene	<0.30	0.30	ug/L							
m,p-Xylenes	<0.60	0.60	ug/L							
Surrogate: 4-Bromofluorobenzene	*47.1*		*ug/L*	*50*		*94.3*	*80-129*			
Surrogate: Dibromofluoromethane	*50.7*		*ug/L*	*50*		*101*	*68-137*			
Surrogate: Toluene-d8	*47.6*		*ug/L*	*50*		*95.2*	*83-134*			
LCS (B9F2416-BS1)				Prepared & Analyzed: 06/24/19						
Acetone	**15.7**	7.7	ug/L	20		78.6	27-123			J
Benzene	**17.8**	0.40	ug/L	20		88.8	60-134			
Bromobenzene	**20.4**	0.40	ug/L	20		102	70-130			
Bromochloromethane	**21.0**	0.20	ug/L	20		105	78-121			
Bromodichloromethane	**22.4**	0.40	ug/L	20		112	74-135			
Bromoform	**21.3**	0.40	ug/L	20		107	68-132			
Bromomethane	**17.1**	0.30	ug/L	20		85.4	58-142			
2-Butanone (MEK)	**19.6**	8.6	ug/L	20		98.0	62-138			J
tert-Butylbenzene	**20.5**	0.20	ug/L	20		103	70-130			
n-Butylbenzene	**21.2**	0.20	ug/L	20		106	70-130			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
sec-Butylbenzene	**20.5**	0.20	ug/L	20		103	84-142			
Carbon Disulfide	**20.7**	0.20	ug/L	20		104	17-177			
Carbon Tetrachloride	**22.5**	0.30	ug/L	20		112	66-155			
Chlorobenzene	**20.7**	0.40	ug/L	20		103	70-130			
Chloroethane	**41.1**	0.40	ug/L	20		205	45-166			**
Chloroform	**20.8**	0.30	ug/L	20		104	71-131			
Chloromethane	**20.6**	0.40	ug/L	20		103	48-152			
4-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130			
2-Chlorotoluene	**20.8**	0.20	ug/L	20		104	70-130			
1,2-Dibromo-3-chloropropane	**23.2**	0.40	ug/L	20		116	53-145			
Dibromochloromethane	**22.4**	0.40	ug/L	20		112	72-133			
1,2-Dibromoethane (EDB)	**22.6**	0.40	ug/L	20		113	79-120			
Dibromomethane	**20.8**	0.40	ug/L	20		104	68-124			
1,3-Dichlorobenzene	**20.4**	0.40	ug/L	20		102	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		99.0	70-130			
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		105	70-130			
Dichlorodifluoromethane (R12)	**17.7**	0.40	ug/L	20		88.6	16-148			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		106	67-120			
1,2-Dichloroethane (EDC)	**23.2**	0.20	ug/L	20		116	57-156			
cis-1,2-Dichloroethylene	**20.6**	0.30	ug/L	20		103	70-124			
1,1-Dichloroethylene	**20.4**	0.40	ug/L	20		102	50-149			
trans-1,2-Dichloroethylene	**20.9**	0.30	ug/L	20		104	66-126			
1,3-Dichloropropane	**22.0**	0.40	ug/L	20		110	79-113			
1,2-Dichloropropane	**21.5**	0.30	ug/L	20		108	53-139			
2,2-Dichloropropane	**20.0**	0.30	ug/L	20		100	44-162			
trans-1,3-Dichloropropylene	**22.6**	0.30	ug/L	20		113	76-121			
1,1-Dichloropropylene	**21.6**	0.30	ug/L	20		108	84-124			
cis-1,3-Dichloropropylene	**21.9**	0.40	ug/L	20		109	67-127			
Ethylbenzene	**21.4**	0.30	ug/L	20		107	86-124			
Hexachlorobutadiene	**19.9**	0.50	ug/L	20		99.4	76-140			
2-Hexanone (MBK)	**23.4**	8.4	ug/L	20		117	52-123			
Isopropylbenzene	**21.1**	0.30	ug/L	20		106	70-130			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
4-Isopropyltoluene	**20.7**	0.30	ug/L	20		104	70-130			
Methyl-tert-Butyl Ether (MTBE)	**44.0**	1.4	ug/L	40		110	58-144			
Methylene Chloride	**28.6**	4.4	ug/L	20		143	50-135			**
4-Methyl-2-pentanone (MIBK)	**21.4**	9.8	ug/L	20		107	49-139			
Naphthalene	**22.4**	0.40	ug/L	20		112	74-128			
n-Propylbenzene	**21.1**	0.20	ug/L	20		106	70-130			
Styrene	**21.6**	0.20	ug/L	20		108	84-123			
1,1,1,2-Tetrachloroethane	**21.2**	0.30	ug/L	20		106	70-130			
1,1,2,2-Tetrachloroethane	**24.1**	0.40	ug/L	20		121	58-126			
Tetrachloroethylene (PCE)	**20.6**	0.50	ug/L	20		103	70-130			
Toluene	**20.8**	0.20	ug/L	20		104	83-118			
1,2,4-Trichlorobenzene	**20.3**	0.30	ug/L	20		101	84-128			
1,2,3-Trichlorobenzene	**20.0**	0.50	ug/L	20		100	77-134			
1,1,2-Trichloroethane	**22.5**	0.30	ug/L	20		113	75-115			
1,1,1-Trichloroethane	**22.3**	0.30	ug/L	20		111	66-158			
Trichloroethylene (TCE)	**21.5**	0.30	ug/L	20		108	82-128			
Trichlorofluoromethane (R11)	**18.5**	0.40	ug/L	20		92.3	65-137			
1,2,3-Trichloropropane	**23.6**	0.20	ug/L	20		118	68-123			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.7**	0.30	ug/L	20		78.6	62-130			
1,2,4-Trimethylbenzene	**20.9**	0.30	ug/L	20		104	70-130			
1,3,5-Trimethylbenzene	**21.0**	0.20	ug/L	20		105	70-130			
Vinyl chloride	**21.0**	0.40	ug/L	20		105	51-151			
o-Xylene	**21.8**	0.30	ug/L	20		109	70-130			
m,p-Xylenes	**42.2**	0.60	ug/L	40		105	70-130			
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.2*	*80-129*			
Surrogate: Dibromofluoromethane	*48.7*		*ug/L*	*50*		*97.4*	*68-137*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.1*	*83-134*			
LCS Dup (B9F2416-BSD1)				Prepared: 06/24/19 Analyzed: 06/25/19						
Acetone	**14.7**	7.7	ug/L	20		73.5	27-123	6.77	30	J
Benzene	**16.3**	0.40	ug/L	20		81.5	60-134	8.57	30	

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
Bromobenzene	**18.1**	0.40	ug/L	20		90.4	70-130	12.3	30	
Bromochloromethane	**19.5**	0.20	ug/L	20		97.3	78-121	7.42	30	
Bromodichloromethane	**20.6**	0.40	ug/L	20		103	74-135	8.52	30	
Bromoform	**16.1**	0.40	ug/L	20		80.6	68-132	27.7	30	
Bromomethane	**18.3**	0.30	ug/L	20		91.4	58-142	6.73	30	
2-Butanone (MEK)	**17.8**	8.6	ug/L	20		88.8	62-138	9.91	30	J
tert-Butylbenzene	**18.3**	0.20	ug/L	20		91.7	70-130	11.2	30	
n-Butylbenzene	**19.7**	0.20	ug/L	20		98.4	70-130	7.63	30	
sec-Butylbenzene	**18.9**	0.20	ug/L	20		94.5	84-142	8.27	30	
Carbon Disulfide	**21.6**	0.20	ug/L	20		108	17-177	4.39	30	
Carbon Tetrachloride	**19.7**	0.30	ug/L	20		98.7	66-155	12.9	30	
Chlorobenzene	**16.6**	0.40	ug/L	20		82.8	70-130	22.1	30	
Chloroethane	**46.5**	0.40	ug/L	20		232	45-166	12.3	30	**
Chloroform	**19.3**	0.30	ug/L	20		96.5	71-131	7.29	30	
Chloromethane	**22.0**	0.40	ug/L	20		110	48-152	6.67	30	
4-Chlorotoluene	**19.0**	0.20	ug/L	20		95.2	70-130	9.02	30	
2-Chlorotoluene	**18.8**	0.20	ug/L	20		94.2	70-130	10.0	30	
1,2-Dibromo-3-chloropropane	**20.0**	0.40	ug/L	20		100	53-145	14.7	30	
Dibromochloromethane	**17.4**	0.40	ug/L	20		87.0	72-133	25.0	30	
1,2-Dibromoethane (EDB)	**17.5**	0.40	ug/L	20		87.3	79-120	25.7	30	
Dibromomethane	**18.8**	0.40	ug/L	20		93.8	68-124	10.1	30	
1,3-Dichlorobenzene	**18.2**	0.40	ug/L	20		90.8	70-130	11.4	30	
1,4-Dichlorobenzene	**18.1**	0.30	ug/L	20		90.5	70-130	8.97	30	
1,2-Dichlorobenzene	**18.7**	0.30	ug/L	20		93.6	70-130	11.1	30	
Dichlorodifluoromethane (R12)	**19.2**	0.40	ug/L	20		95.8	16-148	7.76	30	
1,1-Dichloroethane	**19.1**	0.20	ug/L	20		95.4	67-120	10.9	30	
1,2-Dichloroethane (EDC)	**21.4**	0.20	ug/L	20		107	57-156	8.34	30	
cis-1,2-Dichloroethylene	**18.4**	0.30	ug/L	20		92.0	70-124	11.2	30	
1,1-Dichloroethylene	**19.9**	0.40	ug/L	20		99.6	50-149	2.38	30	
trans-1,2-Dichloroethylene	**19.0**	0.30	ug/L	20		95.0	66-126	9.47	30	
1,3-Dichloropropane	**17.7**	0.40	ug/L	20		88.3	79-113	21.8	30	
1,2-Dichloropropane	**19.6**	0.30	ug/L	20		98.2	53-139	8.99	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
2,2-Dichloropropane	**15.5**	0.30	ug/L	20		77.4	44-162	25.6	30	
trans-1,3-Dichloropropylene	**17.5**	0.30	ug/L	20		87.6	76-121	25.3	30	
1,1-Dichloropropylene	**19.4**	0.30	ug/L	20		97.2	84-124	10.3	30	
cis-1,3-Dichloropropylene	**19.1**	0.40	ug/L	20		95.4	67-127	13.8	30	
Ethylbenzene	**17.5**	0.30	ug/L	20		87.3	86-124	20.0	30	
Hexachlorobutadiene	**18.4**	0.50	ug/L	20		92.1	76-140	7.57	30	
2-Hexanone (MBK)	**17.8**	8.4	ug/L	20		89.2	52-123	27.2	30	J
Isopropylbenzene	**18.8**	0.30	ug/L	20		94.2	70-130	11.4	30	
4-Isopropyltoluene	**18.8**	0.30	ug/L	20		94.2	70-130	9.61	30	
Methyl-tert-Butyl Ether (MTBE)	**38.1**	1.4	ug/L	40		95.3	58-144	14.3	30	
Methylene Chloride	**30.3**	4.4	ug/L	20		152	50-135	5.63	30	**
4-Methyl-2-pentanone (MIBK)	**16.7**	9.8	ug/L	20		83.4	49-139	24.7	30	J
Naphthalene	**19.6**	0.40	ug/L	20		97.8	74-128	13.4	30	
n-Propylbenzene	**18.9**	0.20	ug/L	20		94.3	70-130	11.4	30	
Styrene	**17.0**	0.20	ug/L	20		85.2	84-123	23.6	30	
1,1,1,2-Tetrachloroethane	**16.2**	0.30	ug/L	20		81.2	70-130	26.3	30	
1,1,2,2-Tetrachloroethane	**19.3**	0.40	ug/L	20		96.4	58-126	22.4	30	
Tetrachloroethylene (PCE)	**15.9**	0.50	ug/L	20		79.3	70-130	26.0	30	
Toluene	**16.9**	0.20	ug/L	20		84.5	83-118	20.5	30	
1,2,4-Trichlorobenzene	**18.4**	0.30	ug/L	20		92.2	84-128	9.50	30	
1,2,3-Trichlorobenzene	**18.3**	0.50	ug/L	20		91.4	77-134	9.03	30	
1,1,2-Trichloroethane	**17.9**	0.30	ug/L	20		89.6	75-115	22.7	30	
1,1,1-Trichloroethane	**20.2**	0.30	ug/L	20		101	66-158	9.69	30	
Trichloroethylene (TCE)	**19.8**	0.30	ug/L	20		98.8	82-128	8.53	30	
Trichlorofluoromethane (R11)	**19.8**	0.40	ug/L	20		98.9	65-137	6.90	30	
1,2,3-Trichloropropane	**18.7**	0.20	ug/L	20		93.5	68-123	23.1	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**15.8**	0.30	ug/L	20		79.2	62-130	0.697	30	
1,2,4-Trimethylbenzene	**18.8**	0.30	ug/L	20		94.1	70-130	10.4	30	
1,3,5-Trimethylbenzene	**19.0**	0.20	ug/L	20		95.2	70-130	9.84	30	
Vinyl chloride	**24.1**	0.40	ug/L	20		120	51-151	13.6	30	
o-Xylene	**17.2**	0.30	ug/L	20		85.8	70-130	23.7	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
m,p-Xylenes	**34.4**	0.60	ug/L	40		86.1	70-130	20.2	30	
Surrogate: 4-Bromofluorobenzene	*48.4*		*ug/L*	*50*		*96.8*	*80-129*			
Surrogate: Dibromofluoromethane	*49.5*		*ug/L*	*50*		*99.0*	*68-137*			
Surrogate: Toluene-d8	*44.3*		*ug/L*	*50*		*88.6*	*83-134*			
Matrix Spike (B9F2416-MS1)		**Source: 9F17012-06**		Prepared & Analyzed: 06/24/19						
Acetone	**16.0**	7.7	ug/L	20	<50	80.0	11-169			J
Benzene	**18.3**	0.40	ug/L	20	<0.50	91.5	56-135			
Bromobenzene	**19.8**	0.40	ug/L	20	<0.50	99.2	70-130			
Bromochloromethane	**19.6**	0.20	ug/L	20	<0.50	98.0	74-125			
Bromodichloromethane	**22.6**	0.40	ug/L	20	<0.50	113	68-144			
Bromoform	**17.9**	0.40	ug/L	20	<0.50	89.6	68-151			
Bromomethane	**21.8**	0.30	ug/L	20	<0.50	109	54-142			
2-Butanone (MEK)	**16.9**	8.6	ug/L	20	<20	84.6	62-145			J
tert-Butylbenzene	**20.9**	0.20	ug/L	20	<0.50	105	70-130			
n-Butylbenzene	**21.9**	0.20	ug/L	20	<0.50	109	70-130			
sec-Butylbenzene	**21.0**	0.20	ug/L	20	<0.50	105	84-145			
Carbon Disulfide	**21.1**	0.20	ug/L	20	<0.50	105	28-151			
Carbon Tetrachloride	**23.0**	0.30	ug/L	20	<0.50	115	58-164			
Chlorobenzene	**20.3**	0.40	ug/L	20	<0.50	101	70-130			
Chloroethane	**47.1**	0.40	ug/L	20	<0.50	235	42-164			**
Chloroform	**22.1**	0.30	ug/L	20	<0.50	110	65-138			
Chloromethane	**20.5**	0.40	ug/L	20	<0.50	102	50-152			
4-Chlorotoluene	**21.0**	0.20	ug/L	20	<0.50	105	70-130			
2-Chlorotoluene	**21.3**	0.20	ug/L	20	<0.50	107	70-130			
1,2-Dibromo-3-chloropropane	**20.3**	0.40	ug/L	20	<1.0	102	53-161			
Dibromochloromethane	**20.4**	0.40	ug/L	20	<0.50	102	70-130			
1,2-Dibromoethane (EDB)	**20.4**	0.40	ug/L	20	<0.50	102	76-130			
Dibromomethane	**19.8**	0.40	ug/L	20	<0.50	98.8	62-135			
1,3-Dichlorobenzene	**19.9**	0.40	ug/L	20	<0.50	99.6	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20	<0.50	98.8	70-130			
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20	<0.50	102	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike (B9F2416-MS1) Continued	**Source: 9F17012-06**		Prepared & Analyzed: 06/24/19							
Dichlorodifluoromethane (R12)	**19.2**	0.40	ug/L	20	<0.50	95.9	17-153			
1,1-Dichloroethane	**22.3**	0.20	ug/L	20	<0.50	112	55-131			
1,2-Dichloroethane (EDC)	**23.7**	0.20	ug/L	20	<0.50	118	52-168			
cis-1,2-Dichloroethylene	**21.7**	0.30	ug/L	20	1.07	103	70-130			
1,1-Dichloroethylene	**20.2**	0.40	ug/L	20	<0.50	101	51-140			
trans-1,2-Dichloroethylene	**20.9**	0.30	ug/L	20	<0.50	105	59-127			
1,3-Dichloropropane	**21.1**	0.40	ug/L	20	<0.50	106	80-121			
1,2-Dichloropropane	**22.4**	0.30	ug/L	20	<0.50	112	52-142			
2,2-Dichloropropane	**17.7**	0.30	ug/L	20	<0.50	88.3	36-168			
trans-1,3-Dichloropropylene	**20.6**	0.30	ug/L	20	<0.50	103	78-130			
1,1-Dichloropropylene	**22.4**	0.30	ug/L	20	<0.50	112	76-132			
cis-1,3-Dichloropropylene	**21.0**	0.40	ug/L	20	<0.50	105	66-130			
Ethylbenzene	**21.6**	0.30	ug/L	20	<0.50	108	86-128			
Hexachlorobutadiene	**20.6**	0.50	ug/L	20	<1.0	103	70-130			
2-Hexanone (MBK)	**19.3**	8.4	ug/L	20	<20	96.4	52-141			J
Isopropylbenzene	**21.0**	0.30	ug/L	20	<0.50	105	70-130			
4-Isopropyltoluene	**21.0**	0.30	ug/L	20	<1.0	105	83-149			
Methyl-tert-Butyl Ether (MTBE)	**41.0**	1.4	ug/L	40	<2.0	102	56-150			
Methylene Chloride	**19.2**	4.4	ug/L	20	<5.0	96.2	70-130			
4-Methyl-2-pentanone (MIBK)	**18.2**	9.8	ug/L	20	<20	91.2	60-148			J
Naphthalene	**18.2**	0.40	ug/L	20	<2.0	91.2	70-130			
n-Propylbenzene	**21.5**	0.20	ug/L	20	<0.50	107	70-130			
Styrene	**20.2**	0.20	ug/L	20	<0.50	101	65-141			
1,1,1,2-Tetrachloroethane	**20.4**	0.30	ug/L	20	<0.50	102	70-130			
1,1,2,2-Tetrachloroethane	**21.9**	0.40	ug/L	20	<0.50	109	62-134			
Tetrachloroethylene (PCE)	**20.1**	0.50	ug/L	20	<0.50	100	70-130			
Toluene	**20.4**	0.20	ug/L	20	<0.50	102	81-123			
1,2,4-Trichlorobenzene	**19.0**	0.30	ug/L	20	<0.50	95.2	80-137			
1,2,3-Trichlorobenzene	**18.6**	0.50	ug/L	20	<0.50	92.8	73-144			
1,1,2-Trichloroethane	**20.7**	0.30	ug/L	20	<0.50	104	76-122			
1,1,1-Trichloroethane	**23.3**	0.30	ug/L	20	<0.50	116	62-164			
Trichloroethylene (TCE)	**21.9**	0.30	ug/L	20	<0.50	110	72-136			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike (B9F2416-MS1) Continued	**Source: 9F17012-06**				Prepared & Analyzed: 06/24/19					
Trichlorofluoromethane (R11)	**19.8**	0.40	ug/L	20	<0.50	98.9	59-144			
1,2,3-Trichloropropane	**21.0**	0.20	ug/L	20	<0.50	105	69-135			
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.5**	0.30	ug/L	20	<0.50	82.4	62-126			
1,2,4-Trimethylbenzene	**21.0**	0.30	ug/L	20	<0.50	105	89-134			
1,3,5-Trimethylbenzene	**21.4**	0.20	ug/L	20	<0.50	107	70-130			
Vinyl chloride	**22.8**	0.40	ug/L	20	<0.50	114	54-150			
o-Xylene	**21.5**	0.30	ug/L	20	<0.50	107	70-130			
m,p-Xylenes	**42.2**	0.60	ug/L	40	<1.0	106	70-130			
Surrogate: 4-Bromofluorobenzene	*47.8*		*ug/L*	*50*		*95.5*	*80-129*			
Surrogate: Dibromofluoromethane	*49.6*		*ug/L*	*50*		*99.1*	*68-137*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.3*	*83-134*			
Matrix Spike Dup (B9F2416-MSD1)	**Source: 9F17012-06**				Prepared: 06/24/19 Analyzed: 06/25/19					
Acetone	**18.4**	7.7	ug/L	20	<50	92.2	11-169	14.2	30	J
Benzene	**17.1**	0.40	ug/L	20	<0.50	85.4	56-135	6.84	30	
Bromobenzene	**18.4**	0.40	ug/L	20	<0.50	91.8	70-130	7.80	30	
Bromochloromethane	**20.0**	0.20	ug/L	20	<0.50	100	74-125	2.17	30	
Bromodichloromethane	**21.6**	0.40	ug/L	20	<0.50	108	68-144	4.66	30	
Bromoform	**18.8**	0.40	ug/L	20	<0.50	94.2	68-151	4.90	30	
Bromomethane	**18.0**	0.30	ug/L	20	<0.50	89.8	54-142	19.3	30	
2-Butanone (MEK)	**21.0**	8.6	ug/L	20	<20	105	62-145	21.6	30	
tert-Butylbenzene	**18.9**	0.20	ug/L	20	<0.50	94.4	70-130	10.4	30	
n-Butylbenzene	**19.7**	0.20	ug/L	20	<0.50	98.4	70-130	10.5	30	
sec-Butylbenzene	**19.1**	0.20	ug/L	20	<0.50	95.6	84-145	9.13	30	
Carbon Disulfide	**23.0**	0.20	ug/L	20	<0.50	115	28-151	8.68	30	
Carbon Tetrachloride	**21.1**	0.30	ug/L	20	<0.50	106	58-164	8.44	30	
Chlorobenzene	**18.5**	0.40	ug/L	20	<0.50	92.4	70-130	9.19	30	
Chloroethane	**24.1**	0.40	ug/L	20	<0.50	120	42-164	64.7	30	AA-C1
Chloroform	**20.2**	0.30	ug/L	20	<0.50	101	65-138	8.75	30	
Chloromethane	**22.5**	0.40	ug/L	20	<0.50	112	50-152	9.31	30	
4-Chlorotoluene	**19.2**	0.20	ug/L	20	<0.50	95.8	70-130	9.30	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike Dup (B9F2416-MSD1) Continued	**Source: 9F17012-06** Prepared: 06/24/19 Analyzed: 06/25/19									
2-Chlorotoluene	**18.8**	0.20	ug/L	20	<0.50	94.0	70-130	12.6	30	
1,2-Dibromo-3-chloropropane	**22.5**	0.40	ug/L	20	<1.0	113	53-161	10.4	30	
Dibromochloromethane	**20.6**	0.40	ug/L	20	<0.50	103	70-130	0.877	30	
1,2-Dibromoethane (EDB)	**20.5**	0.40	ug/L	20	<0.50	103	76-130	0.929	30	
Dibromomethane	**20.0**	0.40	ug/L	20	<0.50	100	62-135	1.21	30	
1,3-Dichlorobenzene	**18.4**	0.40	ug/L	20	<0.50	92.2	70-130	7.72	30	
1,4-Dichlorobenzene	**18.5**	0.30	ug/L	20	<0.50	92.3	70-130	6.85	30	
1,2-Dichlorobenzene	**19.4**	0.30	ug/L	20	<0.50	97.1	70-130	4.92	30	
Dichlorodifluoromethane (R12)	**19.3**	0.40	ug/L	20	<0.50	96.6	17-153	0.675	30	
1,1-Dichloroethane	**20.5**	0.20	ug/L	20	<0.50	102	55-131	8.74	30	
1,2-Dichloroethane (EDC)	**23.0**	0.20	ug/L	20	<0.50	115	52-168	2.78	30	
cis-1,2-Dichloroethylene	**20.4**	0.30	ug/L	20	1.07	96.7	70-130	6.26	30	
1,1-Dichloroethylene	**20.6**	0.40	ug/L	20	<0.50	103	51-140	2.30	30	
trans-1,2-Dichloroethylene	**19.3**	0.30	ug/L	20	<0.50	96.5	59-127	8.10	30	
1,3-Dichloropropane	**21.0**	0.40	ug/L	20	<0.50	105	80-121	0.665	30	
1,2-Dichloropropane	**20.6**	0.30	ug/L	20	<0.50	103	52-142	8.14	30	
2,2-Dichloropropane	**17.6**	0.30	ug/L	20	<0.50	87.8	36-168	0.625	30	
trans-1,3-Dichloropropylene	**20.4**	0.30	ug/L	20	<0.50	102	78-130	1.32	30	
1,1-Dichloropropylene	**20.6**	0.30	ug/L	20	<0.50	103	76-132	8.00	30	
cis-1,3-Dichloropropylene	**20.5**	0.40	ug/L	20	<0.50	102	66-130	2.55	30	
Ethylbenzene	**19.2**	0.30	ug/L	20	<0.50	96.0	86-128	11.7	30	
Hexachlorobutadiene	**18.0**	0.50	ug/L	20	<1.0	90.0	70-130	13.5	30	
2-Hexanone (MBK)	**21.3**	8.4	ug/L	20	<20	107	52-141	10.0	30	
Isopropylbenzene	**19.0**	0.30	ug/L	20	<0.50	95.2	70-130	9.50	30	
4-Isopropyltoluene	**18.9**	0.30	ug/L	20	<1.0	94.6	83-149	10.7	30	
Methyl-tert-Butyl Ether (MTBE)	**42.4**	1.4	ug/L	40	<2.0	106	56-150	3.36	30	
Methylene Chloride	**19.6**	4.4	ug/L	20	<5.0	98.0	70-130	1.91	30	
4-Methyl-2-pentanone (MIBK)	**20.8**	9.8	ug/L	20	<20	104	60-148	13.2	30	
Naphthalene	**21.8**	0.40	ug/L	20	<2.0	109	70-130	17.8	30	
n-Propylbenzene	**19.2**	0.20	ug/L	20	<0.50	96.1	70-130	11.1	30	
Styrene	**19.0**	0.20	ug/L	20	<0.50	94.9	65-141	6.43	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-025
Project Name: Cooper Drum GW - South Gate

AA Project No: A874361
Date Received: 06/17/19
Date Reported: 07/01/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike Dup (B9F2416-MSD1) Continued	**Source: 9F17012-06**				Prepared: 06/24/19		Analyzed: 06/25/19			
1,1,1,2-Tetrachloroethane	**19.4**	0.30	ug/L	20	<0.50	96.8	70-130	5.13	30	
1,1,2,2-Tetrachloroethane	**23.7**	0.40	ug/L	20	<0.50	119	62-134	8.25	30	
Tetrachloroethylene (PCE)	**17.7**	0.50	ug/L	20	<0.50	88.6	70-130	12.6	30	
Toluene	**18.5**	0.20	ug/L	20	<0.50	92.4	81-123	9.97	30	
1,2,4-Trichlorobenzene	**19.2**	0.30	ug/L	20	<0.50	95.8	80-137	0.628	30	
1,2,3-Trichlorobenzene	**19.7**	0.50	ug/L	20	<0.50	98.6	73-144	6.01	30	
1,1,2-Trichloroethane	**20.6**	0.30	ug/L	20	<0.50	103	76-122	0.242	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20	<0.50	107	62-164	8.38	30	
Trichloroethylene (TCE)	**20.4**	0.30	ug/L	20	<0.50	102	72-136	7.03	30	
Trichlorofluoromethane (R11)	**20.3**	0.40	ug/L	20	<0.50	102	59-144	2.64	30	
1,2,3-Trichloropropane	**23.0**	0.20	ug/L	20	<0.50	115	69-135	9.27	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**16.0**	0.30	ug/L	20	<0.50	80.0	62-126	2.89	30	
1,2,4-Trimethylbenzene	**19.0**	0.30	ug/L	20	<0.50	94.9	89-134	9.87	30	
1,3,5-Trimethylbenzene	**19.1**	0.20	ug/L	20	<0.50	95.6	70-130	11.2	30	
Vinyl chloride	**21.9**	0.40	ug/L	20	<0.50	109	54-150	3.94	30	
o-Xylene	**19.4**	0.30	ug/L	20	<0.50	97.1	70-130	10.1	30	
m,p-Xylenes	**38.5**	0.60	ug/L	40	<1.0	96.2	70-130	9.37	30	
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.0*	*80-129*			
Surrogate: Dibromofluoromethane	*51.0*		*ug/L*	*50*		*102*	*68-137*			
Surrogate: Toluene-d8	*48.3*		*ug/L*	*50*		*96.6*	*83-134*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874361
Project No:	130072-025	**Date Received:**	06/17/19
Project Name:	Cooper Drum GW - South Gate	**Date Reported:**	07/01/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD control limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

18370

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT: Haley & Aldrich

SITE: Cooper Drum
South Gate, CA

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 1 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A8743G1 / 9F17012

SAMPLE I.D.	DATE	TIME	MATRIX AQ=Water	CONTAINERS #	Preservative	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
QC17-061419	6/14/19	0900	AQ	2	HCl	VOA	X									9F17012-01
MW-1-061419		0846	AQ	4	HCl/NP	VOA/Amber	X	X								-02
QC19-061419		0856	AQ	4	HCl/NP	VOA/Amber	X	X								-03
MW-2B-061419		0950	AQ	4	HCl/NP	VOA/Amber	X	X								-04
MW-2C-061419		1028	AQ	4	HCl/NP	VOA/Amber	X	X								-05
EW-4-061419		1140	AQ	6	HCl/NP	VOA/Amber	X	X					MS/MSD			-06
QC17-061419	↓	1245	AQ	4	HCl/NP	VOA/Amber	X	X								-07
													SAMPLE INTEGRITY INTACT Y N TEMP 4.2			

REVIEWED Date 6/17/19 Time 1620 Sign: TAT N Days

SAMPLING COMPLETED	DATE	TIME

SAMPLING PERFORMED BY: Phil Alonzo

RESULTS NEEDED NO LATER THAN: Standard — 19 JUN 17

RELEASED BY		TIME 1405	RECEIVED BY	DATE 6/14/19	TIME 1405
RELEASED BY Nicole		TIME 12:40	RECEIVED BY	DATE 6-17-19	TIME 12:40
RELEASED BY		TIME 15:02	RECEIVED BY	DATE 6-17-19	TIME 15:02
SHIPPED VIA		TIME SENT	COOLER #		

18371

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

CLIENT Haley & Aldrich

SITE Cooper Drum
South Gate, CA

CONDUCT ANALYSIS TO DETECT

LAB: American Analytics

COC 2 of 2

Send Reports to:
Peter Bennett, CHG
Lead Hydrogeologist and Vice President
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
PBennett@haleyaldrich.com

A874361/9F17012

SAMPLE I.D.	DATE	TIME	MATRIX (AQ=Water)	CONTAINERS #	Preservative	Type	VOC's by 8260	1,4-Dioxane by EPA 8270SIM				Level 4 QAQC package	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW-23A-061419	6/14/19	1200	AQ	4	HCl/none	VOA/amber	X	X								9F17012-08
QC12-061419		1220					X	X								-09
MW-55-061419		1133					X	X								-10
MW-26-061419		1042					X	X								-11
MW-25-061419		0927					X	X								-12
QC20-061419		0947					X	X								-13
MW-25B-061419		0840					X	X								-14

REVIEWED Date 6/17/19 Time 1630 Sign:

TAT 5 Days

SAMPLE INTEGRITY INTACT (Y) N TEMP 4.2

SAMPLING COMPLETED	DATE	TIME
	6/14/19	1230

SAMPLING PERFORMED BY Jordan Tempmp

RESULTS NEEDED NO LATER THAN Standard

19 JUN 17 0902

RELEASED BY		TIME 1405	RECEIVED BY Nicole	DATE 6/14/19	TIME 1405
RELEASED BY		TIME 1240	RECEIVED BY	DATE 6-17-19	TIME 1240
RELEASED BY		TIME 1502	RECEIVED BY	DATE 6-17-19	TIME 1502
SHIPPED VIA		TIME SENT	COOLER #		

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

July 09, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - South Gate / 130072-024

A874363 / 9F26010

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/26/19 12:40 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
TO-15 (Mid Level)ppbv					
SVE-VGACE-062619-0001	9F26010-01	Vapor	5	06/26/19 10:40	06/26/19 12:40
SVE-VGACM-062619-0001	9F26010-02	Vapor	5	06/26/19 10:50	06/26/19 12:40
SVE-VGACI-062619-0001	9F26010-03	Vapor	5	06/26/19 10:55	06/26/19 12:40
TO-3 VOCs as Hexane					
SVE-VGACE-062619-0001	9F26010-01	Vapor	5	06/26/19 10:40	06/26/19 12:40
SVE-VGACM-062619-0001	9F26010-02	Vapor	5	06/26/19 10:50	06/26/19 12:40
SVE-VGACI-062619-0001	9F26010-03	Vapor	5	06/26/19 10:55	06/26/19 12:40

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	0.25	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACE-062619-0001

9F26010-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	**0.016**	ug/L	0.050	**6.9**	ppbv	21
Benzene	<0.0024	ug/L	0.0096	<0.75	ppbv	3.0
Benzyl chloride	<0.013	ug/L	0.050	<2.4	ppbv	9.7
Bromodichloromethane	<0.013	ug/L	0.050	<1.9	ppbv	7.5
Bromoform	<0.012	ug/L	0.050	<1.2	ppbv	4.8
Bromomethane	<0.0025	ug/L	0.010	<0.65	ppbv	2.6
2-Butanone (MEK)	<0.013	ug/L	0.050	<4.2	ppbv	17
Carbon Disulfide	<0.012	ug/L	0.050	<4.0	ppbv	16
Carbon Tetrachloride	<0.0033	ug/L	0.013	<0.52	ppbv	2.1
Chlorobenzene	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
Chloroethane	<0.0025	ug/L	0.010	<0.95	ppbv	3.8
Chloroform	<0.0024	ug/L	0.0098	<0.50	ppbv	2.0
Chloromethane	<0.0025	ug/L	0.0099	<1.2	ppbv	4.8
Dibromochloromethane	<0.0049	ug/L	0.020	<0.58	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.005	ug/L	0.020	<0.65	ppbv	2.6
1,2-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,3-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
1,4-Dichlorobenzene	<0.005	ug/L	0.020	<0.82	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.012	ug/L	0.049	<2.5	ppbv	10
1,1-Dichloroethane	**0.031**	ug/L	0.0081	**7.6**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.0025	ug/L	0.010	<0.62	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	0.25	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACE-062619-0001

9F26010-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.089**	ug/L	0.0079	**23**	ppbv	2.0
1,1-Dichloroethylene	**0.0098**	ug/L	0.0079	**2.5**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.0098**	ug/L	0.0079	**2.5**	ppbv	2.0
1,2-Dichloropropane	<0.0025	ug/L	0.010	<0.55	ppbv	2.2
trans-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
cis-1,3-Dichloropropylene	<0.0025	ug/L	0.01	<0.55	ppbv	2.2
Dichlorotetrafluoroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.2
1,4-Dioxane	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Ethylbenzene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
4-Ethyltoluene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Hexachlorobutadiene	<0.013	ug/L	0.050	<1.2	ppbv	4.7
2-Hexanone (MBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Isopropanol (IPA)	<0.025	ug/L	0.10	<10	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.0025	ug/L	0.010	<0.70	ppbv	2.8
Methylene Chloride	<0.012	ug/L	0.049	<3.5	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.012	ug/L	0.049	<3.0	ppbv	12
Styrene	<0.0024	ug/L	0.0098	<0.58	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.013	ug/L	0.050	<1.8	ppbv	7.3
Tetrachloroethylene (PCE)	<0.0034	ug/L	0.014	<0.50	ppbv	2.0
Toluene	<0.012	ug/L	0.049	<3.2	ppbv	13
1,2,4-Trichlorobenzene	<0.005	ug/L	0.020	<0.68	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	0.25	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACE-062619-0001

9F26010-01 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
1,1,1-Trichloroethane	<0.005	ug/L	0.020	<0.92	ppbv	3.7
Trichloroethylene (TCE)	<0.0027	ug/L	0.011	<0.50	ppbv	2.0
Trichlorofluoromethane (R11)	<0.013	ug/L	0.050	<2.2	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.012	ug/L	0.050	<1.6	ppbv	6.5
1,3,5-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
1,2,4-Trimethylbenzene	<0.0025	ug/L	0.0098	<0.50	ppbv	2.0
Vinyl acetate	<0.0025	ug/L	0.0099	<0.70	ppbv	2.8
Vinyl chloride	**0.0045**	ug/L	0.01	**1.7**	ppbv	3.9
o-Xylene	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
m,p-Xylenes	<0.0025	ug/L	0.01	<0.58	ppbv	2.3
1,2,3-Trichloropropane	<0.003	ug/L	0.012	<0.50	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	105 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACM-062619-0001

9F26010-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.100	ug/L	0.050	<42	ppbv	21
Benzene	<0.019	ug/L	0.0096	<6.0	ppbv	3.0
Benzyl chloride	<0.10	ug/L	0.050	<19	ppbv	9.7
Bromodichloromethane	<0.10	ug/L	0.050	<15	ppbv	7.5
Bromoform	<0.099	ug/L	0.050	<9.6	ppbv	4.8
Bromomethane	<0.020	ug/L	0.010	<5.2	ppbv	2.6
2-Butanone (MEK)	<0.10	ug/L	0.050	<34	ppbv	17
Carbon Disulfide	<0.100	ug/L	0.050	<32	ppbv	16
Carbon Tetrachloride	<0.026	ug/L	0.013	<4.2	ppbv	2.1
Chlorobenzene	<0.020	ug/L	0.010	<4.4	ppbv	2.2
Chloroethane	<0.020	ug/L	0.010	<7.6	ppbv	3.8
Chloroform	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Chloromethane	<0.020	ug/L	0.0099	<9.6	ppbv	4.8
Dibromochloromethane	<0.039	ug/L	0.020	<4.6	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.040	ug/L	0.020	<5.2	ppbv	2.6
1,2-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,3-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,4-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.099	ug/L	0.049	<20	ppbv	10
1,1-Dichloroethane	**0.051**	ug/L	0.0081	**13**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.020	ug/L	0.010	<5.0	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACM-062619-0001

9F26010-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.21**	ug/L	0.0079	**53**	ppbv	2.0
1,1-Dichloroethylene	**0.022**	ug/L	0.0079	**5.5**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.022**	ug/L	0.0079	**5.6**	ppbv	2.0
1,2-Dichloropropane	<0.020	ug/L	0.010	<4.4	ppbv	2.2
trans-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
cis-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
Dichlorotetrafluoroethane	<0.10	ug/L	0.050	<14	ppbv	7.2
1,4-Dioxane	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Ethylbenzene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
4-Ethyltoluene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Hexachlorobutadiene	<0.10	ug/L	0.050	<9.4	ppbv	4.7
2-Hexanone (MBK)	<0.098	ug/L	0.049	<24	ppbv	12
Isopropanol (IPA)	<0.20	ug/L	0.10	<82	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Methylene Chloride	<0.097	ug/L	0.049	<28	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.098	ug/L	0.049	<24	ppbv	12
Styrene	<0.020	ug/L	0.0098	<4.6	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.10	ug/L	0.050	<15	ppbv	7.3
Tetrachloroethylene (PCE)	**0.43**	ug/L	0.014	**63**	ppbv	2.0
Toluene	<0.098	ug/L	0.049	<26	ppbv	13
1,2,4-Trichlorobenzene	<0.040	ug/L	0.020	<5.4	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACM-062619-0001

9F26010-02 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
1,1,1-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
Trichloroethylene (TCE)	**0.38**	ug/L	0.011	**71**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.10	ug/L	0.050	<18	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.100	ug/L	0.050	<13	ppbv	6.5
1,3,5-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Vinyl acetate	<0.020	ug/L	0.0099	<5.6	ppbv	2.8
Vinyl chloride	<0.020	ug/L	0.01	<7.8	ppbv	3.9
o-Xylene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
m,p-Xylenes	<0.020	ug/L	0.01	<4.6	ppbv	2.3
1,2,3-Trichloropropane	<0.024	ug/L	0.012	<4.0	ppbv	2.0

Surrogates	%REC	%REC Limits
4-Bromofluorobenzene	98.6 %	70-130

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACI-062619-0001

9F26010-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
Acetone	<0.100	ug/L	0.050	<42	ppbv	21
Benzene	<0.019	ug/L	0.0096	<6.0	ppbv	3.0
Benzyl chloride	<0.10	ug/L	0.050	<19	ppbv	9.7
Bromodichloromethane	<0.10	ug/L	0.050	<15	ppbv	7.5
Bromoform	<0.099	ug/L	0.050	<9.6	ppbv	4.8
Bromomethane	<0.020	ug/L	0.010	<5.2	ppbv	2.6
2-Butanone (MEK)	<0.10	ug/L	0.050	<34	ppbv	17
Carbon Disulfide	<0.100	ug/L	0.050	<32	ppbv	16
Carbon Tetrachloride	<0.026	ug/L	0.013	<4.2	ppbv	2.1
Chlorobenzene	<0.020	ug/L	0.010	<4.4	ppbv	2.2
Chloroethane	<0.020	ug/L	0.010	<7.6	ppbv	3.8
Chloroform	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Chloromethane	<0.020	ug/L	0.0099	<9.6	ppbv	4.8
Dibromochloromethane	<0.039	ug/L	0.020	<4.6	ppbv	2.3
1,2-Dibromoethane (EDB)	<0.040	ug/L	0.020	<5.2	ppbv	2.6
1,2-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,3-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
1,4-Dichlorobenzene	<0.040	ug/L	0.020	<6.6	ppbv	3.3
Dichlorodifluoromethane (R12)	<0.099	ug/L	0.049	<20	ppbv	10
1,1-Dichloroethane	**0.047**	ug/L	0.0081	**12**	ppbv	2.0
1,2-Dichloroethane (EDC)	<0.020	ug/L	0.010	<5.0	ppbv	2.5

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACI-062619-0001

9F26010-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
cis-1,2-Dichloroethylene	**0.21**	ug/L	0.0079	**52**	ppbv	2.0
1,1-Dichloroethylene	**0.021**	ug/L	0.0079	**5.3**	ppbv	2.0
trans-1,2-Dichloroethylene	**0.020**	ug/L	0.0079	**5.0**	ppbv	2.0
1,2-Dichloropropane	<0.020	ug/L	0.010	<4.4	ppbv	2.2
trans-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
cis-1,3-Dichloropropylene	<0.020	ug/L	0.01	<4.4	ppbv	2.2
Dichlorotetrafluoroethane	<0.10	ug/L	0.050	<14	ppbv	7.2
1,4-Dioxane	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Ethylbenzene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
4-Ethyltoluene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Hexachlorobutadiene	<0.10	ug/L	0.050	<9.4	ppbv	4.7
2-Hexanone (MBK)	<0.098	ug/L	0.049	<24	ppbv	12
Isopropanol (IPA)	<0.20	ug/L	0.10	<82	ppbv	41
Methyl-tert-Butyl Ether (MTBE)	<0.020	ug/L	0.010	<5.6	ppbv	2.8
Methylene Chloride	<0.097	ug/L	0.049	<28	ppbv	14
4-Methyl-2-pentanone (MIBK)	<0.098	ug/L	0.049	<24	ppbv	12
Styrene	<0.020	ug/L	0.0098	<4.6	ppbv	2.3
1,1,2,2-Tetrachloroethane	<0.10	ug/L	0.050	<15	ppbv	7.3
Tetrachloroethylene (PCE)	**0.91**	ug/L	0.014	**130**	ppbv	2.0
Toluene	<0.098	ug/L	0.049	<26	ppbv	13
1,2,4-Trichlorobenzene	<0.040	ug/L	0.020	<5.4	ppbv	2.7

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Matrix:	Vapor	**Sampled:**	06/26/19
Dilution:	2	**Prepared:**	06/27/19
Method:	VOCs by GCMS EPA TO-15	**Analyzed:**	06/27/19

SVE-VGACI-062619-0001

9F26010-03 (Vapor)

Analyte	Result	(ug/L)	MRL	Result	(ppbv)	MRL
1,1,2-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
1,1,1-Trichloroethane	<0.040	ug/L	0.020	<7.4	ppbv	3.7
Trichloroethylene (TCE)	**0.40**	ug/L	0.011	**75**	ppbv	2.0
Trichlorofluoromethane (R11)	<0.10	ug/L	0.050	<18	ppbv	8.9
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<0.100	ug/L	0.050	<13	ppbv	6.5
1,3,5-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
1,2,4-Trimethylbenzene	<0.020	ug/L	0.0098	<4.0	ppbv	2.0
Vinyl acetate	<0.020	ug/L	0.0099	<5.6	ppbv	2.8
Vinyl chloride	<0.020	ug/L	0.01	<7.8	ppbv	3.9
o-Xylene	<0.020	ug/L	0.01	<4.6	ppbv	2.3
m,p-Xylenes	<0.020	ug/L	0.01	<4.6	ppbv	2.3
1,2,3-Trichloropropane	<0.024	ug/L	0.012	<4.0	ppbv	2.0

Surrogates	**%REC**	**%REC Limits**
4-Bromofluorobenzene	98.9 %	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19
Method:	VOCs by EPA TO-3 GC/MS	**Units:**	ppbv

Date Sampled:	06/26/19	06/26/19	06/26/19	
Date Prepared:	06/27/19	06/27/19	06/27/19	
Date Analyzed:	06/27/19	06/27/19	06/27/19	
AA ID No:	9F26010-01	9F26010-02	9F26010-03	
Client ID No:	SVE-VGACE-062619-0001	SVE-VGACM-062619-0001	SVE-VGACI-062619-0001	
Matrix:	Vapor	Vapor	Vapor	
Dilution Factor:	1	1	1	MRL
TO-3 VOCs as Hexane (TO-3)				
TNMOC as Hexane	<1200	<1200	<1200	1200
Surrogates				**%REC Limits**
4-Bromofluorobenzene	104%	99%	99%	70-130

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
Blank (B9F2723-BLK1)				Prepared & Analyzed: 06/27/19						
Acetone	<21	21	ppbv							
Benzene	<3.0	3.0	ppbv							
Benzyl chloride	<9.7	9.7	ppbv							
Bromodichloromethane	<7.5	7.5	ppbv							
Bromoform	<4.8	4.8	ppbv							
Bromomethane	<2.6	2.6	ppbv							
2-Butanone (MEK)	<17	17	ppbv							
Carbon Disulfide	<16	16	ppbv							
Carbon Tetrachloride	<2.1	2.1	ppbv							
Chlorobenzene	<2.2	2.2	ppbv							
Chloroethane	<3.8	3.8	ppbv							
Chloroform	<2.0	2.0	ppbv							
Chloromethane	<4.8	4.8	ppbv							
Dibromochloromethane	<2.3	2.3	ppbv							
1,2-Dibromoethane (EDB)	<2.6	2.6	ppbv							
1,2-Dichlorobenzene	<3.3	3.3	ppbv							
1,3-Dichlorobenzene	<3.3	3.3	ppbv							
1,4-Dichlorobenzene	<3.3	3.3	ppbv							
Dichlorodifluoromethane (R12)	<10	10	ppbv							
1,1-Dichloroethane	<2.0	2.0	ppbv							
1,2-Dichloroethane (EDC)	<2.5	2.5	ppbv							
cis-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,1-Dichloroethylene	<2.0	2.0	ppbv							
trans-1,2-Dichloroethylene	<2.0	2.0	ppbv							
1,2-Dichloropropane	<2.2	2.2	ppbv							
trans-1,3-Dichloropropylene	<2.2	2.2	ppbv							
cis-1,3-Dichloropropylene	<2.2	2.2	ppbv							
Dichlorotetrafluoroethane	<7.2	7.2	ppbv							
1,4-Dioxane	<2.8	2.8	ppbv							
Ethylbenzene	<2.3	2.3	ppbv							
4-Ethyltoluene	<2.0	2.0	ppbv							
Hexachlorobutadiene	<4.7	4.7	ppbv							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
Blank (B9F2723-BLK1) Continued				Prepared & Analyzed: 06/27/19						
2-Hexanone (MBK)	<12	12	ppbv							
Isopropanol (IPA)	<41	41	ppbv							
Methyl-tert-Butyl Ether (MTBE)	<2.8	2.8	ppbv							
Methylene Chloride	<14	14	ppbv							
4-Methyl-2-pentanone (MIBK)	<12	12	ppbv							
Styrene	<2.3	2.3	ppbv							
1,1,2,2-Tetrachloroethane	<7.3	7.3	ppbv							
Tetrachloroethylene (PCE)	<2.0	2.0	ppbv							
Toluene	<13	13	ppbv							
1,2,4-Trichlorobenzene	<2.7	2.7	ppbv							
1,1,2-Trichloroethane	<3.7	3.7	ppbv							
1,1,1-Trichloroethane	<3.7	3.7	ppbv							
Trichloroethylene (TCE)	<2.0	2.0	ppbv							
Trichlorofluoromethane (R11)	<8.9	8.9	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	<6.5	6.5	ppbv							
1,3,5-Trimethylbenzene	<2.0	2.0	ppbv							
1,2,4-Trimethylbenzene	<2.0	2.0	ppbv							
Vinyl acetate	<2.8	2.8	ppbv							
Vinyl chloride	<3.9	3.9	ppbv							
o-Xylene	<2.3	2.3	ppbv							
m,p-Xylenes	<2.3	2.3	ppbv							
1,2,3-Trichloropropane	<2.0	2.0	ppbv							
Surrogate: 4-Bromofluorobenzene	*17.2*		*ppbv*	*20*		*85.8*	*70-130*			
LCS (B9F2723-BS1)				Prepared & Analyzed: 06/27/19						
Acetone	**33.0**	21	ppbv	40		82.5	70-130		30	
Benzene	**36.2**	3.0	ppbv	40		90.4	70-130		30	
Benzyl chloride	**35.7**	9.7	ppbv	40		89.2	70-130		30	
Bromodichloromethane	**35.3**	7.5	ppbv	40		88.4	70-130		30	
Bromoform	**34.8**	4.8	ppbv	40		87.0	70-130		30	
Bromomethane	**41.2**	2.6	ppbv	40		103	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
LCS (B9F2723-BS1) Continued				Prepared & Analyzed: 06/27/19						
2-Butanone (MEK)	**37.1**	17	ppbv	40		92.8	70-130		30	
Carbon Disulfide	**36.5**	16	ppbv	40		91.2	70-130		30	
Carbon Tetrachloride	**34.9**	2.1	ppbv	40		87.2	70-130		30	
Chlorobenzene	**34.8**	2.2	ppbv	40		86.9	70-130		30	
Chloroethane	**41.7**	3.8	ppbv	40		104	70-130		30	
Chloroform	**36.7**	2.0	ppbv	40		91.8	70-130		30	
Chloromethane	**42.2**	4.8	ppbv	40		106	70-130		30	
Dibromochloromethane	**35.3**	2.3	ppbv	40		88.3	70-130		30	
1,2-Dibromoethane (EDB)	**36.9**	2.6	ppbv	40		92.2	70-130		30	
1,2-Dichlorobenzene	**34.0**	3.3	ppbv	40		84.9	70-130		30	
1,3-Dichlorobenzene	**34.4**	3.3	ppbv	40		86.1	70-130		30	
1,4-Dichlorobenzene	**34.9**	3.3	ppbv	40		87.3	70-130		30	
Dichlorodifluoromethane (R12)	**37.6**	10	ppbv	40		94.0	70-130		30	
1,1-Dichloroethane	**36.9**	2.0	ppbv	40		92.4	70-130		30	
1,2-Dichloroethane (EDC)	**35.5**	2.5	ppbv	40		88.6	70-130		30	
cis-1,2-Dichloroethylene	**37.5**	2.0	ppbv	40		93.7	70-130		30	
1,1-Dichloroethylene	**40.3**	2.0	ppbv	40		101	70-130		30	
trans-1,2-Dichloroethylene	**37.2**	2.0	ppbv	40		92.9	70-130		30	
1,2-Dichloropropane	**35.9**	2.2	ppbv	40		89.8	70-130		30	
trans-1,3-Dichloropropylene	**37.9**	2.2	ppbv	40		94.6	70-130		30	
cis-1,3-Dichloropropylene	**36.2**	2.2	ppbv	40		90.6	70-130		30	
Dichlorotetrafluoroethane	**39.8**	7.2	ppbv	40		99.6	70-130		30	
Ethylbenzene	**33.1**	2.3	ppbv	40		82.8	70-130		30	
4-Ethyltoluene	**31.6**	2.0	ppbv	40		78.9	70-130		30	
Hexachlorobutadiene	**31.7**	4.7	ppbv	40		79.4	70-130		30	
2-Hexanone (MBK)	**35.7**	12	ppbv	40		89.2	70-130		30	
Isopropanol (IPA)	**34.4**	41	ppbv	40		86.0	70-130		30	
Methylene Chloride	**35.8**	14	ppbv	40		89.4	70-130		30	
4-Methyl-2-pentanone (MIBK)	**34.0**	12	ppbv	40		85.0	70-130		30	
Styrene	**36.2**	2.3	ppbv	40		90.5	70-130		30	
1,1,2,2-Tetrachloroethane	**29.3**	7.3	ppbv	40		73.2	70-130		30	
Tetrachloroethylene (PCE)	**33.7**	2.0	ppbv	40		84.2	70-130		30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
LCS (B9F2723-BS1) Continued				Prepared & Analyzed: 06/27/19						
Toluene	**35.2**	13	ppbv	40		87.9	70-130		30	
1,2,4-Trichlorobenzene	**37.5**	2.7	ppbv	40		93.8	70-130		30	
1,1,2-Trichloroethane	**35.6**	3.7	ppbv	40		88.9	70-130		30	
1,1,1-Trichloroethane	**35.4**	3.7	ppbv	40		88.6	70-130		30	
Trichloroethylene (TCE)	**34.0**	2.0	ppbv	40		84.9	70-130		30	
Trichlorofluoromethane (R11)	**34.1**	8.9	ppbv	40		85.2	70-130		30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**37.7**	6.5	ppbv	40		94.2	70-130		30	
1,3,5-Trimethylbenzene	**30.3**	2.0	ppbv	40		75.6	70-130		30	
1,2,4-Trimethylbenzene	**33.4**	2.0	ppbv	40		83.6	70-130		30	
Vinyl acetate	**36.2**	2.8	ppbv	40		90.6	70-130		30	
Vinyl chloride	**42.5**	3.9	ppbv	40		106	70-130		30	
o-Xylene	**32.2**	2.3	ppbv	40		80.5	70-130		30	
m,p-Xylenes	**63.0**	2.3	ppbv	80		78.7	70-130		30	
1,2,3-Trichloropropane	**32.0**	2.0	ppbv	40		79.9	70-130		30	
Surrogate: 4-Bromofluorobenzene	*19.8*		*ppbv*	*20*		*99.2*	*70-130*			
LCS Dup (B9F2723-BSD1)				Prepared & Analyzed: 06/27/19						
Acetone	**34.8**	21	ppbv	40		87.1	70-130	5.40	30	
Benzene	**37.0**	3.0	ppbv	40		92.4	70-130	2.24	30	
Benzyl chloride	**34.2**	9.7	ppbv	40		85.5	70-130	4.24	30	
Bromodichloromethane	**36.5**	7.5	ppbv	40		91.2	70-130	3.17	30	
Bromoform	**35.2**	4.8	ppbv	40		88.0	70-130	1.06	30	
Bromomethane	**45.4**	2.6	ppbv	40		114	70-130	9.82	30	
2-Butanone (MEK)	**36.1**	17	ppbv	40		90.2	70-130	2.90	30	
Carbon Disulfide	**37.8**	16	ppbv	40		94.4	70-130	3.42	30	
Carbon Tetrachloride	**36.1**	2.1	ppbv	40		90.2	70-130	3.47	30	
Chlorobenzene	**35.7**	2.2	ppbv	40		89.2	70-130	2.67	30	
Chloroethane	**47.8**	3.8	ppbv	40		120	70-130	13.6	30	
Chloroform	**37.3**	2.0	ppbv	40		93.2	70-130	1.62	30	
Chloromethane	**45.3**	4.8	ppbv	40		113	70-130	6.99	30	
Dibromochloromethane	**36.6**	2.3	ppbv	40		91.5	70-130	3.56	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
LCS Dup (B9F2723-BSD1) Continued				Prepared & Analyzed: 06/27/19						
1,2-Dibromoethane (EDB)	**37.7**	2.6	ppbv	40		94.2	70-130	2.23	30	
1,2-Dichlorobenzene	**33.8**	3.3	ppbv	40		84.5	70-130	0.502	30	
1,3-Dichlorobenzene	**35.0**	3.3	ppbv	40		87.4	70-130	1.47	30	
1,4-Dichlorobenzene	**34.6**	3.3	ppbv	40		86.5	70-130	0.892	30	
Dichlorodifluoromethane (R12)	**38.6**	10	ppbv	40		96.6	70-130	2.75	30	
1,1-Dichloroethane	**34.9**	2.0	ppbv	40		87.2	70-130	5.79	30	
1,2-Dichloroethane (EDC)	**36.2**	2.5	ppbv	40		90.6	70-130	2.12	30	
cis-1,2-Dichloroethylene	**38.6**	2.0	ppbv	40		96.4	70-130	2.87	30	
1,1-Dichloroethylene	**42.4**	2.0	ppbv	40		106	70-130	5.06	30	
trans-1,2-Dichloroethylene	**38.6**	2.0	ppbv	40		96.6	70-130	3.88	30	
1,2-Dichloropropane	**37.0**	2.2	ppbv	40		92.5	70-130	2.99	30	
trans-1,3-Dichloropropylene	**38.4**	2.2	ppbv	40		96.1	70-130	1.55	30	
cis-1,3-Dichloropropylene	**37.3**	2.2	ppbv	40		93.2	70-130	2.94	30	
Dichlorotetrafluoroethane	**42.2**	7.2	ppbv	40		105	70-130	5.66	30	
Ethylbenzene	**33.6**	2.3	ppbv	40		84.0	70-130	1.56	30	
4-Ethyltoluene	**32.0**	2.0	ppbv	40		80.0	70-130	1.48	30	
Hexachlorobutadiene	**30.4**	4.7	ppbv	40		76.1	70-130	4.15	30	
2-Hexanone (MBK)	**35.0**	12	ppbv	40		87.4	70-130	2.07	30	
Isopropanol (IPA)	**35.2**	41	ppbv	40		88.1	70-130	2.41	30	
Methylene Chloride	**36.3**	14	ppbv	40		90.7	70-130	1.44	30	
4-Methyl-2-pentanone (MIBK)	**33.3**	12	ppbv	40		83.2	70-130	2.05	30	
Styrene	**36.3**	2.3	ppbv	40		90.8	70-130	0.276	30	
1,1,2,2-Tetrachloroethane	**29.5**	7.3	ppbv	40		73.7	70-130	0.715	30	
Tetrachloroethylene (PCE)	**35.0**	2.0	ppbv	40		87.6	70-130	3.96	30	
Toluene	**35.8**	13	ppbv	40		89.6	70-130	1.94	30	
1,2,4-Trichlorobenzene	**34.4**	2.7	ppbv	40		86.0	70-130	8.73	30	
1,1,2-Trichloroethane	**36.6**	3.7	ppbv	40		91.5	70-130	2.85	30	
1,1,1-Trichloroethane	**36.0**	3.7	ppbv	40		90.0	70-130	1.60	30	
Trichloroethylene (TCE)	**36.0**	2.0	ppbv	40		90.0	70-130	5.86	30	
Trichlorofluoromethane (R11)	**36.7**	8.9	ppbv	40		91.7	70-130	7.35	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**39.1**	6.5	ppbv	40		97.7	70-130	3.62	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
LCS Dup (B9F2723-BSD1) Continued					Prepared & Analyzed: 06/27/19					
1,3,5-Trimethylbenzene	**31.8**	2.0	ppbv	40		79.6	70-130	5.12	30	
1,2,4-Trimethylbenzene	**33.4**	2.0	ppbv	40		83.6	70-130	0.0299	30	
Vinyl acetate	**36.9**	2.8	ppbv	40		92.2	70-130	1.75	30	
Vinyl chloride	**45.0**	3.9	ppbv	40		113	70-130	5.74	30	
o-Xylene	**32.6**	2.3	ppbv	40		81.4	70-130	1.05	30	
m,p-Xylenes	**63.9**	2.3	ppbv	80		79.9	70-130	1.50	30	
1,2,3-Trichloropropane	**32.5**	2.0	ppbv	40		81.2	70-130	1.58	30	
Surrogate: 4-Bromofluorobenzene	*20.2*		*ppbv*	*20*		*101*	*70-130*			
Duplicate (B9F2723-DUP1)					**Source: 9F26010-02** Prepared & Analyzed: 06/27/19					
Acetone	**<42**	42	ppbv		<42				30	
Benzene	**<6.0**	6.0	ppbv		<6.0				30	
Benzyl chloride	**<19**	19	ppbv		<19				30	
Bromodichloromethane	**<15**	15	ppbv		<15				30	
Bromoform	**<9.6**	9.6	ppbv		<9.6				30	
Bromomethane	**<5.2**	5.2	ppbv		<5.2				30	
2-Butanone (MEK)	**<34**	34	ppbv		<34				30	
Carbon Disulfide	**<32**	32	ppbv		<32				30	
Carbon Tetrachloride	**<4.2**	4.2	ppbv		<4.2				30	
Chlorobenzene	**<4.4**	4.4	ppbv		<4.4				30	
Chloroethane	**<7.6**	7.6	ppbv		<7.6				30	
Chloroform	**<4.0**	4.0	ppbv		<4.0				30	
Chloromethane	**<9.6**	9.6	ppbv		<9.6				30	
Dibromochloromethane	**<4.6**	4.6	ppbv		<4.6				30	
1,2-Dibromoethane (EDB)	**<5.2**	5.2	ppbv		<5.2				30	
1,2-Dichlorobenzene	**<6.6**	6.6	ppbv		<6.6				30	
1,3-Dichlorobenzene	**<6.6**	6.6	ppbv		<6.6				30	
1,4-Dichlorobenzene	**<6.6**	6.6	ppbv		<6.6				30	
Dichlorodifluoromethane (R12)	**<20**	20	ppbv		<20				30	
1,1-Dichloroethane	**12.5**	4.0	ppbv		12.6			0.794	30	
1,2-Dichloroethane (EDC)	**<5.0**	5.0	ppbv		<5.0				30	
cis-1,2-Dichloroethylene	**53.8**	4.0	ppbv		53.2			1.23	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
Duplicate (B9F2723-DUP1) Continued	**Source: 9F26010-02**		Prepared & Analyzed: 06/27/19							
1,1-Dichloroethylene	**5.90**	4.0	ppbv		5.54			6.29	30	
trans-1,2-Dichloroethylene	**5.56**	4.0	ppbv		5.64			1.43	30	
1,2-Dichloropropane	**<4.4**	4.4	ppbv		<4.4				30	
trans-1,3-Dichloropropylene	**<4.4**	4.4	ppbv		<4.4				30	
cis-1,3-Dichloropropylene	**<4.4**	4.4	ppbv		<4.4				30	
Dichlorotetrafluoroethane	**<14**	14	ppbv		<14				30	
1,4-Dioxane	**<5.6**	5.6	ppbv		<5.6				30	
Ethylbenzene	**<4.6**	4.6	ppbv		<4.6				30	
4-Ethyltoluene	**<4.0**	4.0	ppbv		<4.0				30	
Hexachlorobutadiene	**<9.4**	9.4	ppbv		<9.4				30	
2-Hexanone (MBK)	**<24**	24	ppbv		<24				30	
Isopropanol (IPA)	**<82**	82	ppbv		<82				30	
Methyl-tert-Butyl Ether (MTBE)	**<5.6**	5.6	ppbv		<5.6				30	
Methylene Chloride	**<28**	28	ppbv		<28				30	
4-Methyl-2-pentanone (MIBK)	**<24**	24	ppbv		<24				30	
Styrene	**<4.6**	4.6	ppbv		<4.6				30	
1,1,2,2-Tetrachloroethane	**<15**	15	ppbv		<15				30	
Tetrachloroethylene (PCE)	**63.8**	4.0	ppbv		63.3			0.692	30	
Toluene	**<26**	26	ppbv		<26				30	
1,2,4-Trichlorobenzene	**<5.4**	5.4	ppbv		<5.4				30	
1,1,2-Trichloroethane	**<7.4**	7.4	ppbv		<7.4				30	
1,1,1-Trichloroethane	**<7.4**	7.4	ppbv		<7.4				30	
Trichloroethylene (TCE)	**72.1**	4.0	ppbv		71.0			1.62	30	
Trichlorofluoromethane (R11)	**<18**	18	ppbv		<18				30	
1,1,2-Trichloro-1,2,2-trifluoroethane (R113)	**<13**	13	ppbv		<13				30	
1,3,5-Trimethylbenzene	**<4.0**	4.0	ppbv		<4.0				30	
1,2,4-Trimethylbenzene	**<4.0**	4.0	ppbv		<4.0				30	
Vinyl acetate	**<5.6**	5.6	ppbv		<5.6				30	
Vinyl chloride	**<7.8**	7.8	ppbv		<7.8				30	
o-Xylene	**<4.6**	4.6	ppbv		<4.6				30	
m,p-Xylenes	**<4.6**	4.6	ppbv		<4.6				30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - South Gate

AA Project No: A874363
Date Received: 06/26/19
Date Reported: 07/09/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GCMS EPA TO-15 - Quality Control										
*Batch B9F2723 - *** DEFAULT PREP ****										
Duplicate (B9F2723-DUP1) Continued			**Source: 9F26010-02**	Prepared & Analyzed: 06/27/19						
1,2,3-Trichloropropane	**<4.0**	4.0	ppbv		<4.0				30	
Surrogate: 4-Bromofluorobenzene	*20.3*		*ppbv*	*20*		*101*	*70-130*			
VOCs by EPA TO-3 GC/MS - Quality Control										
*Batch B9F2724 - *** DEFAULT PREP ****										
Blank (B9F2724-BLK1)				Prepared & Analyzed: 06/27/19						
TNMOC as Hexane	<1200	1200	ppbv							
Surrogate: 4-Bromofluorobenzene	*4.27*		*ppbv*	*5.0*		*85.4*	*70-130*			
LCS (B9F2724-BS1)				Prepared & Analyzed: 06/27/19						
GRO as Hexane	**216**	1200	ppbv	200		108	70-130		30	
Surrogate: 4-Bromofluorobenzene	*4.53*		*ppbv*	*5.0*		*90.6*	*70-130*			
LCS Dup (B9F2724-BSD1)				Prepared & Analyzed: 06/28/19						
GRO as Hexane	**212**	1200	ppbv	200		106	70-130	1.84	30	
Surrogate: 4-Bromofluorobenzene	*4.61*		*ppbv*	*5.0*		*92.2*	*70-130*			
Duplicate (B9F2724-DUP1)			**Source: 9F26010-02**	Prepared & Analyzed: 06/27/19						
TNMOC as Hexane	**<1200**	1200	ppbv		<1200				30	
GRO as Hexane	**<1200**	1200	ppbv		807			5.48	30	
Surrogate: 4-Bromofluorobenzene	*5.11*		*ppbv*	*5.0*		*102*	*70-130*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	A874363
Project No:	130072-024	**Date Received:**	06/26/19
Project Name:	Cooper Drum - South Gate	**Date Reported:**	07/09/19

Special Notes

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 19435
70049648
Page 1 of 1

Client: Haley+Aldrich; JHA Environmental Inc. Project Name / No.: COOPER DRUM Sampler's Name: ALEX FELIX
Project Manager: Chris Bisttos / Matt Hillman Site Address: 9313 RAYO AVE Sampler's Signature: [signature]
Phone: 714-371-1820 / 714-392-5970 City: SOUTH GATE P.O. No.:
Fax: State & Zip: CA Quote No.:

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Please enter the TAT Turnaround Codes ** below

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	TO-3	TO-15									Special Instructions
SVE-VGACE-062619-0001	9F26010-01	6-26-19	1040	AIR	1	X	X									
SVE-VGACM-062619-0001	-02	6-26-19	1050	AIR	1	X	X									
SVE-VGACI-062619-0001	-03	6-26-19	1055	AIR	1	X	X									

19 JUN 26 12:40PM

For Laboratory Use

PRIORITY
Rush ___ Hrs SH ✓
Date 6/26/19 Time 1330 Sign [signature]

A.A. Project No.: A87 4363/9F26010

Relinquished by	Date	Time	Received by
[signature]	6-26-19	11:00	[signature]
[signature]	6-26-19	12:40	[signature]

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

April 05, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - WDR Samples / 130072-024

MB874348 / 9C20008

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 03/20/19 12:42 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
624					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42
625					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42
COD 410.4					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42
pH Measurement SM4500H+ B					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42
Sulfide Dissolved SM4500-S=D					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42
TSS SM2540D					
CD-IDWP-032019-0001	9C20008-01	Water	5	03/20/19 12:00	03/20/19 12:42

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	03/20/19		
Date Prepared:	03/25/19		
Date Analyzed:	03/26/19		
AA ID No:	9C20008-01		
Client ID No:	CD-IDWP-03201 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625)

3,3´-Dichlorobenzidine	<12	12	20
Acenaphthene	<3.0	3.0	5.0
Acenaphthylene	<3.0	3.0	5.0
Aniline	<10	10	10
Anthracene	<3.0	3.0	5.0
Azobenzene	<3.0	3.0	5.0
Benzidine	<17	17	20
Benzo(a)anthracene	<3.0	3.0	20
Benzo(a)pyrene	<3.0	3.0	5.0
Benzo(b)fluoranthene	<4.0	4.0	5.0
Benzo(g,h,i)perylene	<5.0	5.0	5.0
Benzoic acid	<5.0	5.0	50
Benzo(k)fluoranthene	<5.0	5.0	5.0
Benzyl alcohol	<7.0	7.0	10
4-Bromophenyl phenyl ether	<4.0	4.0	5.0
Butyl benzyl phthalate	<6.0	6.0	10
4-Chloro-3-methylphenol	<8.0	8.0	10
4-Chloroaniline	<7.0	7.0	20
Bis(2-chloroethoxy)methane	<5.0	5.0	5.0
Bis(2-chloroethyl)ether	<4.0	4.0	5.0
Bis(2-chloroisopropyl)ether	<5.0	5.0	5.0
2-Chloronaphthalene	<5.0	5.0	5.0
2-Chlorophenol	<5.0	5.0	5.0
4-Chlorophenyl phenyl ether	<3.0	3.0	5.0
Chrysene	<4.0	4.0	5.0
Dibenzo(a,h)anthracene	<5.0	5.0	5.0

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	03/20/19
Date Prepared:	03/25/19
Date Analyzed:	03/26/19
AA ID No:	9C20008-01
Client ID No:	CD-IDWP-03201 9-0001
Matrix:	Water
Dilution Factor:	1

625 (EPA 625) (continued)

		MDL	MRL
Dibenzofuran	<3.0	3.0	5.0
Di-n-butyl phthalate	<5.0	5.0	100
1,2-Dichlorobenzene	<2.0	2.0	5.0
1,3-Dichlorobenzene	<3.0	3.0	5.0
1,4-Dichlorobenzene	<3.0	3.0	5.0
2,4-Dichlorophenol	<5.0	5.0	5.0
Diethyl phthalate	<3.0	3.0	40
2,4-Dimethylphenol	<6.0	6.0	20
Dimethyl phthalate	<3.0	3.0	10
4,6-Dinitro-2-methylphenol	<17	17	20
2,4-Dinitrophenol	<10	10	20
2,6-Dinitrotoluene	<3.0	3.0	5.0
2,4-Dinitrotoluene	<3.0	3.0	5.0
Di-n-octyl phthalate	<7.0	7.0	10
1,2-Diphenylhydrazine	<3.0	3.0	5.0
Bis(2-ethylhexyl)phthalate	<19	19	50
Fluoranthene	<4.0	4.0	5.0
Fluorene	<3.0	3.0	5.0
Hexachlorobenzene	<7.0	7.0	10
Hexachlorobutadiene	<8.0	8.0	10
Hexachlorocyclopentadiene	<6.0	6.0	10
Hexachloroethane	<3.0	3.0	5.0
Indeno (1,2,3-cd) pyrene	<5.0	5.0	20
Isophorone	<4.0	4.0	5.0
2-Methylnaphthalene	<5.0	5.0	5.0
2-Methylphenol	<4.0	4.0	10

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	03/20/19		
Date Prepared:	03/25/19		
Date Analyzed:	03/26/19		
AA ID No:	9C20008-01		
Client ID No:	CD-IDWP-03201 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625) (continued)

3-Methylphenol	<4.0	4.0	10
4-Methylphenol	<4.0	4.0	10
Naphthalene	<4.0	4.0	5.0
4-Nitroaniline	<5.0	5.0	20
3-Nitroaniline	<10	10	20
2-Nitroaniline	<4.0	4.0	20
Nitrobenzene	<5.0	5.0	5.0
2-Nitrophenol	<6.0	6.0	10
4-Nitrophenol	<5.0	5.0	10
N-Nitrosodimethylamine	<3.0	3.0	5.0
N-Nitrosodiphenylamine	<4.0	4.0	5.0
N-Nitrosodi-n-propylamine	<6.0	6.0	10
Pentachlorophenol	<6.5	6.5	20
Phenanthrene	<3.0	3.0	5.0
Phenol	<3.0	3.0	5.0
Pyrene	<3.0	3.0	5.0
1,2,4-Trichlorobenzene	<4.0	4.0	10
2,4,5-Trichlorophenol	<6.0	6.0	10
2,4,6-Trichlorophenol	<8.0	8.0	10

Surrogates		**%REC Limits**
2-Fluorobiphenyl	65%	43-116
2-Fluorophenol	37%	21-100
Nitrobenzene-d5	86%	35-134
Phenol-d6	27%	10-94
Terphenyl-dl4	74%	33-141

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	03/20/19		
Date Prepared:	03/25/19		
Date Analyzed:	03/26/19		
AA ID No:	9C20008-01		
Client ID No:	CD-IDWP-03201 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625) (continued)

2,4,6-Tribromophenol	56%	10-123	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples
Method: General Chemistry Analyses

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
COD 410.4 (EPA 410.4)									
9C20008-01	CD-IDWP-032019-0001	03/20/19	04/01/19	04/01/19	1	<7.0	mg/L	7	10
pH Measurement SM4500H+ B (SM4500H+ B)									
9C20008-01	CD-IDWP-032019-0001	03/20/19	03/20/19	03/20/19	1	**7.3**	pH Units	0.01	0.01
Sulfide Dissolved SM4500-S=D (SM4500-S=D)									
9C20008-01	CD-IDWP-032019-0001	03/20/19	03/27/19	03/27/19	1	<0.025	mg/L	0.025	0.05
TSS SM2540D (SM2540D)									
9C20008-01	CD-IDWP-032019-0001	03/20/19	03/21/19	03/21/19	1	**10**	mg/L	5	10

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	VOCs by GC/MS EPA 624	**Units:**	ug/L

Date Sampled:	03/20/19		
Date Prepared:	03/26/19		
Date Analyzed:	03/26/19		
AA ID No:	9C20008-01		
Client ID No:	CD-IDWP-03201 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL
624 (EPA 624)			
Benzene	<0.20	0.20	0.50
Bromodichloromethane	<0.20	0.20	0.50
Bromoform	<0.50	0.50	0.50
Bromomethane	<0.50	0.50	0.50
Carbon Tetrachloride	<0.30	0.30	0.50
Chlorobenzene	<0.30	0.30	0.50
Chloroethane	<0.50	0.50	0.50
2-Chloroethyl Vinyl Ether	<6.0	6.0	10
Chloroform	<0.30	0.30	0.50
Chloromethane	<0.40	0.40	0.50
Dibromochloromethane	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	0.30	0.50
1,4-Dichlorobenzene	<0.30	0.30	0.50
1,3-Dichlorobenzene	<0.10	0.10	0.50
1,1-Dichloroethane	<0.20	0.20	0.50
1,2-Dichloroethane (EDC)	**1.5**	0.30	0.50
trans-1,2-Dichloroethylene	**4.1**	0.40	0.50
1,1-Dichloroethylene	<0.30	0.30	0.50
1,2-Dichloropropane	<0.50	0.50	0.50
cis-1,3-Dichloropropylene	<0.20	0.20	0.50
trans-1,3-Dichloropropylene	<0.20	0.20	0.50
Ethylbenzene	<0.20	0.20	0.50
Methylene Chloride	<5.0	5.0	5.0
1,1,2,2-Tetrachloroethane	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	0.50	0.50
Toluene	<0.30	0.30	0.50

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19
Method:	VOCs by GC/MS EPA 624	**Units:**	ug/L

Date Sampled:	03/20/19		
Date Prepared:	03/26/19		
Date Analyzed:	03/26/19		
AA ID No:	9C20008-01		
Client ID No:	CD-IDWP-03201 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

624 (EPA 624) (continued)

1,1,2-Trichloroethane	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	0.30	0.50
Trichloroethylene (TCE)	**0.59**	0.20	0.50
Vinyl chloride	**0.61**	0.50	0.50

Surrogates		**%REC Limits**
4-Bromofluorobenzene	104%	70-140
Dibromofluoromethane	105%	70-140
Toluene-d8	106%	70-140

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9C2522 - EPA 3510C_MS										
Blank (B9C2522-BLK1)				Prepared: 03/25/19 Analyzed: 03/26/19						
3,3´-Dichlorobenzidine	<12	12	ug/L							
Acenaphthene	<3.0	3.0	ug/L							
Acenaphthylene	<3.0	3.0	ug/L							
Aniline	<10	10	ug/L							
Anthracene	<3.0	3.0	ug/L							
Azobenzene	<3.0	3.0	ug/L							
Benzidine	<17	17	ug/L							
Benzo(a)anthracene	<3.0	3.0	ug/L							
Benzo(a)pyrene	<3.0	3.0	ug/L							
Benzo(b)fluoranthene	<4.0	4.0	ug/L							
Benzo(g,h,i)perylene	<5.0	5.0	ug/L							
Benzoic acid	<5.0	5.0	ug/L							
Benzo(k)fluoranthene	<5.0	5.0	ug/L							
Benzyl alcohol	<7.0	7.0	ug/L							
4-Bromophenyl phenyl ether	<4.0	4.0	ug/L							
Butyl benzyl phthalate	<6.0	6.0	ug/L							
4-Chloro-3-methylphenol	<8.0	8.0	ug/L							
4-Chloroaniline	<7.0	7.0	ug/L							
Bis(2-chloroethoxy)methane	<5.0	5.0	ug/L							
Bis(2-chloroethyl)ether	<4.0	4.0	ug/L							
Bis(2-chloroisopropyl)ether	<5.0	5.0	ug/L							
2-Chloronaphthalene	<5.0	5.0	ug/L							
2-Chlorophenol	<5.0	5.0	ug/L							
4-Chlorophenyl phenyl ether	<3.0	3.0	ug/L							
Chrysene	<4.0	4.0	ug/L							
Dibenzo(a,h)anthracene	<5.0	5.0	ug/L							
Dibenzofuran	<3.0	3.0	ug/L							
Di-n-butyl phthalate	<5.0	5.0	ug/L							
1,2-Dichlorobenzene	<2.0	2.0	ug/L							
1,3-Dichlorobenzene	<3.0	3.0	ug/L							
1,4-Dichlorobenzene	<3.0	3.0	ug/L							
2,4-Dichlorophenol	<5.0	5.0	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9C2522 - EPA 3510C_MS										
Blank (B9C2522-BLK1) Continued				Prepared: 03/25/19 Analyzed: 03/26/19						
Diethyl phthalate	<3.0	3.0	ug/L							
2,4-Dimethylphenol	<6.0	6.0	ug/L							
Dimethyl phthalate	<3.0	3.0	ug/L							
4,6-Dinitro-2-methylphenol	<17	17	ug/L							
2,4-Dinitrophenol	<10	10	ug/L							
2,6-Dinitrotoluene	<3.0	3.0	ug/L							
2,4-Dinitrotoluene	<3.0	3.0	ug/L							
Di-n-octyl phthalate	<7.0	7.0	ug/L							
1,2-Diphenylhydrazine	<3.0	3.0	ug/L							
Bis(2-ethylhexyl)phthalate	<19	19	ug/L							
Fluoranthene	<4.0	4.0	ug/L							
Fluorene	<3.0	3.0	ug/L							
Hexachlorobenzene	<7.0	7.0	ug/L							
Hexachlorobutadiene	<8.0	8.0	ug/L							
Hexachlorocyclopentadiene	<6.0	6.0	ug/L							
Hexachloroethane	<3.0	3.0	ug/L							
Indeno (1,2,3-cd) pyrene	<5.0	5.0	ug/L							
Isophorone	<4.0	4.0	ug/L							
2-Methylnaphthalene	<5.0	5.0	ug/L							
2-Methylphenol	<4.0	4.0	ug/L							
3-Methylphenol	<4.0	4.0	ug/L							
4-Methylphenol	<4.0	4.0	ug/L							
Naphthalene	<4.0	4.0	ug/L							
4-Nitroaniline	<5.0	5.0	ug/L							
3-Nitroaniline	<10	10	ug/L							
2-Nitroaniline	<4.0	4.0	ug/L							
Nitrobenzene	<5.0	5.0	ug/L							
2-Nitrophenol	<6.0	6.0	ug/L							
4-Nitrophenol	<5.0	5.0	ug/L							
N-Nitrosodimethylamine	<3.0	3.0	ug/L							
N-Nitrosodiphenylamine	<4.0	4.0	ug/L							
N-Nitrosodi-n-propylamine	<6.0	6.0	ug/L							

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9C2522 - EPA 3510C_MS										
Blank (B9C2522-BLK1) Continued				Prepared: 03/25/19 Analyzed: 03/26/19						
Pentachlorophenol	<6.5	6.5	ug/L							
Phenanthrene	<3.0	3.0	ug/L							
Phenol	<3.0	3.0	ug/L							
Pyrene	<3.0	3.0	ug/L							
1,2,4-Trichlorobenzene	<4.0	4.0	ug/L							
2,4,5-Trichlorophenol	<6.0	6.0	ug/L							
2,4,6-Trichlorophenol	<8.0	8.0	ug/L							
Surrogate: 2-Fluorobiphenyl	*17.1*		*ug/L*	*25*		*68.3*	*43-116*			
Surrogate: 2-Fluorophenol	*20.4*		*ug/L*	*50*		*40.7*	*21-100*			
Surrogate: Nitrobenzene-d5	*23.0*		*ug/L*	*25*		*92.0*	*35-134*			
Surrogate: Phenol-d6	*15.1*		*ug/L*	*50*		*30.2*	*10-94*			
Surrogate: Terphenyl-dl4	*18.6*		*ug/L*	*25*		*74.6*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*24.4*		*ug/L*	*50*		*48.9*	*10-123*			
LCS (B9C2522-BS1)				Prepared: 03/25/19 Analyzed: 03/26/19						
Acenaphthene	**19.0**	3.0	ug/L	30		63.3	50-121			
Anthracene	**21.3**	3.0	ug/L	30		71.0	41-121			
Benzo(a)pyrene	**19.6**	3.0	ug/L	30		65.4	17-163			
Benzo(b)fluoranthene	**20.7**	4.0	ug/L	30		69.1	33-137			
Butyl benzyl phthalate	**18.5**	6.0	ug/L	30		61.6	19-139			
4-Chloro-3-methylphenol	**16.9**	8.0	ug/L	30		56.2	22-147			
Bis(2-chloroethyl)ether	**23.5**	4.0	ug/L	30		78.3	26-122			
2-Chloronaphthalene	**21.2**	5.0	ug/L	30		70.6	60-118			
4-Chlorophenyl phenyl ether	**16.4**	3.0	ug/L	30		54.8	41-128			
1,4-Dichlorobenzene	**18.2**	3.0	ug/L	30		60.6	26-105			
2,4-Dichlorophenol	**9.92**	5.0	ug/L	30		33.1	39-135			***
Di-n-octyl phthalate	**17.9**	7.0	ug/L	30		59.8	4-146			
Fluoranthene	**20.2**	4.0	ug/L	30		67.4	47-125			
Fluorene	**18.4**	3.0	ug/L	30		61.2	60-120			
Hexachlorobenzene	**20.8**	7.0	ug/L	30		69.4	2-152			
Hexachlorobutadiene	**13.4**	8.0	ug/L	30		44.5	24-116			
Hexachloroethane	**18.5**	3.0	ug/L	30		61.5	40-113			

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9C2522 - EPA 3510C_MS										
LCS (B9C2522-BS1) Continued				Prepared: 03/25/19 Analyzed: 03/26/19						
Isophorone	**20.3**	4.0	ug/L	30		67.7	21-196			
Naphthalene	**19.2**	4.0	ug/L	30		63.9	25-121			
Nitrobenzene	**22.0**	5.0	ug/L	30		73.2	38-133			
2-Nitrophenol	**7.88**	6.0	ug/L	30		26.3	2-163			J
N-Nitrosodi-n-propylamine	**25.3**	6.0	ug/L	30		84.3	2-230			
Pentachlorophenol	**6.50**	6.5	ug/L	30		21.7	14-176			J
Phenol	**9.24**	3.0	ug/L	30		30.8	5-112			
Pyrene	**21.7**	3.0	ug/L	30		72.3	52-115			
1,2,4-Trichlorobenzene	**16.1**	4.0	ug/L	30		53.8	44-142			
2,4,6-Trichlorophenol	**8.33**	8.0	ug/L	30		27.8	37-144			***, J
Surrogate: 2-Fluorobiphenyl	*21.5*		*ug/L*	*25*		*85.8*	*43-116*			
Surrogate: 2-Fluorophenol	*15.4*		*ug/L*	*50*		*30.9*	*21-100*			
Surrogate: Nitrobenzene-d5	*25.0*		*ug/L*	*25*		*100*	*35-134*			
Surrogate: Phenol-d6	*15.6*		*ug/L*	*50*		*31.1*	*10-94*			
Surrogate: Terphenyl-dl4	*24.0*		*ug/L*	*25*		*96.2*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*19.3*		*ug/L*	*50*		*38.5*	*10-123*			
LCS Dup (B9C2522-BSD1)				Prepared: 03/25/19 Analyzed: 03/26/19						
Acenaphthene	**22.3**	3.0	ug/L	30		74.5	50-121	16.3	30	
Anthracene	**25.2**	3.0	ug/L	30		83.9	41-121	16.6	30	
Benzo(a)pyrene	**23.6**	3.0	ug/L	30		78.8	17-163	18.6	30	
Benzo(b)fluoranthene	**25.0**	4.0	ug/L	30		83.4	33-137	18.8	30	
Butyl benzyl phthalate	**23.8**	6.0	ug/L	30		79.4	19-139	25.3	30	
4-Chloro-3-methylphenol	**21.8**	8.0	ug/L	30		72.8	22-147	25.7	30	
Bis(2-chloroethyl)ether	**27.4**	4.0	ug/L	30		91.4	26-122	15.4	30	
2-Chloronaphthalene	**22.7**	5.0	ug/L	30		75.7	60-118	6.88	30	
4-Chlorophenyl phenyl ether	**20.2**	3.0	ug/L	30		67.5	41-128	20.7	30	
1,4-Dichlorobenzene	**21.2**	3.0	ug/L	30		70.7	26-105	15.4	30	
2,4-Dichlorophenol	**14.6**	5.0	ug/L	30		48.8	39-135	38.4	30	AA-C1
Di-n-octyl phthalate	**25.6**	7.0	ug/L	30		85.4	4-146	35.3	30	AA-C1
Fluoranthene	**24.4**	4.0	ug/L	30		81.5	47-125	18.9	30	
Fluorene	**21.8**	3.0	ug/L	30		72.8	60-120	17.3	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9C2522 - EPA 3510C_MS										
LCS Dup (B9C2522-BSD1) Continued				Prepared: 03/25/19 Analyzed: 03/26/19						
Hexachlorobenzene	**24.7**	7.0	ug/L	30		82.4	2-152	17.2	30	
Hexachlorobutadiene	**15.1**	8.0	ug/L	30		50.4	24-116	12.4	30	
Hexachloroethane	**23.2**	3.0	ug/L	30		77.3	40-113	22.7	30	
Isophorone	**22.9**	4.0	ug/L	30		76.2	21-196	11.9	30	
Naphthalene	**21.2**	4.0	ug/L	30		70.7	25-121	10.1	30	
Nitrobenzene	**25.8**	5.0	ug/L	30		86.1	38-133	16.2	30	
2-Nitrophenol	**13.1**	6.0	ug/L	30		43.8	2-163	50.0	30	AA-C1
N-Nitrosodi-n-propylamine	**32.4**	6.0	ug/L	30		108	2-230	24.7	30	
Pentachlorophenol	**6.93**	6.5	ug/L	30		23.1	14-176	6.40	30	J
Phenol	**12.1**	3.0	ug/L	30		40.5	5-112	27.1	30	
Pyrene	**24.3**	3.0	ug/L	30		81.0	52-115	11.4	30	
1,2,4-Trichlorobenzene	**17.3**	4.0	ug/L	30		57.6	44-142	6.88	30	
2,4,6-Trichlorophenol	**13.9**	8.0	ug/L	30		46.3	37-144	50.1	30	AA-C1
Surrogate: 2-Fluorobiphenyl	*21.0*		*ug/L*	*25*		*84.0*	*43-116*			
Surrogate: 2-Fluorophenol	*25.7*		*ug/L*	*50*		*51.3*	*21-100*			
Surrogate: Nitrobenzene-d5	*27.2*		*ug/L*	*25*		*109*	*35-134*			
Surrogate: Phenol-d6	*21.4*		*ug/L*	*50*		*42.8*	*10-94*			
Surrogate: Terphenyl-dl4	*25.6*		*ug/L*	*25*		*102*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*32.8*		*ug/L*	*50*		*65.6*	*10-123*			
General Chemistry Analyses - Quality Control										
Batch B9C2530 - NO PREP										
Blank (B9C2530-BLK1)				Prepared & Analyzed: 03/21/19						
Total Suspended Solids	<5.0	5.0	mg/L							
LCS (B9C2530-BS1)				Prepared & Analyzed: 03/21/19						
Total Suspended Solids	**45.5**	5.0	mg/L	50		91.0	80-120			
LCS Dup (B9C2530-BSD1)				Prepared & Analyzed: 03/21/19						
Total Suspended Solids	**46.0**	5.0	mg/L	50		92.0	80-120	1.09	20	
Duplicate (B9C2530-DUP1)				**Source: 9C14005-01** Prepared & Analyzed: 03/21/19						
Total Suspended Solids	**55.0**	5.0	mg/L		53.6			2.58	20	
Batch B9C2721 - NO PREP										

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Chemistry Analyses - Quality Control										
Batch B9C2721 - NO PREP										
Blank (B9C2721-BLK1)				Prepared & Analyzed: 03/27/19						
Sulfide	<0.025	0.025	mg/L							
LCS (B9C2721-BS1)				Prepared & Analyzed: 03/27/19						
Sulfide	**0.477**	0.025	mg/L	0.50		95.4	70-130		20	
LCS Dup (B9C2721-BSD1)				Prepared & Analyzed: 03/27/19						
Sulfide	**0.498**	0.025	mg/L	0.50		99.6	70-130	4.31	20	
Duplicate (B9C2721-DUP1)			**Source: 9C20008-01**	Prepared & Analyzed: 03/27/19						
Sulfide	**<0.025**	0.025	mg/L		<0.050				20	
Matrix Spike (B9C2721-MS1)			**Source: 9C20008-01**	Prepared & Analyzed: 03/27/19						
Sulfide	**0.544**	0.025	mg/L	0.50	<0.050	109	70-130		20	
Matrix Spike Dup (B9C2721-MSD1)			**Source: 9C20008-01**	Prepared & Analyzed: 03/27/19						
Sulfide	**0.548**	0.025	mg/L	0.50	<0.050	110	70-130	0.733	20	
Batch B9D0119 - NO PREP										
Blank (B9D0119-BLK1)				Prepared & Analyzed: 04/01/19						
Chemical Oxygen Demand	<7.0	7.0	mg/L							
LCS (B9D0119-BS1)				Prepared & Analyzed: 04/01/19						
Chemical Oxygen Demand	**58.8**	7.0	mg/L	50		118	80-120			
LCS Dup (B9D0119-BSD1)				Prepared & Analyzed: 04/01/19						
Chemical Oxygen Demand	**58.8**	7.0	mg/L	50		118	80-120	0.00	20	
Duplicate (B9D0119-DUP1)			**Source: 9C20008-01**	Prepared & Analyzed: 04/01/19						
Chemical Oxygen Demand	**<7.0**	7.0	mg/L		<10				20	
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
Blank (B9C2621-BLK1)				Prepared & Analyzed: 03/26/19						
Benzene	<0.20	0.20	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							
Bromomethane	<0.50	0.50	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
Blank (B9C2621-BLK1) Continued				Prepared & Analyzed: 03/26/19						
2-Chloroethyl Vinyl Ether	<6.0	6.0	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
Surrogate: 4-Bromofluorobenzene	*52.1*		*ug/L*	*50*		*104*	*70-140*			
Surrogate: Dibromofluoromethane	*53.2*		*ug/L*	*50*		*106*	*70-140*			
Surrogate: Toluene-d8	*52.9*		*ug/L*	*50*		*106*	*70-140*			
LCS (B9C2621-BS1)				Prepared & Analyzed: 03/26/19						
Benzene	**19.9**	0.20	ug/L	20		99.5	75-125			
Bromodichloromethane	**20.7**	0.20	ug/L	20		104	75-125			
Bromoform	**21.2**	0.50	ug/L	20		106	75-125			
Bromomethane	**16.1**	0.50	ug/L	20		80.6	75-125			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
LCS (B9C2621-BS1) Continued				Prepared & Analyzed: 03/26/19						
Carbon Tetrachloride	**20.6**	0.30	ug/L	20		103	75-125			
Chlorobenzene	**20.8**	0.30	ug/L	20		104	75-125			
Chloroethane	**19.8**	0.50	ug/L	20		99.1	75-125			
2-Chloroethyl Vinyl Ether	**19.3**	6.0	ug/L	20		96.5	70-130			
Chloroform	**20.2**	0.30	ug/L	20		101	75-125			
Chloromethane	**19.9**	0.40	ug/L	20		99.4	65-125			
Dibromochloromethane	**20.3**	0.30	ug/L	20		102	75-125			
1,2-Dichlorobenzene	**20.5**	0.30	ug/L	20		103	70-130			
1,4-Dichlorobenzene	**20.5**	0.30	ug/L	20		103	75-125			
1,3-Dichlorobenzene	**20.5**	0.10	ug/L	20		102	70-130			
1,1-Dichloroethane	**19.0**	0.20	ug/L	20		95.2	70-125			
1,2-Dichloroethane (EDC)	**20.0**	0.30	ug/L	20		100	75-125			
trans-1,2-Dichloroethylene	**20.7**	0.40	ug/L	20		103	75-125			
1,1-Dichloroethylene	**19.1**	0.30	ug/L	20		95.4	70-130			
1,2-Dichloropropane	**20.7**	0.50	ug/L	20		103	75-130			
cis-1,3-Dichloropropylene	**20.3**	0.20	ug/L	20		102	75-125			
trans-1,3-Dichloropropylene	**20.8**	0.20	ug/L	20		104	70-130			
Ethylbenzene	**21.2**	0.20	ug/L	20		106	75-125			
Methylene Chloride	**19.6**	5.0	ug/L	20		97.8	75-130			
1,1,2,2-Tetrachloroethane	**20.8**	0.30	ug/L	20		104	70-135			
Tetrachloroethylene (PCE)	**21.6**	0.50	ug/L	20		108	75-125			
Toluene	**20.2**	0.30	ug/L	20		101	75-125			
1,1,2-Trichloroethane	**19.8**	0.30	ug/L	20		99.2	75-125			
1,1,1-Trichloroethane	**20.5**	0.30	ug/L	20		102	75-125			
Trichloroethylene (TCE)	**21.0**	0.20	ug/L	20		105	75-125			
Vinyl chloride	**18.3**	0.50	ug/L	20		91.6	75-125			
Surrogate: 4-Bromofluorobenzene	*52.2*		*ug/L*	*50*		*104*	*70-140*			
Surrogate: Dibromofluoromethane	*51.3*		*ug/L*	*50*		*103*	*70-140*			
Surrogate: Toluene-d8	*52.5*		*ug/L*	*50*		*105*	*70-140*			
LCS Dup (B9C2621-BSD1)				Prepared: 03/26/19 Analyzed: 03/27/19						
Benzene	**21.5**	0.20	ug/L	20		108	75-125	7.92	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
LCS Dup (B9C2621-BSD1) Continued				Prepared: 03/26/19 Analyzed: 03/27/19						
Bromodichloromethane	**19.6**	0.20	ug/L	20		98.0	75-125	5.65	30	
Bromoform	**19.6**	0.50	ug/L	20		98.2	75-125	7.69	30	
Bromomethane	**18.4**	0.50	ug/L	20		91.8	75-125	13.1	30	
Carbon Tetrachloride	**19.9**	0.30	ug/L	20		99.4	75-125	3.85	30	
Chlorobenzene	**20.8**	0.30	ug/L	20		104	75-125	0.0961	30	
Chloroethane	**19.8**	0.50	ug/L	20		99.0	75-125	0.151	30	
2-Chloroethyl Vinyl Ether	**18.7**	6.0	ug/L	20		93.7	70-130	2.94	30	
Chloroform	**20.3**	0.30	ug/L	20		101	75-125	0.395	30	
Chloromethane	**17.5**	0.40	ug/L	20		87.7	65-125	12.5	30	
Dibromochloromethane	**19.6**	0.30	ug/L	20		97.8	75-125	3.86	30	
1,2-Dichlorobenzene	**20.6**	0.30	ug/L	20		103	70-130	0.632	30	
1,4-Dichlorobenzene	**20.2**	0.30	ug/L	20		101	75-125	1.62	30	
1,3-Dichlorobenzene	**20.3**	0.10	ug/L	20		102	70-130	0.637	30	
1,1-Dichloroethane	**18.7**	0.20	ug/L	20		93.6	70-125	1.75	30	
1,2-Dichloroethane (EDC)	**18.2**	0.30	ug/L	20		90.8	75-125	9.79	30	
trans-1,2-Dichloroethylene	**21.6**	0.40	ug/L	20		108	75-125	4.12	30	
1,1-Dichloroethylene	**21.0**	0.30	ug/L	20		105	70-130	9.49	30	
1,2-Dichloropropane	**22.1**	0.50	ug/L	20		110	75-130	6.69	30	
cis-1,3-Dichloropropylene	**20.7**	0.20	ug/L	20		103	75-125	1.76	30	
trans-1,3-Dichloropropylene	**18.8**	0.20	ug/L	20		94.0	70-130	10.2	30	
Ethylbenzene	**21.0**	0.20	ug/L	20		105	75-125	0.948	30	
Methylene Chloride	**20.3**	5.0	ug/L	20		101	75-130	3.71	30	
1,1,2,2-Tetrachloroethane	**19.5**	0.30	ug/L	20		97.3	70-135	6.61	30	
Tetrachloroethylene (PCE)	**20.4**	0.50	ug/L	20		102	75-125	5.68	30	
Toluene	**20.7**	0.30	ug/L	20		104	75-125	2.44	30	
1,1,2-Trichloroethane	**20.6**	0.30	ug/L	20		103	75-125	3.52	30	
1,1,1-Trichloroethane	**19.8**	0.30	ug/L	20		99.0	75-125	3.38	30	
Trichloroethylene (TCE)	**21.5**	0.20	ug/L	20		107	75-125	2.54	30	
Vinyl chloride	**18.3**	0.50	ug/L	20		91.6	75-125	0.00	30	
Surrogate: 4-Bromofluorobenzene	*53.8*		*ug/L*	*50*		*108*	*70-140*			
Surrogate: Dibromofluoromethane	*51.6*		*ug/L*	*50*		*103*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
LCS Dup (B9C2621-BSD1) Continued				Prepared: 03/26/19 Analyzed: 03/27/19						
Surrogate: Toluene-d8	*52.6*		*ug/L*	*50*		*105*	*70-140*			
Matrix Spike (B9C2621-MS1)			**Source: 9C20009-15**	Prepared & Analyzed: 03/26/19						
Benzene	**20.1**	0.20	ug/L	20		100	70-130			
Bromodichloromethane	**19.8**	0.20	ug/L	20		98.9	70-130			
Bromoform	**19.1**	0.50	ug/L	20		95.7	70-130			
Bromomethane	**18.7**	0.50	ug/L	20		93.7	70-130			
Carbon Tetrachloride	**19.4**	0.30	ug/L	20		96.9	70-130			
Chlorobenzene	**20.4**	0.30	ug/L	20		102	70-130			
Chloroethane	**23.9**	0.50	ug/L	20		119	70-130			
Chloroform	**19.3**	0.30	ug/L	20		96.6	70-130			
Chloromethane	**17.4**	0.40	ug/L	20		86.9	65-130			
Dibromochloromethane	**19.2**	0.30	ug/L	20		95.9	70-130			
1,2-Dichlorobenzene	**20.0**	0.30	ug/L	20		99.9	70-130			
1,4-Dichlorobenzene	**19.9**	0.30	ug/L	20		99.6	70-130			
1,3-Dichlorobenzene	**19.7**	0.10	ug/L	20		98.7	70-130			
1,1-Dichloroethane	**18.0**	0.20	ug/L	20		90.1	70-130			
1,2-Dichloroethane (EDC)	**18.3**	0.30	ug/L	20		91.5	70-130			
trans-1,2-Dichloroethylene	**19.9**	0.40	ug/L	20		99.3	70-130			
1,1-Dichloroethylene	**18.9**	0.30	ug/L	20		94.4	70-130			
1,2-Dichloropropane	**21.4**	0.50	ug/L	20		107	70-130			
cis-1,3-Dichloropropylene	**19.5**	0.20	ug/L	20		97.4	70-130			
trans-1,3-Dichloropropylene	**18.7**	0.20	ug/L	20		93.6	70-130			
Ethylbenzene	**20.2**	0.20	ug/L	20		101	70-130			
Methylene Chloride	**19.1**	5.0	ug/L	20		95.5	70-130			
1,1,2,2-Tetrachloroethane	**19.0**	0.30	ug/L	20		95.2	70-130			
Tetrachloroethylene (PCE)	**20.9**	0.50	ug/L	20		105	70-130			
Toluene	**20.0**	0.30	ug/L	20		99.8	70-130			
1,1,2-Trichloroethane	**20.2**	0.30	ug/L	20		101	70-130			
1,1,1-Trichloroethane	**19.1**	0.30	ug/L	20		95.4	70-130			
Trichloroethylene (TCE)	**20.6**	0.20	ug/L	20		103	70-130			
Vinyl chloride	**17.6**	0.50	ug/L	20		87.9	70-130			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
Matrix Spike (B9C2621-MS1) Continued Source: 9C20009-15 Prepared & Analyzed: 03/26/19										
Surrogate: 4-Bromofluorobenzene	*52.7*		*ug/L*	*50*		*105*	*70-140*			
Surrogate: Dibromofluoromethane	*50.8*		*ug/L*	*50*		*102*	*70-140*			
Surrogate: Toluene-d8	*52.4*		*ug/L*	*50*		*105*	*70-140*			
Matrix Spike Dup (B9C2621-MSD1) Source: 9C20009-15 Prepared & Analyzed: 03/26/19										
Benzene	**21.4**	0.20	ug/L	20		107	70-130	6.12	30	
Bromodichloromethane	**20.5**	0.20	ug/L	20		102	70-130	3.48	30	
Bromoform	**20.7**	0.50	ug/L	20		104	70-130	7.98	30	
Bromomethane	**16.0**	0.50	ug/L	20		80.2	70-130	15.6	30	
Carbon Tetrachloride	**19.9**	0.30	ug/L	20		99.6	70-130	2.80	30	
Chlorobenzene	**21.1**	0.30	ug/L	20		106	70-130	3.22	30	
Chloroethane	**23.8**	0.50	ug/L	20		119	70-130	0.546	30	
Chloroform	**19.8**	0.30	ug/L	20		98.8	70-130	2.30	30	
Chloromethane	**19.8**	0.40	ug/L	20		99.0	65-130	13.0	30	
Dibromochloromethane	**20.3**	0.30	ug/L	20		102	70-130	5.67	30	
1,2-Dichlorobenzene	**21.6**	0.30	ug/L	20		108	70-130	7.65	30	
1,4-Dichlorobenzene	**21.0**	0.30	ug/L	20		105	70-130	5.42	30	
1,3-Dichlorobenzene	**20.5**	0.10	ug/L	20		102	70-130	3.73	30	
1,1-Dichloroethane	**18.1**	0.20	ug/L	20		90.7	70-130	0.664	30	
1,2-Dichloroethane (EDC)	**19.1**	0.30	ug/L	20		95.4	70-130	4.12	30	
trans-1,2-Dichloroethylene	**20.5**	0.40	ug/L	20		102	70-130	3.07	30	
1,1-Dichloroethylene	**19.5**	0.30	ug/L	20		97.6	70-130	3.39	30	
1,2-Dichloropropane	**21.9**	0.50	ug/L	20		110	70-130	2.17	30	
cis-1,3-Dichloropropylene	**20.3**	0.20	ug/L	20		101	70-130	4.12	30	
trans-1,3-Dichloropropylene	**19.7**	0.20	ug/L	20		98.6	70-130	5.15	30	
Ethylbenzene	**21.3**	0.20	ug/L	20		107	70-130	5.59	30	
Methylene Chloride	**19.7**	5.0	ug/L	20		98.3	70-130	2.89	30	
1,1,2,2-Tetrachloroethane	**20.8**	0.30	ug/L	20		104	70-130	8.69	30	
Tetrachloroethylene (PCE)	**21.4**	0.50	ug/L	20		107	70-130	2.41	30	
Toluene	**20.8**	0.30	ug/L	20		104	70-130	4.07	30	
1,1,2-Trichloroethane	**20.9**	0.30	ug/L	20		104	70-130	3.21	30	
1,1,1-Trichloroethane	**19.7**	0.30	ug/L	20		98.3	70-130	2.99	30	
Trichloroethylene (TCE)	**21.4**	0.20	ug/L	20		107	70-130	3.81	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874348
Date Received: 03/20/19
Date Reported: 04/05/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9C2621 - EPA 5030B										
Matrix Spike Dup (B9C2621-MSD1) Continued	**Source: 9C20009-15** Prepared & Analyzed: 03/26/19									
Vinyl chloride	**17.2**	0.50	ug/L	20		85.8	70-130	2.48	30	
Surrogate: 4-Bromofluorobenzene	*54.3*		*ug/L*	*50*		*109*	*70-140*			
Surrogate: Dibromofluoromethane	*49.9*		*ug/L*	*50*		*99.8*	*70-140*			
Surrogate: Toluene-d8	*53.0*		*ug/L*	*50*		*106*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874348
Project No:	130072-024	**Date Received:**	03/20/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	04/05/19

Special Notes

[1] = ******* : Exceeds lower control limit.

[2] = **AA-C1** : Exceeds RPD limit.

J : Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

A.A. COC No.: 7748

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 Fax: 818-998-7258

Client: Haley & Aldrich ; JHA Environmental, Inc.	**Project Name / No.: Cooper Drum IDWP**	**Sampler's Name: Alex Felix**
Project Manager: Chris Tsiatsios / Matt Hillman	**Site Address: 9313 Rayo Ave**	**Sampler's Signature:**
Phone: 714-371-1820 / 714-392-5970	**City: Southgate**	**P.O.No:**
Fax: 949-453-1047	**State & Zip: CA**	**Quote.:**

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	VOC's EPA 624	SVOC's EPA 625	pH (within 1 Hour)	COD by EPA410.4	TSS by SM2540D	Dissolved Sulfides	Special Instructions
						Please enter the TAT Turnaround Codes ** below						
CD-IDWP-032019-0001	~~MB374348~~ -01 JV 9C20008	3/20/2019	1200	Water	9	X	X	X	X	X	X	*: field analyzed
												SAMPLE INTEGRITY INTACT (Y) N TEMP 4.7
												19 MAR 20 3:40PM

For Laboratory Use	Relinquished by	Date	Time	Received by
REVIEWED Date 3/20/19 Time 1600 TAT N Days Sign:		03-20-19	1220	
	Relinquished by	Date	Time	Received by
		3/20/19	1500	
A.A. Project No.: MB374348/9C20008	Relinquished by	Date	Time	Received by

Note: By Relinquishing samples to American Analytics, Client agrees to pay for the services requested on this chain of Custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 Days from the date invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) To American Analytics.

AMERICAN ANALYTICS

9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

July 02, 2019

Peter Bennett

Haley & Aldrich (Oakland)

1956 Webster St., Suite 450

Oakland, CA 94612

Re : Cooper Drum - WDR Samples / 130072-024

MB874362 / 9F19016

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 06/19/19 14:30 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile

Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
624					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30
625					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30
COD 410.4					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30
pH Measurement SM4500H+ B					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30
Sulfide Dissolved SM4500-S=D					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30
TSS SM2540D					
CD-IDWP-061919-0001	9F19016-01	Water	5	06/19/19 12:30	06/19/19 14:30

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/26/19		
Date Analyzed:	06/26/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-06191 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625)

3,3´-Dichlorobenzidine	<12	12	20
Acenaphthene	<3.0	3.0	5.0
Acenaphthylene	<3.0	3.0	5.0
Aniline	<10	10	10
Anthracene	<3.0	3.0	5.0
Azobenzene	<3.0	3.0	5.0
Benzidine	<17	17	20
Benzo(a)anthracene	<3.0	3.0	20
Benzo(a)pyrene	<3.0	3.0	5.0
Benzo(b)fluoranthene	<4.0	4.0	5.0
Benzo(g,h,i)perylene	<5.0	5.0	5.0
Benzoic acid	<5.0	5.0	50
Benzo(k)fluoranthene	<5.0	5.0	5.0
Benzyl alcohol	<7.0	7.0	10
4-Bromophenyl phenyl ether	<4.0	4.0	5.0
Butyl benzyl phthalate	<6.0	6.0	10
4-Chloro-3-methylphenol	<8.0	8.0	10
4-Chloroaniline	<7.0	7.0	20
Bis(2-chloroethoxy)methane	<5.0	5.0	5.0
Bis(2-chloroethyl)ether	<4.0	4.0	5.0
Bis(2-chloroisopropyl)ether	<5.0	5.0	5.0
2-Chloronaphthalene	<5.0	5.0	5.0
2-Chlorophenol	<5.0	5.0	5.0
4-Chlorophenyl phenyl ether	<3.0	3.0	5.0
Chrysene	<4.0	4.0	5.0
Dibenzo(a,h)anthracene	<5.0	5.0	5.0

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/26/19		
Date Analyzed:	06/26/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-06191 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625) (continued)

Dibenzofuran	<3.0	3.0	5.0
Di-n-butyl phthalate	<5.0	5.0	100
1,2-Dichlorobenzene	<2.0	2.0	5.0
1,3-Dichlorobenzene	<3.0	3.0	5.0
1,4-Dichlorobenzene	<3.0	3.0	5.0
2,4-Dichlorophenol	<5.0	5.0	5.0
Diethyl phthalate	<3.0	3.0	40
2,4-Dimethylphenol	<6.0	6.0	20
Dimethyl phthalate	<3.0	3.0	10
4,6-Dinitro-2-methylphenol	<17	17	20
2,4-Dinitrophenol	<10	10	20
2,6-Dinitrotoluene	<3.0	3.0	5.0
2,4-Dinitrotoluene	<3.0	3.0	5.0
Di-n-octyl phthalate	<7.0	7.0	10
1,2-Diphenylhydrazine	<3.0	3.0	5.0
Bis(2-ethylhexyl)phthalate	<19	19	50
Fluoranthene	<4.0	4.0	5.0
Fluorene	<3.0	3.0	5.0
Hexachlorobenzene	<7.0	7.0	10
Hexachlorobutadiene	<8.0	8.0	10
Hexachlorocyclopentadiene	<6.0	6.0	10
Hexachloroethane	<3.0	3.0	5.0
Indeno (1,2,3-cd) pyrene	<5.0	5.0	20
Isophorone	<4.0	4.0	5.0
2-Methylnaphthalene	<5.0	5.0	5.0
2-Methylphenol	<4.0	4.0	10

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/26/19		
Date Analyzed:	06/26/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-06191 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625) (continued)

3-Methylphenol	<4.0	4.0	10
4-Methylphenol	<4.0	4.0	10
Naphthalene	<4.0	4.0	5.0
4-Nitroaniline	<5.0	5.0	20
3-Nitroaniline	<10	10	20
2-Nitroaniline	<4.0	4.0	20
Nitrobenzene	<5.0	5.0	5.0
2-Nitrophenol	<6.0	6.0	10
4-Nitrophenol	<5.0	5.0	10
N-Nitrosodimethylamine	<3.0	3.0	5.0
N-Nitrosodiphenylamine	<4.0	4.0	5.0
N-Nitrosodi-n-propylamine	<6.0	6.0	10
Pentachlorophenol	<6.5	6.5	20
Phenanthrene	<3.0	3.0	5.0
Phenol	<3.0	3.0	5.0
Pyrene	<3.0	3.0	5.0
1,2,4-Trichlorobenzene	<4.0	4.0	10
2,4,5-Trichlorophenol	<6.0	6.0	10
2,4,6-Trichlorophenol	<8.0	8.0	10

Surrogates		**%REC Limits**
2-Fluorobiphenyl	71%	43-116
2-Fluorophenol	42%	21-100
Nitrobenzene-d5	90%	35-134
Phenol-d6	31%	10-94
Terphenyl-dl4	89%	33-141

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	EPA 625 Semivolatile Organics by GC/MS	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/26/19		
Date Analyzed:	06/26/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-061919-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL

625 (EPA 625) (continued)

2,4,6-Tribromophenol	62%	10-123

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples
Method: General Chemistry Analyses

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MDL	MRL
COD 410.4 (EPA 410.4)									
9F19016-01	CD-IDWP-061919-0001	06/19/19	06/26/19	06/26/19	1	**23**	mg/L	7	10
pH Measurement SM4500H+ B (SM4500H+ B)									
9F19016-01	CD-IDWP-061919-0001	06/19/19	06/19/19	06/19/19	1	**6.9**	pH Units	0.01	0.01
Sulfide Dissolved SM4500-S=D (SM4500-S=D)									
9F19016-01	CD-IDWP-061919-0001	06/19/19	06/26/19	06/26/19	1	<0.025	mg/L	0.025	0.05
TSS SM2540D (SM2540D)									
9F19016-01	CD-IDWP-061919-0001	06/19/19	06/24/19	06/24/19	1	**7.6**J	mg/L	5	10

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	VOCs by GC/MS EPA 624	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/24/19		
Date Analyzed:	06/24/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-06191 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL
624 (EPA 624)			
Benzene	**0.72**	0.20	0.50
Bromodichloromethane	<0.20	0.20	0.50
Bromoform	<0.50	0.50	0.50
Bromomethane	<0.50	0.50	0.50
Carbon Tetrachloride	<0.30	0.30	0.50
Chlorobenzene	<0.30	0.30	0.50
Chloroethane	<0.50	0.50	0.50
2-Chloroethyl Vinyl Ether	<6.0	6.0	10
Chloroform	<0.30	0.30	0.50
Chloromethane	<0.40	0.40	0.50
Dibromochloromethane	<0.30	0.30	0.50
1,2-Dichlorobenzene	<0.30	0.30	0.50
1,4-Dichlorobenzene	<0.30	0.30	0.50
1,3-Dichlorobenzene	<0.10	0.10	0.50
1,1-Dichloroethane	**1.8**	0.20	0.50
1,2-Dichloroethane (EDC)	<0.30	0.30	0.50
trans-1,2-Dichloroethylene	**3.1**	0.40	0.50
1,1-Dichloroethylene	**0.55**	0.30	0.50
1,2-Dichloropropane	<0.50	0.50	0.50
cis-1,3-Dichloropropylene	<0.20	0.20	0.50
trans-1,3-Dichloropropylene	<0.20	0.20	0.50
Ethylbenzene	<0.20	0.20	0.50
Methylene Chloride	<5.0	5.0	5.0
1,1,2,2-Tetrachloroethane	<0.30	0.30	0.50
Tetrachloroethylene (PCE)	<0.50	0.50	0.50
Toluene	<0.30	0.30	0.50

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LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19
Method:	VOCs by GC/MS EPA 624	**Units:**	ug/L

Date Sampled:	06/19/19		
Date Prepared:	06/24/19		
Date Analyzed:	06/24/19		
AA ID No:	9F19016-01		
Client ID No:	CD-IDWP-06191 9-0001		
Matrix:	Water		
Dilution Factor:	1	MDL	MRL
624 (EPA 624) (continued)			
1,1,2-Trichloroethane	<0.30	0.30	0.50
1,1,1-Trichloroethane	<0.30	0.30	0.50
Trichloroethylene (TCE)	**1.4**	0.20	0.50
Vinyl chloride	<0.50	0.50	0.50

Surrogates		**%REC Limits**
4-Bromofluorobenzene	99%	70-140
Dibromofluoromethane	104%	70-140
Toluene-d8	97%	70-140

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9F2610 - EPA 3510C_MS										
Blank (B9F2610-BLK1)				Prepared & Analyzed: 06/26/19						
3,3´-Dichlorobenzidine	<12	12	ug/L							
Acenaphthene	<3.0	3.0	ug/L							
Acenaphthylene	<3.0	3.0	ug/L							
Aniline	<10	10	ug/L							
Anthracene	<3.0	3.0	ug/L							
Azobenzene	<3.0	3.0	ug/L							
Benzidine	<17	17	ug/L							
Benzo(a)anthracene	<3.0	3.0	ug/L							
Benzo(a)pyrene	<3.0	3.0	ug/L							
Benzo(b)fluoranthene	<4.0	4.0	ug/L							
Benzo(g,h,i)perylene	<5.0	5.0	ug/L							
Benzoic acid	<5.0	5.0	ug/L							
Benzo(k)fluoranthene	<5.0	5.0	ug/L							
Benzyl alcohol	<7.0	7.0	ug/L							
4-Bromophenyl phenyl ether	<4.0	4.0	ug/L							
Butyl benzyl phthalate	<6.0	6.0	ug/L							
4-Chloro-3-methylphenol	<8.0	8.0	ug/L							
4-Chloroaniline	<7.0	7.0	ug/L							
Bis(2-chloroethoxy)methane	<5.0	5.0	ug/L							
Bis(2-chloroethyl)ether	<4.0	4.0	ug/L							
Bis(2-chloroisopropyl)ether	<5.0	5.0	ug/L							
2-Chloronaphthalene	<5.0	5.0	ug/L							
2-Chlorophenol	<5.0	5.0	ug/L							
4-Chlorophenyl phenyl ether	<3.0	3.0	ug/L							
Chrysene	<4.0	4.0	ug/L							
Dibenzo(a,h)anthracene	<5.0	5.0	ug/L							
Dibenzofuran	<3.0	3.0	ug/L							
Di-n-butyl phthalate	<5.0	5.0	ug/L							
1,2-Dichlorobenzene	<2.0	2.0	ug/L							
1,3-Dichlorobenzene	<3.0	3.0	ug/L							
1,4-Dichlorobenzene	<3.0	3.0	ug/L							
2,4-Dichlorophenol	<5.0	5.0	ug/L							

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9F2610 - EPA 3510C_MS										
Blank (B9F2610-BLK1) Continued				Prepared & Analyzed: 06/26/19						
Diethyl phthalate	<3.0	3.0	ug/L							
2,4-Dimethylphenol	<6.0	6.0	ug/L							
Dimethyl phthalate	<3.0	3.0	ug/L							
4,6-Dinitro-2-methylphenol	<17	17	ug/L							
2,4-Dinitrophenol	<10	10	ug/L							
2,6-Dinitrotoluene	<3.0	3.0	ug/L							
2,4-Dinitrotoluene	<3.0	3.0	ug/L							
Di-n-octyl phthalate	<7.0	7.0	ug/L							
1,2-Diphenylhydrazine	<3.0	3.0	ug/L							
Bis(2-ethylhexyl)phthalate	<19	19	ug/L							
Fluoranthene	<4.0	4.0	ug/L							
Fluorene	<3.0	3.0	ug/L							
Hexachlorobenzene	<7.0	7.0	ug/L							
Hexachlorobutadiene	<8.0	8.0	ug/L							
Hexachlorocyclopentadiene	<6.0	6.0	ug/L							
Hexachloroethane	<3.0	3.0	ug/L							
Indeno (1,2,3-cd) pyrene	<5.0	5.0	ug/L							
Isophorone	<4.0	4.0	ug/L							
2-Methylnaphthalene	<5.0	5.0	ug/L							
2-Methylphenol	<4.0	4.0	ug/L							
3-Methylphenol	<4.0	4.0	ug/L							
4-Methylphenol	<4.0	4.0	ug/L							
Naphthalene	<4.0	4.0	ug/L							
4-Nitroaniline	<5.0	5.0	ug/L							
3-Nitroaniline	<10	10	ug/L							
2-Nitroaniline	<4.0	4.0	ug/L							
Nitrobenzene	<5.0	5.0	ug/L							
2-Nitrophenol	<6.0	6.0	ug/L							
4-Nitrophenol	<5.0	5.0	ug/L							
N-Nitrosodimethylamine	<3.0	3.0	ug/L							
N-Nitrosodiphenylamine	<4.0	4.0	ug/L							
N-Nitrosodi-n-propylamine	<6.0	6.0	ug/L							

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9F2610 - EPA 3510C_MS										
Blank (B9F2610-BLK1) Continued				Prepared & Analyzed: 06/26/19						
Pentachlorophenol	<6.5	6.5	ug/L							
Phenanthrene	<3.0	3.0	ug/L							
Phenol	<3.0	3.0	ug/L							
Pyrene	<3.0	3.0	ug/L							
1,2,4-Trichlorobenzene	<4.0	4.0	ug/L							
2,4,5-Trichlorophenol	<6.0	6.0	ug/L							
2,4,6-Trichlorophenol	<8.0	8.0	ug/L							
Surrogate: 2-Fluorobiphenyl	*19.6*		*ug/L*	*25*		*78.3*	*43-116*			
Surrogate: 2-Fluorophenol	*22.2*		*ug/L*	*50*		*44.5*	*21-100*			
Surrogate: Nitrobenzene-d5	*25.5*		*ug/L*	*25*		*102*	*35-134*			
Surrogate: Phenol-d6	*18.4*		*ug/L*	*50*		*36.8*	*10-94*			
Surrogate: Terphenyl-dl4	*24.8*		*ug/L*	*25*		*99.3*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*32.5*		*ug/L*	*50*		*65.0*	*10-123*			
LCS (B9F2610-BS1)				Prepared & Analyzed: 06/26/19						
Acenaphthene	**19.8**	3.0	ug/L	30		66.1	31-104			
Anthracene	**22.8**	3.0	ug/L	30		76.1	33-115			
Benzo(a)pyrene	**21.7**	3.0	ug/L	30		72.2	26-111			
Benzo(b)fluoranthene	**23.0**	4.0	ug/L	30		76.7	24-118			
Butyl benzyl phthalate	**22.8**	6.0	ug/L	30		76.1	12-126			
4-Chloro-3-methylphenol	**17.6**	8.0	ug/L	30		58.7	23-104			
Bis(2-chloroethyl)ether	**22.8**	4.0	ug/L	30		76.1	30-121			
2-Chloronaphthalene	**19.4**	5.0	ug/L	30		64.8	35-102			
4-Chlorophenyl phenyl ether	**17.5**	3.0	ug/L	30		58.4	41-128			
1,4-Dichlorobenzene	**17.0**	3.0	ug/L	30		56.6	25-100			
2,4-Dichlorophenol	**14.2**	5.0	ug/L	30		47.3	14-100			
Di-n-octyl phthalate	**25.0**	7.0	ug/L	30		83.5	13-120			
Fluoranthene	**21.7**	4.0	ug/L	30		72.4	26-111			
Fluorene	**20.7**	3.0	ug/L	30		68.9	37-94			
Hexachlorobenzene	**24.1**	7.0	ug/L	30		80.4	2-152			
Hexachlorobutadiene	**11.7**	8.0	ug/L	30		38.9	24-86			
Hexachloroethane	**18.1**	3.0	ug/L	30		60.4	17-115			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9F2610 - EPA 3510C_MS										
LCS (B9F2610-BS1) Continued				Prepared & Analyzed: 06/26/19						
Isophorone	**17.6**	4.0	ug/L	30		58.6	35-101			
Naphthalene	**16.6**	4.0	ug/L	30		55.3	36-94			
Nitrobenzene	**20.9**	5.0	ug/L	30		69.8	34-112			
2-Nitrophenol	**13.4**	6.0	ug/L	30		44.5	8.2-99			
N-Nitrosodi-n-propylamine	**26.6**	6.0	ug/L	30		88.8	20-138			
Phenol	**10.6**	3.0	ug/L	30		35.2	12-52			
Pyrene	**23.1**	3.0	ug/L	30		77.0	29-120			
1,2,4-Trichlorobenzene	**13.8**	4.0	ug/L	30		45.9	29-89			
2,4,6-Trichlorophenol	**14.5**	8.0	ug/L	30		48.2	7.9-100			
Surrogate: 2-Fluorobiphenyl	*16.9*		*ug/L*	*25*		*67.5*	*43-116*			
Surrogate: 2-Fluorophenol	*23.8*		*ug/L*	*50*		*47.7*	*21-100*			
Surrogate: Nitrobenzene-d5	*22.8*		*ug/L*	*25*		*91.3*	*35-134*			
Surrogate: Phenol-d6	*17.9*		*ug/L*	*50*		*35.7*	*10-94*			
Surrogate: Terphenyl-dl4	*27.0*		*ug/L*	*25*		*108*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*30.8*		*ug/L*	*50*		*61.6*	*10-123*			
LCS Dup (B9F2610-BSD1)				Prepared & Analyzed: 06/26/19						
Acenaphthene	**23.1**	3.0	ug/L	30		77.0	31-104	15.3	30	
Anthracene	**25.4**	3.0	ug/L	30		84.7	33-115	10.7	30	
Benzo(a)pyrene	**23.5**	3.0	ug/L	30		78.2	26-111	7.98	30	
Benzo(b)fluoranthene	**23.9**	4.0	ug/L	30		79.6	24-118	3.67	30	
Butyl benzyl phthalate	**24.4**	6.0	ug/L	30		81.3	12-126	6.61	30	
4-Chloro-3-methylphenol	**18.5**	8.0	ug/L	30		61.6	23-104	4.88	30	
Bis(2-chloroethyl)ether	**27.8**	4.0	ug/L	30		92.6	30-121	19.5	30	
2-Chloronaphthalene	**22.2**	5.0	ug/L	30		74.1	35-102	13.3	30	
4-Chlorophenyl phenyl ether	**19.3**	3.0	ug/L	30		64.5	41-128	9.82	30	
1,4-Dichlorobenzene	**21.3**	3.0	ug/L	30		70.9	25-100	22.4	30	
2,4-Dichlorophenol	**13.6**	5.0	ug/L	30		45.2	14-100	4.54	30	
Di-n-octyl phthalate	**24.3**	7.0	ug/L	30		80.9	13-120	3.20	30	
Fluoranthene	**23.3**	4.0	ug/L	30		77.7	26-111	7.06	30	
Fluorene	**22.4**	3.0	ug/L	30		74.6	37-94	8.04	30	
Hexachlorobenzene	**26.2**	7.0	ug/L	30		87.2	2-152	8.11	30	

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
EPA 625 Semivolatile Organics by GC/MS - Quality Control										
Batch B9F2610 - EPA 3510C_MS										
LCS Dup (B9F2610-BSD1) Continued				Prepared & Analyzed: 06/26/19						
Hexachlorobutadiene	**15.0**	8.0	ug/L	30		50.1	24-86	25.1	30	
Hexachloroethane	**23.6**	3.0	ug/L	30		78.5	17-115	26.1	30	
Isophorone	**21.7**	4.0	ug/L	30		72.4	35-101	21.0	30	
Naphthalene	**20.5**	4.0	ug/L	30		68.3	36-94	21.0	30	
Nitrobenzene	**25.1**	5.0	ug/L	30		83.7	34-112	18.2	30	
2-Nitrophenol	**12.3**	6.0	ug/L	30		41.1	8.2-99	8.02	30	
N-Nitrosodi-n-propylamine	**32.1**	6.0	ug/L	30		107	20-138	18.6	30	
Phenol	**11.5**	3.0	ug/L	30		38.4	12-52	8.70	30	
Pyrene	**24.8**	3.0	ug/L	30		82.7	29-120	7.14	30	
1,2,4-Trichlorobenzene	**17.2**	4.0	ug/L	30		57.2	29-89	22.0	30	
2,4,6-Trichlorophenol	**11.6**	8.0	ug/L	30		38.8	7.9-100	21.6	30	
Surrogate: 2-Fluorobiphenyl	*20.5*		*ug/L*	*25*		*81.9*	*43-116*			
Surrogate: 2-Fluorophenol	*20.0*		*ug/L*	*50*		*40.0*	*21-100*			
Surrogate: Nitrobenzene-d5	*27.4*		*ug/L*	*25*		*110*	*35-134*			
Surrogate: Phenol-d6	*18.1*		*ug/L*	*50*		*36.3*	*10-94*			
Surrogate: Terphenyl-dl4	*28.6*		*ug/L*	*25*		*114*	*33-141*			
Surrogate: 2,4,6-Tribromophenol	*24.4*		*ug/L*	*50*		*48.7*	*10-123*			
General Chemistry Analyses - Quality Control										
Batch B9F2015 - NO PREP										
Duplicate (B9F2015-DUP1)				**Source: 9F19016-01**	Prepared & Analyzed: 06/19/19					
pH	**6.90**	0.010	pH Units		6.90			0.00	20	
Batch B9F2427 - NO PREP										
Blank (B9F2427-BLK1)				Prepared & Analyzed: 06/24/19						
Total Suspended Solids	<5.0	5.0	mg/L							
LCS (B9F2427-BS1)				Prepared & Analyzed: 06/24/19						
Total Suspended Solids	**49.0**	5.0	mg/L	50		98.0	80-120			
LCS Dup (B9F2427-BSD1)				Prepared & Analyzed: 06/24/19						
Total Suspended Solids	**51.0**	5.0	mg/L	50		102	80-120	4.00	20	
Duplicate (B9F2427-DUP1)				**Source: 9F18014-01**	Prepared & Analyzed: 06/24/19					
Total Suspended Solids	**<5.0**	5.0	mg/L						20	

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
General Chemistry Analyses - Quality Control										
Batch B9F2427 - NO PREP										
Duplicate (B9F2427-DUP2)		**Source: 9F20002-13**		Prepared & Analyzed: 06/24/19						
Total Suspended Solids	**31500**	5.0	mg/L		32900			4.34	20	
Batch B9F2623 - NO PREP										
Blank (B9F2623-BLK1)				Prepared & Analyzed: 06/26/19						
Chemical Oxygen Demand	<7.0	7.0	mg/L							
LCS (B9F2623-BS1)				Prepared & Analyzed: 06/26/19						
Chemical Oxygen Demand	**54.4**	7.0	mg/L	50		109	80-120			
LCS Dup (B9F2623-BSD1)				Prepared & Analyzed: 06/26/19						
Chemical Oxygen Demand	**60.2**	7.0	mg/L	50		120	80-120	10.0	20	
Duplicate (B9F2623-DUP1)		**Source: 9F19016-01**		Prepared & Analyzed: 06/26/19						
Chemical Oxygen Demand	**20.1**	7.0	mg/L		22.9			13.3	20	
Batch B9F2712 - NO PREP										
Blank (B9F2712-BLK1)				Prepared & Analyzed: 06/26/19						
Sulfide	<0.025	0.025	mg/L							
LCS (B9F2712-BS1)				Prepared & Analyzed: 06/26/19						
Sulfide	**0.496**	0.025	mg/L	0.50		99.2	70-130		20	
LCS Dup (B9F2712-BSD1)				Prepared & Analyzed: 06/26/19						
Sulfide	**0.486**	0.025	mg/L	0.50		97.2	70-130	2.04	20	
Duplicate (B9F2712-DUP1)		**Source: 9F19016-01**		Prepared & Analyzed: 06/26/19						
Sulfide	**<0.025**	0.025	mg/L		<0.050				20	
Matrix Spike (B9F2712-MS1)		**Source: 9F20002-04**		Prepared & Analyzed: 06/26/19						
Sulfide	**0.528**	0.025	mg/L	0.50		106	70-130		20	
Matrix Spike Dup (B9F2712-MSD1)		**Source: 9F20002-04**		Prepared & Analyzed: 06/26/19						
Sulfide	**0.521**	0.025	mg/L	0.50		104	70-130	1.33	20	
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1)				Prepared & Analyzed: 06/24/19						
Benzene	<0.20	0.20	ug/L							
Bromodichloromethane	<0.20	0.20	ug/L							
Bromoform	<0.50	0.50	ug/L							

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
Blank (B9F2416-BLK1) Continued				Prepared & Analyzed: 06/24/19						
Bromomethane	<0.50	0.50	ug/L							
Carbon Tetrachloride	<0.30	0.30	ug/L							
Chlorobenzene	<0.30	0.30	ug/L							
Chloroethane	<0.50	0.50	ug/L							
2-Chloroethyl Vinyl Ether	<6.0	6.0	ug/L							
Chloroform	<0.30	0.30	ug/L							
Chloromethane	<0.40	0.40	ug/L							
Dibromochloromethane	<0.30	0.30	ug/L							
1,2-Dichlorobenzene	<0.30	0.30	ug/L							
1,4-Dichlorobenzene	<0.30	0.30	ug/L							
1,3-Dichlorobenzene	<0.10	0.10	ug/L							
1,1-Dichloroethane	<0.20	0.20	ug/L							
1,2-Dichloroethane (EDC)	<0.30	0.30	ug/L							
trans-1,2-Dichloroethylene	<0.40	0.40	ug/L							
1,1-Dichloroethylene	<0.30	0.30	ug/L							
1,2-Dichloropropane	<0.50	0.50	ug/L							
cis-1,3-Dichloropropylene	<0.20	0.20	ug/L							
trans-1,3-Dichloropropylene	<0.20	0.20	ug/L							
Ethylbenzene	<0.20	0.20	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<0.30	0.30	ug/L							
Tetrachloroethylene (PCE)	<0.50	0.50	ug/L							
Toluene	<0.30	0.30	ug/L							
1,1,2-Trichloroethane	<0.30	0.30	ug/L							
1,1,1-Trichloroethane	<0.30	0.30	ug/L							
Trichloroethylene (TCE)	<0.20	0.20	ug/L							
Vinyl chloride	<0.50	0.50	ug/L							
Surrogate: 4-Bromofluorobenzene	*47.1*		*ug/L*	*50*		*94.3*	*70-140*			
Surrogate: Dibromofluoromethane	*50.7*		*ug/L*	*50*		*101*	*70-140*			
Surrogate: Toluene-d8	*47.6*		*ug/L*	*50*		*95.2*	*70-140*			
LCS (B9F2416-BS1)				Prepared & Analyzed: 06/24/19						

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Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
Benzene	**17.8**	0.20	ug/L	20		88.8	75-125			
Bromodichloromethane	**22.4**	0.20	ug/L	20		112	75-125			
Bromoform	**21.3**	0.50	ug/L	20		107	75-125			
Bromomethane	**17.1**	0.50	ug/L	20		85.4	75-125			
Carbon Tetrachloride	**22.5**	0.30	ug/L	20		112	75-125			
Chlorobenzene	**20.7**	0.30	ug/L	20		103	75-125			
Chloroethane	**41.1**	0.50	ug/L	20		205	75-125			**
2-Chloroethyl Vinyl Ether	**18.7**	6.0	ug/L	20		93.4	70-130			
Chloroform	**20.8**	0.30	ug/L	20		104	75-125			
Chloromethane	**20.6**	0.40	ug/L	20		103	65-125			
Dibromochloromethane	**22.4**	0.30	ug/L	20		112	75-125			
1,2-Dichlorobenzene	**20.9**	0.30	ug/L	20		105	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		99.0	75-125			
1,3-Dichlorobenzene	**20.4**	0.10	ug/L	20		102	70-130			
1,1-Dichloroethane	**21.3**	0.20	ug/L	20		106	70-125			
1,2-Dichloroethane (EDC)	**23.2**	0.30	ug/L	20		116	75-125			
trans-1,2-Dichloroethylene	**20.9**	0.40	ug/L	20		104	75-125			
1,1-Dichloroethylene	**20.4**	0.30	ug/L	20		102	70-130			
1,2-Dichloropropane	**21.5**	0.50	ug/L	20		108	75-130			
cis-1,3-Dichloropropylene	**21.9**	0.20	ug/L	20		109	75-125			
trans-1,3-Dichloropropylene	**22.6**	0.20	ug/L	20		113	70-130			
Ethylbenzene	**21.4**	0.20	ug/L	20		107	75-125			
Methylene Chloride	**28.6**	5.0	ug/L	20		143	75-130			**
1,1,2,2-Tetrachloroethane	**24.1**	0.30	ug/L	20		121	70-135			
Tetrachloroethylene (PCE)	**20.6**	0.50	ug/L	20		103	75-125			
Toluene	**20.8**	0.30	ug/L	20		104	75-125			
1,1,2-Trichloroethane	**22.5**	0.30	ug/L	20		113	75-125			
1,1,1-Trichloroethane	**22.3**	0.30	ug/L	20		111	75-125			
Trichloroethylene (TCE)	**21.5**	0.20	ug/L	20		108	75-125			
Vinyl chloride	**21.0**	0.50	ug/L	20		105	75-125			
Surrogate: 4-Bromofluorobenzene	*47.6*		*ug/L*	*50*		*95.2*	*70-140*			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS (B9F2416-BS1) Continued				Prepared & Analyzed: 06/24/19						
Surrogate: Dibromofluoromethane	*48.7*		*ug/L*	*50*		*97.4*	*70-140*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.1*	*70-140*			
LCS Dup (B9F2416-BSD1)				Prepared: 06/24/19 Analyzed: 06/25/19						
Benzene	**16.3**	0.20	ug/L	20		81.5	75-125	8.57	30	
Bromodichloromethane	**20.6**	0.20	ug/L	20		103	75-125	8.52	30	
Bromoform	**16.1**	0.50	ug/L	20		80.6	75-125	27.7	30	
Bromomethane	**18.3**	0.50	ug/L	20		91.4	75-125	6.73	30	
Carbon Tetrachloride	**19.7**	0.30	ug/L	20		98.7	75-125	12.9	30	
Chlorobenzene	**16.6**	0.30	ug/L	20		82.8	75-125	22.1	30	
Chloroethane	**46.5**	0.50	ug/L	20		232	75-125	12.3	30	**
2-Chloroethyl Vinyl Ether	**15.7**	6.0	ug/L	20		78.5	70-130	17.3	30	
Chloroform	**19.3**	0.30	ug/L	20		96.5	75-125	7.29	30	
Chloromethane	**22.0**	0.40	ug/L	20		110	65-125	6.67	30	
Dibromochloromethane	**17.4**	0.30	ug/L	20		87.0	75-125	25.0	30	
1,2-Dichlorobenzene	**18.7**	0.30	ug/L	20		93.6	70-130	11.1	30	
1,4-Dichlorobenzene	**18.1**	0.30	ug/L	20		90.5	75-125	8.97	30	
1,3-Dichlorobenzene	**18.2**	0.10	ug/L	20		90.8	70-130	11.4	30	
1,1-Dichloroethane	**19.1**	0.20	ug/L	20		95.4	70-125	10.9	30	
1,2-Dichloroethane (EDC)	**21.4**	0.30	ug/L	20		107	75-125	8.34	30	
trans-1,2-Dichloroethylene	**19.0**	0.40	ug/L	20		95.0	75-125	9.47	30	
1,1-Dichloroethylene	**19.9**	0.30	ug/L	20		99.6	70-130	2.38	30	
1,2-Dichloropropane	**19.6**	0.50	ug/L	20		98.2	75-130	8.99	30	
cis-1,3-Dichloropropylene	**19.1**	0.20	ug/L	20		95.4	75-125	13.8	30	
trans-1,3-Dichloropropylene	**17.5**	0.20	ug/L	20		87.6	70-130	25.3	30	
Ethylbenzene	**17.5**	0.20	ug/L	20		87.3	75-125	20.0	30	
Methylene Chloride	**30.3**	5.0	ug/L	20		152	75-130	5.63	30	**
1,1,2,2-Tetrachloroethane	**19.3**	0.30	ug/L	20		96.4	70-135	22.4	30	
Tetrachloroethylene (PCE)	**15.9**	0.50	ug/L	20		79.3	75-125	26.0	30	
Toluene	**16.9**	0.30	ug/L	20		84.5	75-125	20.5	30	
1,1,2-Trichloroethane	**17.9**	0.30	ug/L	20		89.6	75-125	22.7	30	
1,1,1-Trichloroethane	**20.2**	0.30	ug/L	20		101	75-125	9.69	30	
Trichloroethylene (TCE)	**19.8**	0.20	ug/L	20		98.8	75-125	8.53	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
LCS Dup (B9F2416-BSD1) Continued				Prepared: 06/24/19 Analyzed: 06/25/19						
Vinyl chloride	**24.1**	0.50	ug/L	20		120	75-125	13.6	30	
Surrogate: 4-Bromofluorobenzene	*48.4*		*ug/L*	*50*		*96.8*	*70-140*			
Surrogate: Dibromofluoromethane	*49.5*		*ug/L*	*50*		*99.0*	*70-140*			
Surrogate: Toluene-d8	*44.3*		*ug/L*	*50*		*88.6*	*70-140*			
Matrix Spike (B9F2416-MS1)			**Source: 9F17012-06**	Prepared & Analyzed: 06/24/19						
Benzene	**18.3**	0.20	ug/L	20		91.5	70-130			
Bromodichloromethane	**22.6**	0.20	ug/L	20		113	70-130			
Bromoform	**17.9**	0.50	ug/L	20		89.6	70-130			
Bromomethane	**21.8**	0.50	ug/L	20		109	70-130			
Carbon Tetrachloride	**23.0**	0.30	ug/L	20		115	70-130			
Chlorobenzene	**20.3**	0.30	ug/L	20		101	70-130			
Chloroethane	**47.1**	0.50	ug/L	20		235	70-130			**
Chloroform	**22.1**	0.30	ug/L	20		110	70-130			
Chloromethane	**20.5**	0.40	ug/L	20		102	65-130			
Dibromochloromethane	**20.4**	0.30	ug/L	20		102	70-130			
1,2-Dichlorobenzene	**20.4**	0.30	ug/L	20		102	70-130			
1,4-Dichlorobenzene	**19.8**	0.30	ug/L	20		98.8	70-130			
1,3-Dichlorobenzene	**19.9**	0.10	ug/L	20		99.6	70-130			
1,1-Dichloroethane	**22.3**	0.20	ug/L	20		112	70-130			
1,2-Dichloroethane (EDC)	**23.7**	0.30	ug/L	20		118	70-130			
trans-1,2-Dichloroethylene	**20.9**	0.40	ug/L	20		105	70-130			
1,1-Dichloroethylene	**20.2**	0.30	ug/L	20		101	70-130			
1,2-Dichloropropane	**22.4**	0.50	ug/L	20		112	70-130			
cis-1,3-Dichloropropylene	**21.0**	0.20	ug/L	20		105	70-130			
trans-1,3-Dichloropropylene	**20.6**	0.20	ug/L	20		103	70-130			
Ethylbenzene	**21.6**	0.20	ug/L	20		108	70-130			
Methylene Chloride	**19.2**	5.0	ug/L	20		96.2	70-130			
1,1,2,2-Tetrachloroethane	**21.9**	0.30	ug/L	20		109	70-130			
Tetrachloroethylene (PCE)	**20.1**	0.50	ug/L	20		100	70-130			
Toluene	**20.4**	0.30	ug/L	20		102	70-130			
1,1,2-Trichloroethane	**20.7**	0.30	ug/L	20		104	70-130			

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LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike (B9F2416-MS1) Continued	**Source: 9F17012-06**			Prepared & Analyzed: 06/24/19						
1,1,1-Trichloroethane	**23.3**	0.30	ug/L	20		116	70-130			
Trichloroethylene (TCE)	**21.9**	0.20	ug/L	20		110	70-130			
Vinyl chloride	**22.8**	0.50	ug/L	20		114	70-130			
Surrogate: 4-Bromofluorobenzene	*47.8*		*ug/L*	*50*		*95.5*	*70-140*			
Surrogate: Dibromofluoromethane	*49.6*		*ug/L*	*50*		*99.1*	*70-140*			
Surrogate: Toluene-d8	*48.1*		*ug/L*	*50*		*96.3*	*70-140*			
Matrix Spike Dup (B9F2416-MSD1)	**Source: 9F17012-06**			Prepared: 06/24/19 Analyzed: 06/25/19						
Benzene	**17.1**	0.20	ug/L	20		85.4	70-130	6.84	30	
Bromodichloromethane	**21.6**	0.20	ug/L	20		108	70-130	4.66	30	
Bromoform	**18.8**	0.50	ug/L	20		94.2	70-130	4.90	30	
Bromomethane	**18.0**	0.50	ug/L	20		89.8	70-130	19.3	30	
Carbon Tetrachloride	**21.1**	0.30	ug/L	20		106	70-130	8.44	30	
Chlorobenzene	**18.5**	0.30	ug/L	20		92.4	70-130	9.19	30	
Chloroethane	**24.1**	0.50	ug/L	20		120	70-130	64.7	30	AA-C1
Chloroform	**20.2**	0.30	ug/L	20		101	70-130	8.75	30	
Chloromethane	**22.5**	0.40	ug/L	20		112	65-130	9.31	30	
Dibromochloromethane	**20.6**	0.30	ug/L	20		103	70-130	0.877	30	
1,2-Dichlorobenzene	**19.4**	0.30	ug/L	20		97.1	70-130	4.92	30	
1,4-Dichlorobenzene	**18.5**	0.30	ug/L	20		92.3	70-130	6.85	30	
1,3-Dichlorobenzene	**18.4**	0.10	ug/L	20		92.2	70-130	7.72	30	
1,1-Dichloroethane	**20.5**	0.20	ug/L	20		102	70-130	8.74	30	
1,2-Dichloroethane (EDC)	**23.0**	0.30	ug/L	20		115	70-130	2.78	30	
trans-1,2-Dichloroethylene	**19.3**	0.40	ug/L	20		96.5	70-130	8.10	30	
1,1-Dichloroethylene	**20.6**	0.30	ug/L	20		103	70-130	2.30	30	
1,2-Dichloropropane	**20.6**	0.50	ug/L	20		103	70-130	8.14	30	
cis-1,3-Dichloropropylene	**20.5**	0.20	ug/L	20		102	70-130	2.55	30	
trans-1,3-Dichloropropylene	**20.4**	0.20	ug/L	20		102	70-130	1.32	30	
Ethylbenzene	**19.2**	0.20	ug/L	20		96.0	70-130	11.7	30	
Methylene Chloride	**19.6**	5.0	ug/L	20		98.0	70-130	1.91	30	
1,1,2,2-Tetrachloroethane	**23.7**	0.30	ug/L	20		119	70-130	8.25	30	
Tetrachloroethylene (PCE)	**17.7**	0.50	ug/L	20		88.6	70-130	12.6	30	

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client: Haley & Aldrich (Oakland)
Project No: 130072-024
Project Name: Cooper Drum - WDR Samples

AA Project No: MB874362
Date Received: 06/19/19
Date Reported: 07/02/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
VOCs by GC/MS EPA 624 - Quality Control										
Batch B9F2416 - EPA 5030B										
Matrix Spike Dup (B9F2416-MSD1) Continued		**Source: 9F17012-06**				Prepared: 06/24/19	Analyzed: 06/25/19			
Toluene	**18.5**	0.30	ug/L	20		92.4	70-130	9.97	30	
1,1,2-Trichloroethane	**20.6**	0.30	ug/L	20		103	70-130	0.242	30	
1,1,1-Trichloroethane	**21.4**	0.30	ug/L	20		107	70-130	8.38	30	
Trichloroethylene (TCE)	**20.4**	0.20	ug/L	20		102	70-130	7.03	30	
Vinyl chloride	**21.9**	0.50	ug/L	20		109	70-130	3.94	30	
Surrogate: 4-Bromofluorobenzene	*48.5*		*ug/L*	*50*		*97.0*	*70-140*			
Surrogate: Dibromofluoromethane	*51.0*		*ug/L*	*50*		*102*	*70-140*			
Surrogate: Toluene-d8	*48.3*		*ug/L*	*50*		*96.6*	*70-140*			

Viorel Vasile
Operations Manager

LABORATORY ANALYSIS RESULTS

Client:	Haley & Aldrich (Oakland)	**AA Project No:**	MB874362
Project No:	130072-024	**Date Received:**	06/19/19
Project Name:	Cooper Drum - WDR Samples	**Date Reported:**	07/02/19

Special Notes

[1] = ****** : Exceeds upper control limit.

[2] = **AA-C1** : Exceeds RPD limit.

J : Detected but below the Method Reporting Limit (MRL) / Limit of Quantitation (LOQ); therefore, result is an estimated concentration (CLP J-Flag).

Viorel Vasile
Operations Manager

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 18388
70044916
Page 1 of 1

Client: Haley+Aldrich; JHA Environmental
Project Name / No.: Cooper Drum IDWP
Sampler's Name: Alex Felix
Project Manager: Chris Tsiatsios / Matt Hillman
Site Address: 9313 Rayo Ave
Sampler's Signature: Alex Felix
Phone: 714-371-1820 / 714-392-5970
City: South Gate
P.O. No.:
Fax: 949-453-1047
State & Zip: CA
Quote No.:

TAT Turnaround Codes **

1 = Same Day Rush
2 = 24 Hour Rush
3 = 48 Hour Rush
4 = 72 Hour Rush
5 = 5 Day Rush
X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Please enter the TAT Turnaround Codes ** below

Client I.D.	A.A. I.D.	Date	Time	Sample Matrix	No. of Cont	SVOCs EPA 625	VOCs EPA 624	PH* (within 14 days)	COD BY EPA 410.4	TSS BY SM 2540D	DISSOLVED SULFIDE					Special Instructions
CD-IDWP-061919-0001	9F19016-01	6-19-19	1230	WATER	9	X	X	X	X	X	X					*: field analyzed

SAMPLE INTEGRITY INTACT Y N TEMP 5°C

For Laboratory Use
REVIEWED
Date 6/19/19 Time 1530
TAT N Days Sign:

A.A. Project No.: MB874362 / 9F19016

Relinquished by	Date	Time	Received by
Alex Felix	6-19-19	1300	
	6-19-19	14:30	

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytics.

APPENDIX C

Groundwater Monitoring Well Gauging and Sampling Field Records

Well Gauging Data

Project # 130072-025 Date _____ Client Haley & Aldrich

Site Cooper Drum - South Gate

Well ID	Time	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (mL)	Depth to Water (ft.)	Depth to well bottom (ft.)	Measured Depth to Well Bottom (ft.)	Survey Point: TOB or (TOC)	Notes
MW-63	0827	2					63.43	67.6			
MW-64A	0930	2					62.84	84.5			
MW-64B	1023	2					66.64	112.9			

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	1Q 2019 Quarterly Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	KT
CONTRACTOR	Blaine Tech	DATE	3.13.19

Sampling Data:

Well ID: MW-63 | Well Depth: 67.81 ft | Initial Depth To Water: 63.43 ft | Purging Device: RFT

Start time: 0836 | Depth To Top Of Screen: 62.5 ft | Depth Of Pump Intake: 65 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 67.5 ft | Tubing Type: ½ in

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0839	63.55	150 mL	150 mL	450	19.6	6.80	1916	1.30	583	-49.3	TB
0842	63.59	↓	↓	900	20.4	6.84	1922	1.12	173	-61.3	QC1-031319 @ 0700
0845	63.61			1350	20.9	6.89	1925	1.03	88	-66.7	
0848	63.61			1800	21.4	6.93	1936	0.93	74	-70.3	DUP
0851	63.61			2250	21.5	6.95	1939	0.87	30	-72.5	QC2-031319 @ 0910
0854	63.61			2700	21.5	6.97	1944	0.82	24	-73.6	
0857	63.61			3150	21.6	6.98	1947	0.79	20	-73.5	SAMPLE TIME @ 0905
~~0860~~ 0900	63.61			3600	21.6	6.98	1950	0.75	19	-73.4	MW-63-031319
0903	63.61			4050	21.7	6.98	1951	0.73	19	-75.0	

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	1Q 2019 Quarterly Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	KT
CONTRACTOR	Blaine Tech	DATE	3.13.19

Sampling Data:

Well ID: MW-64A | Well Depth: 84.70 ft | Initial Depth To Water: 62.84 ft | Purging Device: RFZ

Start time: 0937 | Depth To Top Of Screen: 79.5 ft | Depth Of Pump Intake: 82 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 84.5 ft | Tubing Type:

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0940	62.88	200	200	600	18.8	6.88	3911	1.19	40	-134.9	SAMPLE ID
0943	62.89	↓	↓	1200	19.4	6.89	3889	1.25	36	-133.6	MW-64A-031319 @ 1006
0946	62.89			1800	19.9	6.89	3878	1.23	32	-130.8	
0949	62.89			2400	20.4	6.90	3875	1.16	28	-125.9	EB-
0952	62.89			3000	20.4	6.90	3884	1.03	25	-128.7	QC3-031319 @ 1018
0955	62.89			3600	20.5	6.89	3893	1.05	20	-131.2	
0958	62.89			4200	20.5	6.89	3897	1.09	18	-130.9	MS/MSD (3 VOAs 3 AMBERS)
1001	62.89			4800	20.6	6.89	3892	1.07	19	-130.5	
1004	62.89	↓	↓	5400	20.6	6.89	3890	1.05	19	-130.2	ODOR

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	1Q 2019 Quarterly Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	KJ
CONTRACTOR	Blaine Tech	DATE	3.13.19

Sampling Data:

Well ID:	MW-64B	Well Depth:	112.73 ft	Initial Depth To Water:	66.64 ft	Purging Device:	BF2
Start time:	1033	Depth To Top Of Screen:	107.5 ft	Depth Of Pump Intake:	110 ft	Tubing Present In Well:	☒ Yes ☐ No
Finish Time:		Depth To Bottom Of Screen	112.5 ft			Tubing Type:	

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1036	66.75	150	150	450	19.8	6.99	2669	3.44	31	-84.6	
1039	66.78	↓	↓	900	20.2	6.98	2683	3.14	25	-80.2	MW-64B-031319 @ 1102
1042	66.81			1350	20.3	6.98	2688	2.56	20	-80.0	
1045	66.82			1800	20.7	6.97	2693	2.21	15	-78.3	QC4-031319 @ 1110
1048	66.82			2250	20.9	6.97	2698	1.83	11	-72.1	FB = Field Blank
1051	66.82			2700	21.0	6.97	2704	1.80	10	-69.7	
1054	66.82			3150	21.0	6.97	2713	1.77	8	-66.8	
1057	66.82			3600	21.0	6.96	2720	1.75	8	-64.7	
1100	66.82	↓	↓	4050	21.0	6.96	2718	1.72	7	-63.5	

WELLHEAD INSPECTION CHECKLIST

Client Haley & Aldrich Date 3.13.19

Site Address 9313 Rayo, South GATE

Job Number 190313-KT1 Technician KT

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-63	X	X	X		X					
MW-64A/B	X	X	X		X					

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME				PROJECT NUMBER			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI PRO Plus	14A102846	3.13.19 0740	PH 7 10 4 Con ORP	7.00 10.01 3.98 3902 240.3	✓ ✓ ✓ ✓ ✓	13.6	KT ↓
			D.O%	100.0%	✓	14.3	↓

Well Gauging Data

Project # 130072-025 Date 6/10/19 Client Haley & Aldrich

Site Cooper Drum - South Gate

Well ID	Time	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Depth to Water (ft.) December 2018	Measured Depth to Water(ft.)	Depth to well bottom (ft.)	Measured Depth to Well Bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1256	4				60.81	61.64	83	82.51		
MW-2A	1319	2				Dry	dry	62.71	62.29		
MW-2B	1314	2				64.30	64.77	72.6	72.41		
MW-2C	1310	2				64.30	64.60	92.48	92.38		
MW-4	1249	4				63.19	63.75	82.05	81.90		
MW-4B	1244	2				63.29	63.70	92.67	92.40		
MW-15	1213	4				63.40	63.81	85.07	85.10		
MW-15B	1055	2				63.32	63.63	103.11	103.60		
MW-16	1045	2				67.92	68.16	128.2	128.00		
MW-17	1115	4				63.56	64.16	78.81	78.80		
MW-18	1110	2				70.42	70.74	127.88	128.00		
MW-19	1232	4				63.83	64.35	77.52	77.52		
MW-20	0811	4				63.08	63.50	68.81	68.79		
MW-20B	0806	2				62.69	63.23	89.9	89.10		
MW-21	1410	4				63.70	64.22	74.83	74.71		
MW-22	0735	4				63.87	64.29	73.16	71.72		
MW-23	1451	4				63.88	64.43	79.67	78.81		
MW-23A	1458	2				63.22	63.75	64.45	64.61		
MW-23B	1445	2				65.28	65.73	105.97	104.22		
MW-24	1432	4				62.94	63.28	85.2	85.20		
MW-25	1207	4				62.91	63.34	88.89	89.00		
MW-25B	1211	4				63.06	63.35	104.38	105.00		
MW-26	1215	2				68.98	69.34	132.17	131.99		
MW-27	1235	4				62.82	63.28	90.08	90.16		
MW-28	1230	2				63.09	63.46	113.9	113.80		
MW-29	1512	4				62.41	62.81	90.08	90.11		
MW-29A	1507	4				62.11	62.51	65.93	66.05		

Well Gauging Data

Project # 130072-025 Date 6/10/19 Client Haley & Aldrich

Site Cooper Drum - South Gate

Well ID	Time	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Depth to Water (ft.) December 2018	Measured Depth to Water(ft.)	Depth to well bottom (ft.)	Measured Depth to Well Bottom (ft.)	Survey Point: TOB or (TOC)	Notes
MW-30	1502	2				63.10	63.46	114.34	114.22		
MW-31	1449	4				62.55	63.04	89.99	90.05		
MW-31A	1456	4				62.07	62.70	64.02	64.10		
MW-31B	1453	4				62.74	63.01	106.54	106.75		
MW-32	1446	2				68.50	68.85	133.3	133.39		
MW-33A	0835	2				Dry	dry	64.71	64.70		
MW-33B	0822	2				62.97	63.51	90.21	90.20		
MW-34	1436	4				62.37	62.90	67.16	67.05		
MW-35	1439	4				62.78	62.99	104.42	104.40		
MW-36	1505	4				62.18	62.51	86.72	86.70		
MW-37	1330	4				62.22	62.51	108.26	108.20		
MW-38	1445	4				61.60	61.88	66.11	66.10		
MW-39	1440	4				61.85	62.26	87.1	86.98		
MW-40	1430	4				61.77	62.18	109.59	109.42		
MW-41	1405	4				63.34	63.94	97.7	97.63		
MW-42	1557	2				62.23	63.78	66.38	66.40		
MW-43	1554	2				63.08	63.61	86.86	86.81		
MW-44	1551	2				62.92	63.44	105.46	105.50		
MW-45	1538	2				61.85	62.26	88.61	88.61		
MW-46	1457	2				61.42	61.87	67.38	67.42		
MW-47	1500	2				61.30	61.77	87.84	87.60		
MW-48	1505	2				61.22	61.63	108.05	108.01		
MW-49	1439	2				60.57	60.93	69.91	69.87		
MW-50	1443	2				60.72	61.13	88.28	88.26		
MW-51	1447	2				60.74	61.11	108.41	108.17		
MW-52	1430	2				60.66	61.12	76.54	76.50		
MW-53	1426	2				60.78	61.12	95.95	95.90		

Well Gauging Data

Project # 130072-025 Date 6/10/19 Client Haley & Aldrich

Site Cooper Drum - South Gate

Well ID	Time	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Depth to Water (ft.) December 2018	Measured Depth to Water(ft.)	Depth to well bottom (ft.)	Measured Depth to Well Bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-54	1422	2				61.18	61.43	112.84	112.80		
MW-55	1500	2				67.52	67.95	137.62	137.60		
MW-56	1548	2	N	~~[illegible]~~		61.38	61.76	72.18	72.16		
MW-57A	1425	2				63.46	63.94	71	71.73		
MW-57B	1421	2				63.36	63.91	91	93.45		
MW-58	1430	2				63.52	64.14	71	70.96		
MW-59A	1343	2				Dry	62.41	62.91	62.60		
MW-59B	1339	2				63.61	64.08	79.67	79.56		
MW-59C	1334	2				63.85	64.32	92.78	92.55		
MW-60A	1030	2				64.22	64.71	77	76.00		
MW-60B	1035	2				64.46	64.94	102	102.00		
MW-61A	0749	2				63.29	63.76	76	76.00		
MW-61B	0746	2				63.38	63.86	88	88.00		
MW-62A	1006	2				64.02	64.47	77	77.00		
MW-62B	1015	2				64.11	64.54	107	106.01		
MW-63		2		— unable to access		63.15		67.6			
MW-64A		2		— unable to access		62.57		84.5			
MW-64B		2		— unable to access		66.56		112.9			
PZ-7A	0945	2				64.20	65.07	76	75.70		
PZ-7B	0955	2				64.63	65.19	94	94.00		
EW-8	1218	4				63.08	63.58	109.34	109.28		
EW-3	1445	6					62.31		111.71		

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/13/15

Sampling Data:

Well ID: EW-A | Well Depth: — ft | Initial Depth To Water: — ft | Purging Device: Port

Start time: _____ | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☐ Yes ☐ No

Finish Time: _____ | Depth To Bottom Of Screen — ft | Tubing Type: _____

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
	—	Port	Simple	—							
	EW-A- 061315 @					1040					
~~EW-A~~ 1040					21.2	6.39	3390	0.38	5	87	

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: EW-2 Well Depth: — ft Initial Depth To Water: — ft Purging Device: Pump

Start time: _____ Depth To Top Of Screen: — ft Depth Of Pump Intake: _____ ft Tubing Present In Well: ☐ Yes ☐ No

Finish Time: _____ Depth To Bottom Of Screen — ft Tubing Type: _____

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
	—	Pump		Sample —							
	EW-02-06/13/19				@	1250					
1250					23.8	6.34	2827	0.35	2	104	

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: EW-4 | Well Depth: — ft | Initial Depth To Water: — ft | Purging Device: Ext. Pump

Start time: 1135 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☐ Yes ☐ No

Finish Time: 1140 | Depth To Bottom Of Screen — ft | Tubing Type: —

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1135	—	1	1	5	21.9	7.51	4177	0.58	4	-23.8	
											EW-4-061419@1140
											MS/MSD

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT: 2Q 2015 Semi-Annual Groundwater Sampling
LOCATION: 9313 Rayo Avenue, South Gate, California
CLIENT: Cooper Drum Cooperating Parties Group
CONTRACTOR: Blaine Tech

H&A FILE NO. 39845-131
PROJECT MGR. P. Bennett
FIELD REP TJ
DATE 6/12/15

Sampling Data:

Well ID: EW-5 Well Depth: _____ ft Initial Depth To Water: _____ ft Purging Device: Pump

Start time: _____ Depth To Top Of Screen: _____ ft Depth Of Pump Intake: _____ ft Tubing Present In Well: ☐ Yes ☐ No

Finish Time: _____ Depth To Bottom Of Screen _____ ft Tubing Type: _____

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
	—	Pump		Sample	—						
0915		EW-05-061215 @				0915		MS/MSD		*	
0915					25.5	6.76	4007	1.41	31	60	

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: EW-7A | Well Depth: — ft | Initial Depth To Water: — ft | Purging Device: Port

Start time: | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☐ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen — ft | Tubing Type:

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
	—	Port	Sample		—						
	EW-07A- 061219 @ 0950										
0950					22.9	6.69	3567	1.94	2	46	

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/12/15

Sampling Data:

Well ID: EW-7B | Well Depth: — ft | Initial Depth To Water: — ft | Purging Device: Port

Start time: | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☐ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen — ft | Tubing Type:

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
	—	Port		Sample —							
	EW-7B-061219 @ 1015										
1015					21.9	6.43	5878	1.20	16	44	

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: EW-8 Well Depth: 109.25 ft Initial Depth To Water: 63.58 ft Purging Device: RFZ

Start time: 0845 Depth To Top Of Screen: 99.37 ft Depth Of Pump Intake: 104 ft Tubing Present In Well: ☑ Yes ☐ No

Finish Time: 0901 Depth To Bottom Of Screen 108.90 ft Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0848	63.64	500	500	1500	21.0	7.15	3513	0.47	~~172.8~~ 57	-172.8	
0851	63.65	↓	↓	3000	21.3	7.13	3526	0.45	22	-175.4	
0854	63.65			4500	21.6	7.13	3533	0.43	20	-176.2	
0857	63.65			6000	21.8	7.13	3541	0.41	19	-179.4	
0900	63.65	↓	↓	7500	21.8	7.12	3550	0.41	19	-180.2	
											EW-8-061319 @ 0901

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-1 | Well Depth: 82.51 ft | Initial Depth To Water: 61.64 ft | Purging Device: PE2

Start time: 0836 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 78' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 0846 | Depth To Bottom Of Screen — ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0833	61.70	400	400	1200	21.3	7.43	2816	0.50	12	-110.5	
0836	61.71	↓	↓	2400	22.5	7.39	2810	0.49	9	-112.8	
0839	61.71			3600	22.6	7.37	2834	0.43	8	-115.4	
0842	61.72			4800	22.7	7.36	2857	0.41	8	-117.3	
0845	61.72	↓	↓	6000	22.7	7.36	2865	0.41	8	-119.5	
											MW-1-061419@0846
											QC19-061419@0856

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID:	MW-2A	Well Depth:	62.24 ft	Initial Depth To Water:	Dry ft	Purging Device:	—
Start time:	—	Depth To Top Of Screen:	— ft	Depth Of Pump Intake:	— ft	Tubing Present In Well: ☐ Yes	☐ No
Finish Time:	—	Depth To Bottom Of Screen	— ft			Tubing Type:	—

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
			- well		is	dry	—				
							0				
		-	NO	SAMPLE			TAKEN	-			

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PR
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-2B | Well Depth: 72.41 ft | Initial Depth To Water: 64.77 ft | Purging Device: KFZ

Start time: 0930 | Depth To Top Of Screen: 68 ft | Depth Of Pump Intake: 70' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 0950 | Depth To Bottom Of Screen 72 ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0933	64.83	400	400	1200	22.6	7.17	2216	0.71	7	-101.4	
0936	64.86			2400	22.9	7.15	2248	0.68	5	-105.6	
0939	64.87			3600	23.1	7.14	2268	0.65	4	-107.2	
0942	64.87			4800	23.2	7.13	2274	0.64	3	-110.5	
0945	64.87			6000	23.2	7.13	2289	0.63	3	-111.7	
0949	64.88	↓	↓	7200	23.3	7.13	2296	0.63	3	-112.2	
											MW-2B-061419
											@ 0950

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-2C | Well Depth: 92.38 ft | Initial Depth To Water: 64.60 ft | Purging Device: RFZ

Start time: 1012 | Depth To Top Of Screen: 88 ft | Depth Of Pump Intake: 90 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1028 | Depth To Bottom Of Screen 92 ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1015	64.68	400	400	1800	23.1	7.27	4530	0.51	33	-87.6	
1018	64.69			2400	23.4	7.23	4541	0.47	27	-90.3	
1021	64.70			3600	23.5	7.21	4550	0.45	25	-92.4	
1024	64.70			4800	23.7	7.21	4561	0.45	24	-94.8	
1027	64.70	↓	↓	6000	23.7	7.20	4572	0.44	24	-97.1	
											MW-2C-061419
											@ 1028

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TB
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID:	MW-4	Well Depth:	81.90 ft	Initial Depth To Water:	63.75 ft	Purging Device:	RF2
Start time:	1300	Depth To Top Of Screen:	50 ft	Depth Of Pump Intake:	70 ft	Tubing Present In Well: ☒ Yes ☐ No	
Finish Time:		Depth To Bottom Of Screen	82 ft			Tubing Type:	1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1303	63.91		500	1500	22.3	6.44	5186	0.31	28	115	
1306	63.91			3000	22.7	6.46	5173	0.16	20	113	
1309	63.91			4500	22.9	6.48	5178	0.24	15	111	
1312	63.91			6000	23.0	6.49	5180	0.29	12	110	
1315	63.91			7500	22.1	6.49	5182	0.30	11	108	
1318	63.91			9000	22.1	6.49	5184	0.31	11	107	
	MW-04 06/13/19 @ 1319										
	* MS/MSD										

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	JS
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-4D | Well Depth: 92.40 ft | Initial Depth To Water: 63.70 ft | Purging Device: BF2

Start time: 1327 | Depth To Top Of Screen: 88 ft | Depth Of Pump Intake: 90 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen: 92 ft | Tubing Type: 1/2 ll

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1330	63.91		500	1500	22.4	6.43	2122	0.34	35	15	
1333	63.91			3000	23.2	6.49	2136	0.26	20	-8	
1336	63.91			4500	23.3	6.47	2140	0.15	15	-25	
1339	63.91			6000	23.4	6.50	2149	0.13	10	-30	
1342	63.91			7500	23.6	6.52	2155	0.10	6	-32	
1345	63.91			9000	23.6	6.52	2159	0.11	5	-35	
1348	63.91		↓	10,500	23.7	6.53	2166	0.11	5	-37	
		MW-04D-		061319	@		1349				
		QC-15-		061319 @			1354				
		QC13-		061319 @			1420				

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-15 | Well Depth: 85.10 ft | Initial Depth To Water: 63.81 ft | Purging Device: RFT

Start time: 1040 | Depth To Top Of Screen: 70 ft | Depth Of Pump Intake: 881 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1056 | Depth To Bottom Of Screen 85 ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1043	63.86	400	400	1200	21.4	7.41	2958	0.58	9	-90.2	
1046	63.87	↓	↓	2400	21.9	7.40	3026	0.55	8	-92.3	
1049	63.87			3600	22.6	7.40	3032	0.54	7	-93.7	
1052	63.87			4800	22.8	7.39	3048	0.53	7	-94.2	
1055	63.87			6000	22.8	7.39	3051	0.53	7	-95.2	
											MW-15-061319 @ 1056

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-15B | Well Depth: 103.00 ft | Initial Depth To Water: 63.63 ft | Purging Device: PP

Start time: 1130 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 99 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1146 | Depth To Bottom Of Screen ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1133	63.70	500	500	1500	21.5	7.32	2954	0.65	19	-120.8	
1136	63.71	↓	↓	3000	21.6	7.33	2931	0.63	15	-124.5	
1139	63.71			4500	21.0	7.32	2962	0.61	13	-125.8	
1142	63.71			6000	22.1	7.32	2975	0.61	12	-126.4	
1145	63.71			7500	22.2	7.31	2981	0.60	12	-127.5	MW-15B-061319 @ 1146

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT: 2Q 2015 Semi-Annual Groundwater Sampling
LOCATION: 9313 Rayo Avenue, South Gate, California
CLIENT: Cooper Drum Cooperating Parties Group
CONTRACTOR: Blaine Tech

H&A FILE NO. 39845-131
PROJECT MGR. P. Bennett
FIELD REP PA
DATE 6/13/19

Sampling Data:

Well ID: MW-16 | Well Depth: 128.00 ft | Initial Depth To Water: 68.16 ft | Purging Device: RFZ
Start time: 0929 | Depth To Top Of Screen: 118 ft | Depth Of Pump Intake: 122 ft | Tubing Present In Well: ☒ Yes ☐ No
Finish Time: 0948 | Depth To Bottom Of Screen 128 ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0932	68.20	500	500	1500	20.9	7.19	3403	0.45	67	-54.8	
0935	68.22	↓	↓	3000	21.2	7.18	3420	0.43	58	-57.6	
0938	68.22			4500	22.0	7.17	3416	0.41	35	-59.2	
0941	68.23			6000	22.5	7.17	3432	0.40	32	-61.5	
0944	68.23			7500	22.6	7.17	3440	0.39	31	-62.8	
0947	68.23			9000	22.6	7.17	3445	0.39	31	-62.4	
											MW-16-061319 @ 0948

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/13/15

Sampling Data:

Well ID: MW-17 | Well Depth: 78.80 ft | Initial Depth To Water: 64.16 ft | Purging Device: RFZ

Start time: 0845 | Depth To Top Of Screen: 69 ft | Depth Of Pump Intake: ~74 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 79 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0848	64.20		~500	1500	21.5	6.47	6067	0.46	38	30	
0851	64.20		↓	3000	21.9	6.44	6085	0.54	23	18	
0854	64.20			4500	22.2	6.44	6082	0.50	18	10	
0857	64.20			6000	22.5	6.45	6080	0.48	12	5	
0900	64.20			7500	22.8	6.45	5991	0.40	15	-8	
0903	64.20			9000	23.0	6.45	5988	0.39	14	-11	
0906	64.20			10,500	23.1	6.45	5984	0.37	14	-12	

MW-17-061315 @ 0907

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-18 | Well Depth: 128.00 ft | Initial Depth To Water: 70.74 ft | Purging Device: PFZ

Start time: 1227 | Depth To Top Of Screen: 118 ft | Depth Of Pump Intake: 124 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1246 | Depth To Bottom Of Screen 128 ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1230	70.79	500	500	1500	21.1	7.35	4338	0.92	43	-105.6	
1233	70.80	↓	↓	3000	21.4	7.21	4520	0.71	34	-111.8	
1236	70.80			4500	22.1	7.16	4590	0.37	28	-117.2	
1239	70.80			6000	22.3	7.16	4598	0.35	25	-119.4	
1242	70.80			7500	22.3	7.15	4602	0.34	24	-120.2	
1245	70.80			9000	22.4	7.15	4607	0.34	24	-121.3	MW-18-061319 @ 1246

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-19 | Well Depth: 77.52 ft | Initial Depth To Water: 64.35 ft | Purging Device: PP

Start time: 1330 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 74 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1346 | Depth To Bottom Of Screen — ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1333	64.41	300	300	900	22.8	7.21	4694	0.92	5	-41.3	
1336	64.43	"	"	1800	22.9	7.20	4713	0.87	4	-46.8	
1339	64.43	"	"	2700	22.9	7.20	4727	0.85	3	-48.2	
1342	64.43	"	"	3600	23.1	7.19	4738	0.84	3	-51.2	
1345	64.43	↓	↓	4500	23.1	7.19	4750	0.84	3	-51.9	
											MW-19-061219 @ 1346

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PB
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-20 | Well Depth: 68.79 ft | Initial Depth To Water: 63.50 ft | Purging Device: RFZ

Start time: 1111 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 67 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1130 | Depth To Bottom Of Screen — ft | Tubing Type: Yz 10

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1114	63.56	200	200	600	23.6	7.73	5111	1.78	34	117.8	
1117	63.58	↓	↓	1200	23.7	7.72	5134	1.70	30	115.4	
1120	63.58			1800	23.7	7.70	5143	1.68	28	114.9	
1123	63.58			2400	24.0	7.70	5150	1.67	25	113.8	
1126	63.58			3000	24.1	7.69	5162	1.65	24	112.4	
1129	63.58			3600	24.1	7.69	5165	1.65	24	111.7	
											MW-20-061119 @ 1130

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-20B | Well Depth: 84.10 ft | Initial Depth To Water: 63.23 ft | Purging Device: PFZ

Start time: 1152 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 85' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1208 | Depth To Bottom Of Screen ✓ ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1155	63.26	500	500	1500	22.3	7.27	5875	1.03	31	-125.7	
1158	63.28	↓	↓	3000	22.5	7.25	5883	0.97	23	-129.4	
1201	63.28	↓	↓	4500	22.9	7.24	5890	0.95	20	-131.4	
1204	63.28	↓	↓	6500	23.0	7.24	5898	0.94	19	-132.4	
1207	63.28	↓	↓	7500	23.0	7.23	5904	0.94	19	-133.7	
											MW-20B-061119 @ 1208
											* MS/MSD * 6 Bottles

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-21 | Well Depth: 74.11 ft | Initial Depth To Water: 64.22 ft | Purging Device: RF2

Start time: 1325 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 72' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1344 | Depth To Bottom Of Screen — ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1328	64.28	300	300	900	22.6	7.32	5312	1.07	13	-20.6	
1331	64.28	↓	↓	1800	22.7	7.31	5385	1.03	10	-26.8	
1334	64.28			2700	22.9	7.30	5404	0.98	9	-29.4	
1337	64.28			3600	23.4	7.30	5415	0.95	8	-30.7	
1340	64.28			4500	23.5	7.30	5420	0.94	8	-31.3	
1343	64.28	↓	↓	5400	23.6	7.30	5428	0.94	8	-32.8	
											MW-21-061119 @ 1344

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TG
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-22 | Well Depth: 71.72 ft | Initial Depth To Water: 64.29 ft | Purging Device: RFZ

Start time: 0810 | Depth To Top Of Screen: 63 ft | Depth Of Pump Intake: 68 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 73 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0813	64.41		200	1000	22.0	6.57	4100	0.38	22	-103	
0816	64.41			1200	22.7	6.60	4095	0.46	11	-104	
0819	64.41			1800	23.1	6.62	4104	0.47	8	-100	
0822	64.41			2400	23.4	6.62	4118	0.37	6	-98	
0825	64.41			3000	23.5	6.63	4122	0.36	5	-97	
0828	64.41			3600	23.5	6.63	4127	0.36	5	-95	
			MW-22-061219				@	0829			
			QC 04-061219				@	0800			

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-23 | Well Depth: 78.81 ft | Initial Depth To Water: 64.43 ft | Purging Device: RF2

Start time: 0915 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 74 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 0934 | Depth To Bottom Of Screen ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0918	64.43	400	400	1200	21.5	7.22	6433	0.73	4	-41.7	
0921	64.45	↓	↓	2400	21.8	7.20	6440	0.68	3	-44.2	
0924	64.45			3600	22.2	7.19	6458	0.65	3	-47.5	
0927	64.45			4800	22.5	7.19	6462	0.64	2	-49.3	
0930	64.46			6000	22.6	7.18	6470	0.63	2	-80.6	
0933	64.47	↓	↓	7200	22.6	7.18	6478	0.63	2	-51.0	
											MW-23-061119 @ 0934

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-23A | Well Depth: 64.61 ft | Initial Depth To Water: 63.75 ft | Purging Device: disp. bailer

Start time: 1145 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: — | Depth To Bottom Of Screen: — ft | Tubing Type: —

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
			Switched	to	hand	bail	due	to	Low	water	column —
		—									
1149	63.87			0.2	22.7	6.50	4906	0.62	376	91	
1151	63.90			0.4	22.9	6.55	4954	0.55	510	102	
1153	63.92			0.6	23.0	6.57	4966	0.50	691	109	
	MW-23A-061419 @ 1200										
	QC18-061419 @ 1220										

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling
LOCATION	9313 Rayo Avenue, South Gate, California
CLIENT	Cooper Drum Cooperating Parties Group
CONTRACTOR	Blaine Tech
H&A FILE NO.	39845-131
PROJECT MGR.	P. Bennett
FIELD REP	PA
DATE	6/11/19

Sampling Data:

Well ID: MW-23B
Well Depth: 104.22 ft
Initial Depth To Water: ~~104.23~~ 65.73
Purging Device: PP
Start time: 0953
Depth To Top Of Screen: ft
Depth Of Pump Intake: 100 ft
Tubing Present In Well: ☒ Yes ☐ No
Finish Time: 1012
Depth To Bottom Of Screen ft
Tubing Type: 1/2" PD

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0956	65.82	200	200	600	21.6	7.32	3225	0.26	28	-36.8	
0959	65.85	↓	↓	1200	21.7	7.32	3240	0.23	22	-38.5	
1002	65.85			1800	21.7	7.31	3256	0.21	20	-40.1	
1005	65.86			2400	21.9	7.30	3268	0.20	18	-41.3	
1008	65.87			3000	22.1	7.30	3270	0.20	17	-42.9	
1011	65.87			3600	22.1	7.30	3278	0.19	17	-43.1	MW-23B-061119 @ 1012

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-25 | Well Depth: 84.00 ft | Initial Depth To Water: 63.34 ft | Purging Device: PF2

Start time: 0918 | Depth To Top Of Screen: 75 ft | Depth Of Pump Intake: 82.5 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen: 90 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0921	63.60		500	1500	21.6	6.54	3610	0.28	16	84	
0924	63.60		↓	3000	22.1	6.45	3641	0.20	10	-17	
0927	63.60			4500	22.5	6.49	3649	0.19	8	-22	
0930	63.60			6000	22.7	6.53	3655	0.17	6	-25	
0933	63.60			7500	22.9	6.53	3659	0.16	5	-27	
0936	63.60		↓	9000	23.0	6.53	3661	0.16	5	-29	
			MW-25-061419		@			0937			
			QC20-061419		@			0947			

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-25B | Well Depth: 105.00 ft | Initial Depth To Water: 63.35 ft | Purging Device: RF2

Start time: 0821 | Depth To Top Of Screen: 95 ft | Depth Of Pump Intake: 100 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen: 105 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0824	63.54		500	1500	21.6	6.50	3386	0.43	22	55	
0827	63.54			3000	21.9	6.51	3350	0.40	11	40	
0830	63.54			4500	22.1	6.52	3341	0.38	8	33	
0833	63.54			6000	22.2	6.52	3338	0.37	7	29	
0836	63.54			7500	22.4	6.52	3319	0.30	7	28	
0839	63.54			9000	22.5	6.52	3315	0.35	7	25	
		MW-25B - 06/14/19 @ 0840									

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TG
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-26 | Well Depth: 131.99 ft | Initial Depth To Water: 69.34 ft | Purging Device: RFZ

Start time: 1020 | Depth To Top Of Screen: 122 ft | Depth Of Pump Intake: 127 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen: 132 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1023	69.44		500	1500	21.3	6.46	3148	0.24	16	78	
1026	69.44			3000	21.5	6.41	3210	0.16	10	50	
1029	69.44			4500	21.9	6.46	3319	0.15	9	40	
1032	69.44			6000	22.2	6.46	3336	0.17	6	102	
1035	69.44			7500	22.3	6.46	3344	0.17	5	105	
1038	69.44			(900)	22.3	6.46	3349	0.18	4	108	
1041	69.44			10,500	22.3	6.46	3352	0.18	4	109	
			MW-26-061419 @ 1042								

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/11/15

Sampling Data:

Well ID: MW-28 | Well Depth: 113.90 ft | Initial Depth To Water: 63.46 ft | Purging Device: RFZ

Start time: 1004 | Depth To Top Of Screen: 104 ft | Depth Of Pump Intake: 109' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 114 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1012	63.62	300	300	900	22.3	6.72	2254	0.37	91	-263	
1015	63.62	↓	↓	1800	22.6	6.47	3013	0.36	70	-271	
1018	63.62			2700	23.0	6.58	3422	0.40	66	-279	
1021	63.62			3600	23.1	6.61	3517	0.41	60	-287	
1024	63.62			4500	23.1	6.64	3817	0.44	62	-284	
1027	63.62			5406	23.1	6.64	3822	0.45	65	-285	
1030	63.62			6300	23.1	6.64	3827	0.46	67	-285	
		MW-28-061115 @ 1031									
		QC05-061115 @ 1041									

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-29 | Well Depth: 90.11 ft | Initial Depth To Water: 62.81 ft | Purging Device: RF2

Start time: 1047 | Depth To Top Of Screen: 75 ft | Depth Of Pump Intake: 82.5 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 90 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1050	62.95		500	1500	22.7	6.74	4610	0.59	16	-214	
1053	62.95		↓	3000	23.1	6.75	4570	0.44	10	-212	
1056	62.95			4500	23.5	6.81	4531	0.39	5	-210	
1059	62.95			6000	23.9	6.87	4520	0.37	3	-208	
1102	62.95			7500	24.0	6.81	4516	0.36	2	-207	
1105	62.95		↓	9000	24.0	6.82	4510	0.36	2	-207	
			MW-29-061119 @ 1106								

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/11/15

Sampling Data:

Well ID: MW-32 | Well Depth: 133.39 ft | Initial Depth To Water: 68.85 ft | Purging Device: RFZ

Start time: 0923 | Depth To Top Of Screen: 122 ft | Depth Of Pump Intake: 127 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 132 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0926	69.12		400	1200	22.4	6.48	4731	0.80	16	-110	
0929	69.16			2400	22.9	6.57	4802	0.77	11	-119	
0932	69.16			3600	23.1	6.57	4806	0.74	10	-140	
0935	69.16			4800	23.2	6.60	4810	0.76	8	-144	
0938	69.16			6000	23.2	6.60	4814	0.77	7	-145	
0941	69.16			7200	23.3	6.60	4814	0.77	7	-147	
			MW-32-061115@0942								

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-33A | Well Depth: 64.70 ft | Initial Depth To Water: Dry ft | Purging Device: —

Start time: — | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☐ Yes ☐ No

Finish Time: — | Depth To Bottom Of Screen — ft | Tubing Type: —

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
		—	well	15	dry						
		—	NO	SAMPLE	TAKEN						

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/13/15

Sampling Data:

Well ID: MW-33B | Well Depth: 90.20 ft | Initial Depth To Water: 63.51 ft | Purging Device: PFZ

Start time: 0927 | Depth To Top Of Screen: 80 ft | Depth Of Pump Intake: 85 ft | Tubing Present In Well: ☑ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 90 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0930	63.66		500	1500	21.3	6.42	4318	0.29	29	64	
0933	63.66		↓	3000	22.0	6.47	4325	0.26	17	41	
0936	63.66			4500	22.5	6.50	4340	0.25	10	35	
0939	63.66			6000	22.8	6.51	4352	0.25	6	30	
0942	63.66			7500	23.0	6.51	4356	0.24	5	29	
0945	63.66		↓	9000	23.0	6.51	4360	0.24	5	29	
		MW-33B-061315					@	0946			

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT: 2Q 2015 Semi-Annual Groundwater Sampling
LOCATION: 9313 Rayo Avenue, South Gate, California
CLIENT: Cooper Drum Cooperating Parties Group
CONTRACTOR: Blaine Tech

H&A FILE NO.: 39845-131
PROJECT MGR.: P. Bennett
FIELD REP: TJ
DATE: 6/11/19

Sampling Data:

Well ID: MW-37
Start time: 0847
Finish Time: 0910

Well Depth: 108.20 ft
Depth To Top Of Screen: 99.5 ft
Depth To Bottom Of Screen: 109.5 ft

Initial Depth To Water: 62.51 ft
Depth Of Pump Intake: 104 ft

Purging Device: RF2
Tubing Present In Well: ☒ Yes ☐ No
Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0850	62.65		500	1500	22.4	6.49	7721	0.90	27	-128	
0853	62.65		↓	3000	22.0	6.52	6877	0.92	20	-134	
0856	62.65			4500	22.5	6.55	7127	0.93	15	-135	
0859	62.65			6000	22.7	6.56	7190	0.95	12	-133	
0902	62.65			7500	22.7	6.56	7206	0.97	11	-132	
0905	62.65			9000	22.8	6.56	7215	0.98	11	-132	
											Sample ID: MW-37-061119 @ 0906

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/11/15

Sampling Data:

Well ID: MW-41 | Well Depth: 97.03 ft | Initial Depth To Water: 63.94 ft | Purging Device: RFZ

Start time: 1135 | Depth To Top Of Screen: 84 ft | Depth Of Pump Intake: 94 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 99 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1138	64.15		500	1500	26.0	6.53	7148	1.74	26	-90	
1141	64.15			3000	25.2	6.55	7072	1.48	15	-109	
1144	64.15			4500	25.5	6.61	7046	1.34	15	-112	
1147	64.15			6000	25.5	6.61	7032	1.37	12	-113	
1150	64.15			7500	25.5	6.62	7030	1.35	12	-115	
1153	64.15			9000	25.7	6.62	7028	1.33	12	-116	
			MW-41-061115		@	1154					

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2019 Semi-Annual Groundwater Sampling	H&A FILE NO.	130072-025
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TO
CONTRACTOR	Blaine Tech	DATE	6/14/19

Sampling Data:

Well ID: MW-55 | Well Depth: 137.60 ft | Initial Depth To Water: 67.95 ft | Purging Device: RFZ

Start time: 1114 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: — ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen — ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or °C	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1117	68.12		500	1500	21.4	6.44	4121	5.87	10	38	
1120	68.12			3000	22.2	6.53	5076	3.30	5	57	
1123	68.12			4500	22.5	6.53	5316	2.69	2	54	
1126	68.12			6000	22.7	6.55	5419	2.55	2	62	
1129	68.12			7500	22.7	6.55	5426	2.50	2	65	
1132	68.12			9000	22.8	6.55	5430	2.49	2	66	
		MW-55-06141900						1133			

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TT
CONTRACTOR	Blaine Tech	DATE	6/12/15

Sampling Data:

Well ID: MW-57A | Well Depth: 71.73 ft | Initial Depth To Water: 63.94 ft | Purging Device: PF2

Start time: 1310 | Depth To Top Of Screen: 60 ft | Depth Of Pump Intake: 68 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 70 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1317	64.20		700	600	22.5	6.29	2277	0.23	91	-84	
1320	64.24			1200	23.2	6.40	2522	0.52	122	-109	
1319	64.24			1800	24.0	6.48	2591	0.27	140	-121	
1322	64.24			24.00	24.2	6.50	2619	0.20	131	-125	
1325	64.24			3000	24.2	6.50	2643	0.16	130	-128	
1328	64.24			36.00	24.4	6.51	2650	0.15	125	-130	
1331	64.24			4200	24.4	6.51	2652	0.14	122	-131	
			MW-57A-061215 @ 1332								

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/12/15

Sampling Data:

Well ID: MW-57B | Well Depth: 93.48 ft | Initial Depth To Water: 63.91 ft | Purging Device: RF2

Start time: 1352 | Depth To Top Of Screen: 85 ft | Depth Of Pump Intake: 87.5 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 90 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1355	64.10		500	1500	22.0	6.36	1726	0.68	41	26	
1358	64.12		↓	3000	22.6	6.42	1800	0.72	33	19	
1401	64.12			4500	22.8	6.44	1816	0.70	30	18	
1404	64.12			6000	22.9	6.47	1824	0.69	25	17	
1407	64.12			7500	23.0	6.47	1827	0.65	22	17	
1410	64.12			9000	23.1	6.48	1830	0.62	22	16	
1413	64.12			10,500	23.1	6.48	1831	0.60	23	16	
		MW-57B-061215 @ 1414									
		QC08-061215 @ 1430									

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/12/15

Sampling Data:

Well ID: MW-58 | Well Depth: 70.96 ft | Initial Depth To Water: 64.14 ft | Purging Device: RFT

Start time: 1220 | Depth To Top Of Screen: 60 ft | Depth Of Pump Intake: 68 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 70 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1223	64.30		300	900	22.5	6.42	1612	0.43	45	70	
1226	64.30		↓	1800	23.2	6.58	1605	0.99	31	10	
1229	64.30			2700	23.3	6.58	1604	1.12	20	6	
1232	64.30			3600	23.3	6.60	1605	1.13	18	~~5~~	
1235	64.30			4500	23.5	6.61	1608	1.15	17	4	
1238	64.30		↓	5400	23.6	6.61	1609	1.16	17	4	
		MW-58-061215 @ 1239									

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TD
CONTRACTOR	Blaine Tech	DATE	6/13/15

Sampling Data:

Well ID: MW-59A Well Depth: 62.60 ft Initial Depth To Water: 62.41 ft Purging Device: ____

Start time: ____ Depth To Top Of Screen: ____ ft Depth Of Pump Intake: ____ ft Tubing Present In Well: ☐ Yes ☐ No

Finish Time: ____ Depth To Bottom Of Screen ____ ft Tubing Type: ____

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
			—	Transducer		water	to	Sample			
				—	No	Sample	taken	—			

Form 3010

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TJ
CONTRACTOR	Blaine Tech	DATE	6/17/15

Sampling Data:

Well ID: MW-59S | Well Depth: 79.56 ft | Initial Depth To Water: 64.08 ft | Purging Device: RFT

Start time: 1100 | Depth To Top Of Screen: 75 ft | Depth Of Pump Intake: 77 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 79 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1103	64.25		500	1500	21.5	6.47	3455	0.35	246	82	
1106	64.25		↓	3000	22.4	6.44	3915	0.40	145	50	
1109	64.25			4500	22.9	6.45	4348	0.47	123	32	
1112	64.25			6000	23.5	6.47	4412	0.30	71	30	
1115	64.25			7500	23.9	6.49	4461	0.18	44	19	
1118	64.25			9000	24.2	6.49	4472	0.15	32	15	
1121	64.25			10,500	24.2	6.50	4475	0.14	30	12	
1124	64.25			12,000	24.3	6.50	4479	0.12	28	12	
1127	64.25		↓	13,500	24.4	6.50	4482	0.12	28	11	
		MW-59S-0617		@	1128						

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TS
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-59C | Well Depth: 92.55 ft | Initial Depth To Water: 64.37 ft | Purging Device: RF2

Start time: 1100 | Depth To Top Of Screen: 88 ft | Depth Of Pump Intake: 90' ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen 92 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1104	64.45		500	1500	24.9	6.54	1764	0.44	16	91	
1112	64.45			3000	25.1	6.49	1758	0.35	10	102	
1115	64.45			4500	25.7	6.63	1750	0.31	6	90	
1118	64.45			6000	26.1	6.70	1754	0.30	5	87	
1121	64.45			7500	26.2	6.71	1766	0.28	5	85	
1124	64.45			9000	26.2	6.71	1771	0.27	4	82	
		MW-59C-061219 @ 1125									

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-60A | Well Depth: 76.00 ft | Initial Depth To Water: 64.71 ft | Purging Device: PFP

Start time: 0827 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 74 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 0843 | Depth To Bottom Of Screen ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0830	64.78	500	500	1500	22.5	7.25	4133	0.31	19	-118.6	
0833	64.80	↓	↓	3000	22.7	7.25	4158	0.29	17	-121.4	
0836	64.81			4500	22.8	7.24	4167	0.27	16	-122.4	
0839	64.82			6000	22.9	7.23	4175	0.26	15	-123.7	
0842	64.82	↓	↓	7500	23.0	7.23	4185	0.26	15	-124.9	
											MW-60A-061219 @0843

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-60B | Well Depth: 107.00 ft | Initial Depth To Water: 64.94 ft | Purging Device: RFZ

Start time: 0853 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 96 ft | Tubing Present In Well: ☑ Yes ☐ No

Finish Time: 0909 | Depth To Bottom Of Screen ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0856	65.00	500	500	1500	21.1	7.19	5922	0.33	12	-103.9	
0859	65.01	↓	↓	3000	22.7	7.18	6013	0.27	10	-105.7	
0902	65.01			4500	22.7	7.18	6020	0.26	9	-109.3	
0905	65.01			6000	22.9	7.18	6039	0.26	9	-110.1	
0908	65.01			7500	22.9	7.18	6047	0.25	9	-112.6	
											MW-60B-061219 @ 0909

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-61A | Well Depth: 76.00 ft | Initial Depth To Water: 63.76 ft | Purging Device: PF2

Start time: 1307 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 72 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1323 | Depth To Bottom Of Screen ft | Tubing Type: 1/2 HD

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1310	63.82	500	500	1500	22.3	7.24	4115	0.49	27	-110.3	
1313	63.83	↓	↓	3000	22.3	7.27	4141	0.47	24	-114.2	
1316	63.83			4500	22.5	7.26	4150	0.46	21	-117.2	
1319	63.84			6000	22.6	7.25	4162	0.45	20	-119.1	
1322	63.84	↓	↓	7500	22.7	7.25	4179	0.45	20	-121.4	
											MW-61A-061319@1323
											DUP → QC14-061319@1333

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/13/19

Sampling Data:

Well ID: MW-61B | Well Depth: 88.00 ft | Initial Depth To Water: 63.86 ft | Purging Device: RFZ

Start time: 1337 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 84 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1353 | Depth To Bottom Of Screen ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1340	63.90	500	500	1500	21.5	7.15	2358	0.24	6	-124.1	
1343	63.91	↓	↓	3000	22.4	7.13	2425	0.19	5	-127.8	
1346	63.92			4500	22.4	7.13	2436	0.17	4	-129.7	
1349	63.92			6000	22.5	7.12	2440	0.16	4	-131.5	
1352	63.92	↓	↓	7500	22.5	7.12	2453	0.16	4	-133.6	
											MW-61B-061319
											@ 1353

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-62A | Well Depth: 72.00 ft | Initial Depth To Water: 64.47 ft | Purging Device: RFZ

Start time: 1013 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 72 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: | Depth To Bottom Of Screen ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temperature (°F) or (°C)	pH	Conductivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1016	64.51	500	500	1500	23.1	7.24	3029	0.36	34	-72.8	
1019	64.51	↓	↓	3000	23.3	7.21	3042	0.33	27	-75.9	
1022	64.51			4500	23.5	7.20	3080	0.29	25	-79.4	
1025	64.51			6000	23.6	7.20	3092	0.27	24	-80.1	
1028	64.51			7500	23.6	7.20	3107	0.27	24	-81.2	
											MW-62A-061219 @ 1029

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: MW-62B(R) Well Depth: 106.01 ft Initial Depth To Water: 64.41 ft Purging Device: RFZ

Start time: 0945 Depth To Top Of Screen: — ft Depth Of Pump Intake: 104 ft Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1001 Depth To Bottom Of Screen — ft Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
0948	64.60	500	500	1500	22.4	7.26	2481	0.71	4	-87.4	
0951	64.60	↓	↓	3000	22.3	7.25	2506	0.68	2	-90.3	
0954	64.61			4500	22.7	7.25	2530	0.67	1	-91.7	
0957	64.61			6000	22.9	7.24	2580	0.65	1	-92.0	
1000	64.61			7500	22.9	7.24	2596	0.65	1	-93.2	
											MW-62B(R)-061219 @ 1001

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PK
CONTRACTOR	Blaine Tech	DATE	6/11/19

Sampling Data:

Well ID: MW-63 | Well Depth: 67.63 ft | Initial Depth To Water: 63.62 ft | Purging Device: PEZ

Start time: 1400 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 66 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1416 | Depth To Bottom Of Screen ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting ~~(ml/min)~~ or (gal/min)	Purge Rate ~~(ml/min)~~ or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or ~~(°C)~~	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1403	63.70	200	200	600	22.8	7.41	2304	0.17	47	72.1	
1406	63.71	↓	↓	1200	22.9	7.40	2316	0.16	42	70.8	
1409	63.71			1800	22.9	7.39	2321	0.15	40	68.5	
1412	63.71			2400	23.0	7.39	2340	0.15	39	66.2	
1415	63.71	↓	↓	3000	23.1	7.39	2352	0.14	39	65.3	
											MW-63-061119
											@ 1416

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	JT
CONTRACTOR	Blaine Tech	DATE	6/11/14

Sampling Data:

Well ID: MW-64A | Well Depth: 84.69 ft | Initial Depth To Water: 63.00 ft | Purging Device: RFZ

Start time: 1400 | Depth To Top Of Screen: 79.5 ft | Depth Of Pump Intake: 82.5 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1430 | Depth To Bottom Of Screen 84.5 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1403	63.22		500	1500	22.9	6.20	4232	1.15	72	-136	
1406	63.26			3000	23.6	6.22	4178	0.65	19	-135	
1409	63.26			4500	23.9	6.22	4170	0.52	10	-136	
1412	63.26			6000	24.0	6.23	4167	0.49	5	-137	
1415	63.26			7500	24.1	6.25	4166	0.40	4	-138	
1418	63.26			9000	24.1	6.26	4160	0.39	4	-140	
1421	63.26		↓	10,500	24.2	6.26	4154	0.38	3	-141	
			MW-64A-061114 @					1422			
			QC04-061114 @					1440			

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	TO
CONTRACTOR	Blaine Tech	DATE	6/11/15

Sampling Data:

Well ID: MW-64B | Well Depth: 112.96 ft | Initial Depth To Water: 106.95 ft | Purging Device: IRF2

Start time: 1320 | Depth To Top Of Screen: 102.5 ft | Depth Of Pump Intake: 110 ft | Tubing Present In Well: ☒ Yes ☐ No

Finish Time: 1350 | Depth To Bottom Of Screen 117.5 ft | Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1330	107.10		500	1500	22.1	4.50	2987	1.60	26	-138	
1333	67.10			3000	22.2	6.61	3013	1.49	10	-144	
1336	67.10			4500	22.6	6.70	3113	1.40	6	-140	
1339	67.10			6000	22.8	6.72	3168	1.32	5	-138	
1342	67.10			7500	22.8	6.72	3177	1.30	4	-135	
1348	67.10			9000	23.0	6.73	3192	1.29	4	-134	
			MW-64B-061115 @				1346				

Form 3010

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	PA
CONTRACTOR	Blaine Tech	DATE	6/12/19

Sampling Data:

Well ID: PZ-7A | Well Depth: 75.70 ft | Initial Depth To Water: 65.07 ft | Purging Device: PEZ

Start time: 1140 | Depth To Top Of Screen: — ft | Depth Of Pump Intake: 73 ft | Tubing Present In Well: ☑ Yes ☐ No

Finish Time: 1156 | Depth To Bottom Of Screen — ft | Tubing Type: 1/2 ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1143	65.09	300	300	900	23.0	7.31	3324	0.51	6	-90.1	
1146	65.10			1800	23.5	7.30	3512	0.47	5	-94.7	
1149	65.10			2700	23.7	7.29	3530	0.45	4	-97.3	
1152	65.10			3600	23.8	7.29	3551	0.44	4	-99.2	
1155	65.10	↓	↓	4500	23.9	7.29	3562	0.44	4	-101.2	
											PZ-7A-061219
											@ 1156

HALEY ALDRICH

LOW FLOW/MNA FIELD SAMPLING FORM

PROJECT	2Q 2015 Semi-Annual Groundwater Sampling	H&A FILE NO.	39845-131
LOCATION	9313 Rayo Avenue, South Gate, California	PROJECT MGR.	P. Bennett
CLIENT	Cooper Drum Cooperating Parties Group	FIELD REP	6/12/19
CONTRACTOR	Blaine Tech	DATE	PA

Sampling Data:

Well ID: ~~MW~~ PZ-7B | Well Depth: 94.00 ft | Initial Depth To Water: 65.19 ft | Purging Device: RFZ

Start time: 1100 | Depth To Top Of Screen: ft | Depth Of Pump Intake: 90 ft | Tubing Present In Well: ☑ Yes ☐ No

Finish Time: 1116 | Depth To Bottom Of Screen ft | Tubing Type: ½ ID

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (ml/min) or (gal/min)	Purge Rate (ml/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (us/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mv)	Comments
1103	65.23	500	500	1500	22.9	7.25	3396	0.47	23	-72.4	
1106	65.23	|	|	3000	22.9	7.25	3411	0.45	18	-76.2	
1109	65.24	|	|	4500	23.4	7.24	3413	0.43	17	-78.9	
1112	65.25	|	|	6000	23.6	7.23	3420	0.41	17	-80.3	
1115	65.25	↓	↓	7500	23.6	7.23	3431	0.41	16	-81.2	
											PZ-7B-061219 @ 1116
										DUP →	QC10-061219 @ 1126

Form 3010

WELLHEAD INSPECTION CHECKLIST

Client Haley & Aldrich Date 6-10-19

Site Address 6313 Roya Ave, Southgate

Job Number 190610HS-1 Technician HS

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-26	✓	✓	✓							
MW-28	✓	✓	✓							
MW-27	✓	✓	✓							
MW-29	✓	✓	✓							
~~MW-29A~~ MW-42	✓	✓	✓							
~~MW-30~~										
MW-37	✓	✓	✓							
MW-41	✓	✓	✓							
MW-29A	✓	✓	✓							
MW-30	✓	✓	✓							
MW-40	✓	1 bolt	✓							
MW-39	✓	✓	✓							
MW-38	✓	✓	✓							
MW-55	✓	1 bolt	✓							
MW-36	✓	✓	✓							
MW-43	✓	✓	✓							
MW-44	✓	✓	✓							

NOTES: MW-40 - 1 bolt missing
MW-55 ✓

WELLHEAD INSPECTION CHECKLIST

Client Haley & Aldrich Date 6-10-19

Site Address 9313 Rayo Ave, South Gate

Job Number 190610HS-1 Technician HS

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-22	✓	✓	✓							
MW-64A	-NO ACCESS-									
MW-64B	-NO ACCESS-									
MW-63	-NO ACCESS-									
P2-7A	✓	✓	✓							
P2-7B	✓	✓	✓							
MW-62B	✓	✓	✓							
MW-62A										
MW-60A	✓	✓	✓							
MW-60B	✓	✓	✓							
MW-16	✓	✓	✓							
MW-15										
MW-15B	✓	✓	✓							
MW-19	✓	✓	✓							
MW-17	✓	✓	✓							
MW-25	✓	✓	✓							
MW-25B	✓	✓	✓							

NOTES: MW-64A, MW-64B, MW-63 - Unable to Access

WELLHEAD INSPECTION CHECKLIST

Client _____ Date _____

Site Address _____

Job Number _____ Technician _____

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-6A	✓	✓	✓							
MW-6B	✓	✓	✓							
MW-20	✓	✓	✓							
MW-20B	✓	✓	✓							
MW-33B	✓	✓	✓							
MW-37A	✓	✓	✓							
MW-4	✓	✓	✓							
MW-4B	✓	✓	✓							
MW-15		x	x		1/2	bolts	missing			
~~MW~~EW-8		x	x		1/2	bolts	missing			
MW-19		x	x		1/2	bolts	missing			
MW-4B	x	x	x							
MW-4		x	x		1/2	bolts	missing			
MW-1	x	x	x							
MW-2C		x	x		1/2	bolts	missing			
MW-2B	x	x	x							
MW-2A	x	x	x							

NOTES: _____

WELLHEAD INSPECTION CHECKLIST

Client _____ Date _____

Site Address _____

Job Number _____ Technician _____

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-23A	2" ✓	63.75	64.61	1458						
MW-23B	2" ✓	65.73	104.22	1445	—	1/2 bolts missing				
MW-23	4" ✓	64.43	78.81	1451	—	1/2 bolts missing				
MW-57A	2" ✓	63.94	71.73	1495						
MW-57B	2" ✓	63.91	93.45	1421						
MW-58	✓									
~~MW-63~~	1/2 bolts missing	2"	64.14/66.57							
MW-64A	✓ 2"									
MW-64	✓ 2"									
MW-45	1/2 bolts broken in tub			2"	50-88	1524				

NOTES: _____

WELLHEAD INSPECTION CHECKLIST

Page ____ of ____

Client Haley & Aldrich Date 6/10/19

Site Address 9313 Rayo. Ave., South gate, CA

Job Number 190610 - PA1 Technician NT

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-21		X	X		2/2	tabs stripped				
MW-24		X	X		1/2	tabs stripped				
MW-34		X	X							
MW-35		X	X							
MW-32		X	X							
MW-31		X	X							
MW-31B		X	X							
MW-31A		X	X							
MW-29		X	X							
MW-29A		X	X							
MW-30		X	X							
MW-56	X	X	X							
MW-54		X	X	}	1/2 bolts		missing			
MW-53		X	X	}						
MW-52		X	X	}		↓				
MW-51		X	X		2/2	tabs stripped				
MW-50		X	X	}		↓				
MW-49		X	X	}						

NOTES: locked

WELLHEAD INSPECTION CHECKLIST

Client Haley & Aldrich Date 6/10/19

Site Address 9313 Rayo Ave. South gate, CA

Job Number 190610-PA1 Technician M

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-46	X	P	P							
MW-47	P	P	P							
MW-48	P	P	P							

NOTES:

QUALITY CONTROL SAMPLES
COOPER DRUM SUPERFUND SITE
9313 RAYO AVENUE
SOUTH GATE, CALIFORNIA

Sample ID (ie. QC01-060517)	Date	Type of Sample (FD, TB, EB, FB)	If Duplicate, Well ID
QC01-061119	6/11/19	TB (Trip)	
QC02-061119		FB (Field)	
QC03-061119		EB	
QC04-061119		EB	
QC05-061119		DUP	MW-28
QC06-061219	6/12/19	TB	
QC07-061219		EB	
QC08-061219		EB	
QC09-061219		FB	
QC10-061219		DUP	PZ7B
QC11-061319	6/13/19	TB	
QC12-061319		EB	
QC13-061319		EB	
QC14-061319		DUP	MW-61A
QC15-061319		DUP	MW-4B
QC16-061419	6/14/19	TB	
QC17-061419		EB	
QC18-061419		EB	
QC19-061419		DUP	MW-1
QC20-061419		DUP	MW-25

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	Cooper Drum	PROJECT NUMBER	190610-PA1

EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI ProPLUS	17G1015886	6/12 0700	4 7 10 3900	4.0 2412 7.0 10.0 3920	Y	20.1	PA
↓	↓	6/12 0700	↓	4.0 2427 7.0 10.0 3933	Y	21.7	PA
↓	↓	6/13 0700	↓	4.0 2406 7.0 10.0 3912	Y	18.6	PA
↓	↓	6/14 0710	↓	4.1 2412 7.0 9.9 3920	Y	18.1	PA

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	H&A @ Cooper Drum			PROJECT NUMBER	190610-RA1		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI-Pro+	16M100926	6/11/14 0745	pH 7.0 4 3400	7.02 10.06 4.05 3867	✓ ✓ ✓	22.9	TG
↓	↓	↓	ORP 257.1 100%	242.6 102%	✓ ✓	22.0 21.6	TG
YSI-Pro+		6/12/14 0730	pH 7.0 4 3400	7.02 10.06 4.00 3883	✓ ✓ ✓	21.5	
↓	↓	↓	ORP 238.1 100%	240.0 94%	✓ ✓	21.1 20.9	
YSI-Pro+		6/13/14 0800	pH 7.0 4 3400	6.99 10.01 4.04 3866	✓ ✓ ✓	20.2	
↓	↓	↓	ORP 240.1 100%	245.5 102%	✓ ✓	19.9 19.5	
YSI-Pro+		6/14/14 0730	pH 7.0 4 3400	7.02 10.05 4.03 3881	✓ ✓ ✓	20.0	
↓	↓		ORP 238.1 100%	241.1 94%	✓ ✓	19.9 18.5	

APPENDIX D

Remediation Systems Operation and Maintenance Data

TABLE D-1
SVE/DPE PID MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	PID MEASUREMENTS AT SVE WELLS - Manifold (ppmv)										PID MEASUREMENTS AT DPE WELLS - Manifold (ppmv)														PID MEASUREMENTS AT SVE SYSTEM (ppmv)					
Date	SVE-3	SVE-4	SVE-5	SVE-6	SVE-7	SVE-8	SVE-9	SVE-10	SVE-11	SVE-12	DPE-1	DPE-2	DPE-3	DPE-4	DPE-5	DPE-6	DPE-7	DPE-8	DPE-9	DPE-10	DPE-11	DPE-12	DPE-13	DPE-14	Influent (Pre-Blower combined stream)	Effluent (VGACE)	HWA Inf	DPA Inf	MID 1 (VGACI) (Post-Blower Influent stream)	MID 2 (VGACM)
1/2/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.6	0.0	0.7	0.0	1.3	0.7	2.5	0.0	0.0	0.4	0.0	0.4	0.0	0.8	0.6	0.0	0.4	1.7	0.0	0.0
1/9/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.7	0.0	4.7	0.0	19.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	7.0	0.0	0.0
2/20/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	2.0	0.0	33.4	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.4	0.0	0.2	9.0	0.2	0.0
2/27/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/6/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	2.3	0.0	11.8	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	5.5	0.8	0.0
4/17/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	2.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.8	0.0	0.0	5.5	0.0	0.0
4/24/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.6	0.0	0.0	0.0	1.8	0.0	12.5	0.0	0.0	0.0	0.0	0.0	1.1	0.5	0.4	0.0	0.0	4.2	0.0	0.0
5/1/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0	0.0	0.0	4.1	0.0	1.2	0.0	0.0	4.6	0.0	0.0
6/12/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	22.3	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.8	0.0	0.0	4.2	7.1	0.0
6/19/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	2.3	0.0	28.6	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.6	0.0	0.0	9.1	0.0	0.0
6/26/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.8	0.0	21.7	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.5	0.0	0.0	5.8	0.0	0.0

Notes:
PID measurements in units of ppmv; PID calibrated to 50 ppmv of hexane
NM = Not Measured
PID = photoionization detector
ppmv = parts per million by volume

TABLE D-2
SVE/DPE VACUUM MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	VACUUM AT SVE WELLS (IN H2O)										VACUUM AT DPE WELLS (IN H2O)														VACUUM AT SVE SYSTEM (IN H2O)					
Date	SVE-3	SVE-4	SVE-5	SVE-6	SVE-7	SVE-8	SVE-9	SVE-10	SVE-11	SVE-12	DPE-1	DPE-2	DPE-3	DPE-4	DPE-5	DPE-6	DPE-7	DPE-8	DPE-9	DPE-10	DPE-11	DPE-12	DPE-13	DPE-14	Influent	Effluent	HWA Influent	DPA Influent	MID 1	MID 2
1/2/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	81	80	81	82	81	79	86	82	83	81	83	81	76	87	87	-1	86	87	-124	-109
1/9/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	82	82	82	82	82	82	86	82	82	82	82	82	79	86	90	0	87	89	-117	-115
2/20/2019	NM	NM	NM	NM	NM	NM	NM	80	NM	NM	80	80	80	80	80	80	82	80	80	80	80	80	80	82	86	0	86	86	-134	-131
2/27/2019	NM	NM	NM	NM	NM	NM	NM	88	NM	NM	84	84	85	83	83	83	91	83	84	84	83	83	79	90	92	-1	91	93	-139	-135
3/6/2019	NM	NM	NM	NM	NM	NM	NM	90	NM	NM	88	87	86	88	89	90	90	88	89	89	89	92	80	90	94	0	91	93	-140	-136
4/17/2019	NM	NM	NM	NM	NM	NM	NM	80	NM	NM	80	80	80	80	80	80	80	80	80	80	80	82	80	80	84	0	82	82	-124	-110
4/24/2019	NM	NM	NM	NM	NM	NM	NM	86	NM	NM	86	86	86	86	86	86	86	86	86	86	86	86	86	86	90	0	88	88	-124	-114
5/1/2019	NM	NM	NM	NM	NM	NM	NM	88	NM	NM	88	88	88	88	88	88	88	88	88	88	88	88	88	88	92	0	90	90	-125	-120
6/12/2019	NM	NM	NM	NM	NM	NM	NM	88	NM	NM	86	86	86	86	86	86	86	86	86	86	86	86	86	86	88	0	88	88	-125	-120
6/19/2019	NM	NM	NM	NM	NM	NM	NM	88	NM	NM	90	90	90	90	90	90	90	90	90	90	90	90	90	90	92	0	92	92	-128	-124
6/26/2019	NM	NM	NM	NM	NM	NM	NM	87	NM	NM	91	91	91	91	91	91	91	91	91	91	91	91	91	91	92	0	92	92	-128	-124

Notes:
Measurements collected using digital manometer connected to sample port.
Vacuum shown as positive value. Pressure shown as negative value.
NM = not measured; well not operational
IN H2O = inches of water

TABLE D-3
SVE/DPE FLOW RATE MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Date	CALCULATED FLOW AT SVE WELLS (SCFM)										CALCULATED FLOW AT DPE WELLS (SCFM)													
	SVE-3	SVE-4	SVE-5	SVE-6	SVE-7	SVE-8	SVE-9	SVE-10	SVE-11	SVE-12	DPE-1	DPE-2	DPE-3	DPE-4	DPE-5	DPE-6	DPE-7	DPE-8	DPE-9	DPE-10	DPE-11	DPE-12	DPE-13	DPE-14
1/2/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	38	34	35	39	40	34	38	32	38	38	40	35	42	42
1/9/2019	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	41	36	32	36	38	32	36	30	36	36	38	34	40	40
2/20/2019	NM	NM	NM	NM	NM	NM	NM	34	NM	NM	33	30	33	36	42	32	30	37	31	31	33	33	34	36
2/27/2019	NM	NM	NM	NM	NM	NM	NM	38	NM	NM	34	34	34	35	38	32	36	35	35	31	34	35	38	40
3/6/2019	NM	NM	NM	NM	NM	NM	NM	40	NM	NM	36	36	36	36	38	34	36	36	36	34	36	36	40	40
4/17/2019	NM	NM	NM	NM	NM	NM	NM	40	NM	NM	34	34	34	34	36	34	38	36	34	34	34	36	38	38
4/24/2019	NM	NM	NM	NM	NM	NM	NM	38	NM	NM	32	32	32	32	34	32	34	34	34	34	34	34	34	34
5/1/2019	NM	NM	NM	NM	NM	NM	NM	36	NM	NM	32	32	32	32	32	32	34	34	34	34	34	34	34	34
6/12/2019	NM	NM	NM	NM	NM	NM	NM	32	NM	NM	30	34	38	39	18	36	36	30	36	36	35	33	35	36
6/19/2019	NM	NM	NM	NM	NM	NM	NM	38	NM	NM	41	37	32	41	45	11	34	31	34	35	36	34	34	34
6/26/2019	NM	NM	NM	NM	NM	NM	NM	39	NM	NM	42	36	34	42	47	13	36	33	36	37	38	36	36	36

Notes:
SCFM = standard cubic feet per minute
NM = not measured; well not operational

TABLE D-4

VAPOR POINT VACUUM AND PID MEASUREMENTS
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

Sampling Date	2/20/2019	
System Status	DPE Wells Running	
	PID	VAC
VP-5A	10.7	0
VP-5B	0.0	0
VP-5C	12.1	0
VP-6A	45.5	0
VP-6B	0.0	0
VP-6C	15.6	0
VP-7A	0.0	0
VP-7B	0.0	0
VP-7C	16.8	0
VP-7D	15.2	0
VP-8A	0.0	0
VP-8B	0.0	0
VP-8C	0.0	0
VP-8D	0.0	0
VP-9A	0.0	0
VP-9B	0.0	0
VP-9C	0.0	0
VP-9D	0.0	0
VP-10A	3.8	0
VP-10B	4.8	0
VP-10C	23.4	0
VP-10D	0.0	0
VP-11A	0.0	0
VP-11B	0.0	0
VP-11C	0.0	0
VP-11D	0.0	0
VP-12A	0.0	0
VP-12B	0.0	0
VP-12C	0.0	0
VP-12D	0.0	0
VP-13A	0.0	0
VP-13B	170.2	0
VP-13C	20.4	0
VP-13D	4.5	0
VP-14A	0.0	0
VP-14B	0.0	0
VP-14C	0.0	0
VP-14D	2.9	0
VP-15A	0.0	0
VP-15B	0.0	0
VP-15C	0.0	0
VP-15D	0.0	0
PZ-5	4.9	0
PZ-6	0.9	0

Notes:
PID measurements in units of ppmv; PID calibrated to 50 ppmv of hexane
PID measurements collected during quarterly sampling events
Vacuum measurements collected during quarterly sampling and during operational changes (e.g. temporary closing wells for focused recovery)
Vacuum measurements in units of inches of water
NM = Not Measured
PID = photoionization detector
ppmv = parts per million by volume

TABLE D-5

OU1 EXTRACTION WELL FLOW RATES
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

	Flow Totalizer Measurements (gallons)							Estimated Flow Rates (gallons per minute)					
Date	EW-2	EW-4	EW-5	EW-7A	EW-7B	EW-A	Combined Influent for OU1	EW-2	EW-4	EW-5	EW-7A	EW-7B	EW-A
1/2/2019	14,923,000	1,816,721	1,832,366	3,538,033	5,129,351	3,043,217	34,358,697	1.1	0.9	0.9	2.7	3.5	1.5
1/9/2019	14,931,960	1,818,521	1,841,180	3,564,433	5,164,321	3,057,487	34,453,458	0.9	0.2	0.9	2.8	3.6	1.5
2/20/2019	14,992,070	1,879,241	1,872,540	3,728,533	5,378,371	3,147,417	35,074,364	1.0	1.0	0.5	2.7	3.5	1.5
2/27/2019	14,999,640	1,888,321	1,877,530	3,754,583	5,413,221	3,162,537	35,170,716	0.8	0.9	0.5	2.6	3.5	1.5
3/6/2019	15,007,900	1,899,542	1,882,518	3,780,633	5,447,681	3,178,587	35,268,746	0.8	1.1	0.5	2.5	3.3	1.6
4/17/2019	15,054,030	1,945,530	1,903,613	3,884,283	5,592,791	3,240,777	35,663,408	1.1	1.1	0.5	2.5	3.5	1.5
4/24/2019	15,064,030	1,955,420	1,907,383	3,911,913	5,628,101	3,255,807	35,762,861	1.0	1.0	0.4	2.8	3.5	1.5
5/1/2019	15,074,930	1,959,360	1,919,407	3,937,323	5,663,001	3,271,417	35,867,829	1.1	0.4	1.2	2.5	3.5	1.6
5/15/2019	15,091,940	1,966,310	1,939,087	3,987,373	5,732,491	3,303,147	36,062,580	0.8	0.3	1.0	2.5	3.4	1.6
6/12/2019	15,135,480	2,008,001	1,969,647	4,074,423	5,867,811	3,363,077	36,470,740	1.1	1.0	0.8	2.2	3.4	1.5
6/19/2019	15,146,470	2,018,201	1,977,207	4,095,163	5,900,961	3,377,887	36,567,194	1.1	1.0	0.8	2.1	3.3	1.5
6/26/2019	15,156,850	2,028,341	1,983,219	4,115,163	5,934,311	3,393,007	36,661,844	1.0	1.0	0.6	2.0	3.3	1.5

Notes:
Flow rates estimated by dividing incremental volume from totalizer by motor hours (motor hours not shown).
NM = not measured; well not operational

APPENDIX E

Data Validation Reports

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Data Usability Summary Report

Project Name: Cooper Drum – South Gate

Analytical Laboratory: American Analytics – Chatsworth, CA

Validation Performed by: Emily Heuer

Validation Reviewed by: Katherine Miller

Validation Date: March 2019

Haley & Aldrich, Inc., prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the Cooper Drum South Gate groundwater treatment system samples samples collected in the first quarter of 2019. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability. This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (EPA) "National Functional Guidelines for Organic Data Review." Data in this report has been reviewed against the most recent NFG. The following quality assurance/quality control criteria from the analysis of the project samples were reviewed as applicable:

1. Sample Delivery Group Number A874341
2. Sample Delivery Group Number A874344
3. Sample Delivery Group Number A874347

- Holding Times/Preservation
- Reporting Limits and Sample Dilution
- Blank Sample Analysis
- Surrogate Recovery Compliance
- Laboratory Control Samples
- Matrix Spike Samples
- Laboratory and Field Duplicate Sample Analysis
- System Performance and Overall Assessment

Analytical precision and accuracy were evaluated based on the laboratory control analysis performed concurrently with the project samples.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). If reported to the MDL, results found between the MDL and RL are flagged "J" estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number A874341

1.1 SUMMARY

This DUSR summarizes the review of SDG number A874341. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-010919-0001	N	9A09016-01	1/9/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-010919-0001	N	9A09016-02	1/9/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

1.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

1.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

1.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits with the following exceptions:

- A LCSD was not reported for this analysis batch for VOCs. As a site-specific matrix spike duplicate, field duplicate, or laboratory duplicate were also not analyzed, this data set was not supported by any site-specific precision quality control.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9A1106	Bromomethane	143	Detect: J; Non-detect: no qual	None, results are ND.
LCS	8260B	B9A1106	Methylene Chloride	59	J/UJ	UJ applied.

1.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

1.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

1.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
EW-INF-010919-0001	Methylene Chloride	U	UJ	LCS % recovery was outside of the limits.
TOTAL-EFF-010919-0001	Methylene Chloride	U	UJ	LCS % recovery was outside of the limits.

2. Sample Delivery Group Number A874344

2.1 SUMMARY

This DUSR summarizes the review of SDG number A874344. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-022019-0001	N	9B20011-01	2/20/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-022019-0001	N	9B20011-02	2/20/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

2.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

2.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

2.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

2.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

2.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits with the following exceptions:

- A LCSD was not reported for this analysis batch for VOCs. As a site-specific matrix spike duplicate, field duplicate, or laboratory duplicate were also not analyzed, this data set was not supported by any site-specific precision quality control.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9C0106	Bromomethane	132	Detect: J; Non-detect: no qual	None, results are ND.
LCS	8260B	B9C0106	1,2-Dichloropropane	71.1	J/UJ	UJ applied.
LCS	8260B	B9C0106	Methylene Chloride	59	J/UJ	UJ applied.

2.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

2.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

2.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
EW-INF-022019-0001	1,2-Dichloropropane	U	UJ	LCS % recovery was outside of the limits.
TOTAL-EFF-022019-0001	Methylene Chloride	U	UJ	LCS % recovery was outside of the limits.
EW-INF-022019-0001	1,2-Dichloropropane	U	UJ	LCS % recovery was outside of the limits.
TOTAL-EFF-022019-0001	Methylene Chloride	U	UJ	LCS % recovery was outside of the limits.

3. Sample Delivery Group Number A874347

3.1 SUMMARY

This DUSR summarizes the review of SDG number A874347. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-032019-0001	N	9C20007-01	3/20/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-032019-0001	N	9C20007-02	3/20/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

3.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

3.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

3.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

3.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

3.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9D0213	Acetone	47	Detect: J; Non-detect: no qual	None, results are ND.

3.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

3.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

3.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

References

1. United States Environmental Protection Agency, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.

Glossary

- Sample Types:
  - N Primary Sample
  - FD Field Duplicate Sample
  - FB Field Blank Sample
  - EB Equipment Blank Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg or ug/kg microgram per kilogram
  - µg/L or ug/L microgram per liter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
- Matrices:
  - SO Soil
  - WG Groundwater
  - AA Ambient Air
- Table Footnotes
  - NA Not applicable
  - ND Non-detect

Results are qualified with the following codes in accordance with EPA National Functional Guidelines:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is therefore an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

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Data Usability Summary Report

Project Name: Cooper Drum – South Gate

Analytical Laboratory: American Analytics – Chatsworth, CA

Validation Performed by: Emily Heuer

Validation Reviewed by: Katherine Miller

Validation Date: March 2019

Haley & Aldrich, Inc., prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the Cooper Drum South Gate groundwater treatment system samples collected in the second quarter of 2019. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability. This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (EPA) "National Functional Guidelines for Organic Data Review." Data in this report has been reviewed against the most recent NFG. The following quality assurance/quality control criteria from the analysis of the project samples were reviewed as applicable:

1. Sample Delivery Group Number A874349
2. Sample Delivery Group Number A874351
3. Sample Delivery Group Number A874355

- Holding Times/Preservation
- Reporting Limits and Sample Dilution
- Blank Sample Analysis
- Surrogate Recovery Compliance
- Laboratory Control Samples
- Matrix Spike Samples
- Laboratory and Field Duplicate Sample Analysis
- System Performance and Overall Assessment

Analytical precision and accuracy were evaluated based on the laboratory control analysis performed concurrently with the project samples.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). If reported to the MDL, results found between the MDL and RL are flagged "J" estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number A874349

1.1 SUMMARY

This DUSR summarizes the review of SDG number A874349. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-042419-0001	N	9D24021-01	4/24/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-042419-0001	N	9D24021-02	4/24/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

1.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

1.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

1.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits with the following exceptions:

- A LCSD was not reported for this analysis batch for VOCs. As a site-specific matrix spike duplicate, field duplicate, or laboratory duplicate were also not analyzed, this data set was not supported by any site-specific precision quality control.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260C	B9D2601	1,4-Dioxane	134	Detect: J; Non-detect: no qual	J applied.

1.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

1.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

1.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
EW-INF-042419-0001	1,4-Dioxane	6.9	6.9 J	LCS % recovery outside of limits
TOTAL-EFF-042419-0001	1,4-Dioxane	7.2	7.2 J	LCS % recovery outside of limits

2. Sample Delivery Group Number A874351

2.1 SUMMARY

This DUSR summarizes the review of SDG number A874351. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-052919-0001	N	9E29007-01	5/29/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-052919-0001	N	9E29007-02	5/29/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

2.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

2.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

2.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

2.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

2.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits with the following exceptions:

- A LCSD was not reported for this analysis batch for VOCs. As a site-specific matrix spike duplicate, field duplicate, or laboratory duplicate were also not analyzed, this data set was not supported by any site-specific precision quality control.

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9F0522	Bromomethane	200, 192/4.28	Detect: J; Non-detect: no qual	None
LCS	8260B	B9F0522	4-Methyl-2-pentanone	45, 40.6/10.2	J/UJ	UJ applied

2.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

2.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

2.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
EW-INF-052919-0001	4-Methyl-2-pentanone	U	UJ	LCS % recovery outside of limits
TOTAL-EFF-052919-0001	4-Methyl-2-pentanone	U	UJ	LCS % recovery outside of limits

3. Sample Delivery Group Number A874355

3.1 SUMMARY

This DUSR summarizes the review of SDG number A874355. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-INF-061219-0001	N	9F12014-01	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
TOTAL-EFF-061219-0001	N	9F12014-02	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

3.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

3.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

3.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

3.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

3.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS analyses exhibited recoveries within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9F2004	Chloroethane	113, 239/71.4	Detect: J; Non-detect: no qual	None

3.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

3.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

3.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

References

1. United States Environmental Protection Agency, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.

Glossary

- Sample Types:
  - N Primary Sample
  - FD Field Duplicate Sample
  - FB Field Blank Sample
  - EB Equipment Blank Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg or ug/kg microgram per kilogram
  - µg/L or ug/L microgram per liter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
- Matrices:
  - SO Soil
  - WG Groundwater
  - AA Ambient Air
- Table Footnotes
  - NA Not applicable
  - ND Non-detect

Results are qualified with the following codes in accordance with EPA National Functional Guidelines:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is therefore an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

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Data Usability Summary Report

Project Name: Cooper Drum – South Gate

Analytical Laboratory: American Analytics – Chatsworth, CA

Validation Performed by: Emily Heuer

Validation Reviewed by: Katherine Miller

Validation Date: March 2019

Haley & Aldrich, Inc., prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the Cooper Drum South Gate soil vapor samples collected in the first quarter of 2019. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability. This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (EPA) "National Functional Guidelines for Organic Data Review." Data in this report has been reviewed against the most recent NFG. The following quality assurance/quality control criteria from the analysis of the project samples were reviewed as applicable:

1. Sample Delivery Group Number A874340
2. Sample Delivery Group Number A874342
3. Sample Delivery Group Number A874343
4. Sample Delivery Group Number A874345

- Holding Times/Preservation
- Reporting Limits and Sample Dilution
- Blank Sample Analysis
- Surrogate Recovery Compliance
- Laboratory Control Samples
- Laboratory and Field Duplicate Sample Analysis
- System Performance and Overall Assessment

Analytical precision and accuracy were evaluated based on the laboratory control analysis performed concurrently with the project samples.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). If reported to the MDL, results found between the MDL and RL are flagged "J" estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number A874340

1.1 SUMMARY

This DUSR summarizes the review of SDG number A874340. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACI-010919-0001	N	9A09015-01	1/9/2019	Air	TO-15, TO-3	3 days
SVE-VGACM-010919-0001	N	9A09015-02	1/9/2019	Air	TO-15, TO-3	3 days
SVE-VGACE-010919-0001	N	9A09015-03	1/9/2019	Air	TO-15, TO-3	3 days

1.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
SVE-VGACI-010919-0001	9A09015-01	TO-15	2x	Dilution required due to high target analyte abundance.
SVE-VGACM-010919-0001	9A09015-02	TO-15	2x	Dilution required due to high target analyte abundance.

1.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

1.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits.

1.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

1.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100%. No qualifiers were applied to any data in this report.

2. Sample Delivery Group Number A874342

2.1 SUMMARY

This DUSR summarizes the review of SDG number A874342. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
VP-05A-022019-0001	N	9B20009-01	2/20/2019	Air	TO-15	3 days
VP-07C-022019-0001	N	9B20009-02	2/20/2019	Air	TO-15	3 days
VP-09D-022019-0001	N	9B20009-03	2/20/2019	Air	TO-15	3 days
VP-10B-022019-0001	N	9B20009-04	2/20/2019	Air	TO-15	3 days
VP-13B-022019-0001	N	9B20009-05	2/20/2019	Air	TO-15	3 days
VP-14A-022019-0001	N	9B20009-06	2/20/2019	Air	TO-15	3 days
VP-14B-022019-0001	N	9B20009-07	2/20/2019	Air	TO-15	3 days
VP-14C-022019-0001	N	9B20009-08	2/20/2019	Air	TO-15	3 days
VP-14D-022019-0001	N	9B20009-09	2/20/2019	Air	TO-15	3 days

2.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

2.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

2.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

2.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

2.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits, with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	TO15	B9C0119	Hexachlorobutadiene	**62.7, 60.7**/3.28	J/UJ	All samples.
LCS/LCSD	TO15	B9C0119	1,2,4-Trichlorobenzene	**61.3, 60.4**/1.76	J/UJ	All samples.

2.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

2.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
All samples	Hexachlorobutadiene and 1,2,4-Trichlorobenzene	U	UJ	LCS % recovery outside of limits.
VP-05A-022019-0001	1,2,4-Trichlorobenzene	1.8	1.8 J	LCS % recovery outside of limits.

3. Sample Delivery Group Number A874343

3.1 SUMMARY

This DUSR summarizes the review of SDG number A874343. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACI-022019-0001	N	9B20010-01	2/20/2019	Air	TO-15	3 days

3.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

3.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

3.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

3.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

3.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R/RPD	Qualifier	Affected Samples
LCS/LCSD	TO-15	B9C0119	Hexachlorobutadiene	**62.7/60.7**/3.28	J/UJ	9B20010-01
LCS/LCSD	TO-15	B9C0119	1,2,4-Trichlorobenzene	**61.3/60.4**/1.36	J/UJ	9B20010-01

3.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

3.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
SVE-VGACI-022019-0001	Hexachlorobutadiene	U	UJ	LCS/LCSD % Recovery Low
SVE-VGACI-022019-0001	1,2,4-Trichlorobenzene	U	UJ	LCS/LCSD % Recovery Low

4. Sample Delivery Group Number A874345

4.1 SUMMARY

This DUSR summarizes the review of SDG number A874345. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACE-030619-0001	N	9C06025-01	3/6/2019	Air	TO-15, TO-3	3 days
SVE-VGACM-030619-0001	N	9C06025-02	3/6/2019	Air	TO-15, TO-3	3 days
SVE-VGACI-030619-0001	N	9C06025-03	3/6/2019	Air	TO-15, TO-3	3 days

4.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

4.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were reported in this SDG.

4.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

4.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

4.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits.

4.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

4.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

References

1. United States Environmental Protection Agency, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.

Glossary

- Sample Types:
  - N Primary Sample
  - FD Field Duplicate Sample
  - FB Field Blank Sample
  - EB Equipment Blank Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg or ug/kg microgram per kilogram
  - µg/L or ug/L microgram per liter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
- Matrices:
  - SO Soil
  - WG Groundwater
  - AA Ambient Air
- Table Footnotes
  - NA Not applicable
  - ND Non-detect

Results are qualified with the following codes in accordance with EPA National Functional Guidelines:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is therefore an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

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Data Usability Summary Report

Project Name: Cooper Drum – South Gate

Analytical Laboratory: American Analytics – Chatsworth, CA

Validation Performed by: Emily Heuer

Validation Reviewed by: Katherine Miller

Validation Date: June 2019

Haley & Aldrich, Inc., prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the Cooper Drum South Gate soil vapor samples collected in the second quarter of 2019. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability. This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (EPA) "National Functional Guidelines for Organic Data Review." Data in this report has been reviewed against the most recent NFG. The following quality assurance/quality control criteria from the analysis of the project samples were reviewed as applicable:

1. Sample Delivery Group Number A874350
2. Sample Delivery Group Number A874356
3. Sample Delivery Group Number A874357
4. Sample Delivery Group Number A874363

- Holding Times/Preservation
- Reporting Limits and Sample Dilution
- Blank Sample Analysis
- Surrogate Recovery Compliance
- Laboratory Control Samples
- Laboratory and Field Duplicate Sample Analysis
- System Performance and Overall Assessment

Analytical precision and accuracy were evaluated based on the laboratory control analysis performed concurrently with the project samples.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). If reported to the MDL, results found between the MDL and RL are flagged "J" estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number A874350

1.1 SUMMARY

This DUSR summarizes the review of SDG number A874350. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACE-050119-0001	N	9E01023-01	5/1/2019	Air	TO-15, TO-3	3 days
SVE-VGACM-050119-0001	N	9E01023-02	5/1/2019	Air	TO-15, TO-3	3 days
SVE-VGACI-050119-0001	N	9E01023-03	5/1/2019	Air	TO-15, TO-3	3 days

1.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

1.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
SVE-VGACI-050119-0001	9E01023-03	TO-15	2x	Dilution required due to high target analyte abundance.

1.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

1.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

1.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits, with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	TO15	B9E0317	2-Hexanone	115, **137**/17.7	Detect: J, ND: no qual	None
LCS/LCSD	TO15	B9E0317	4-Methyl-2-pentanone	122, **144**/17.0	Detect: J, ND: no qual	None

1.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

1.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100%. No qualifiers were applied to any data in this report.

2. Sample Delivery Group Number A874356

2.1 SUMMARY

This DUSR summarizes the review of SDG number A874356. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
VP-05A-061219-0001	N	9F12015-01	6/12/2019	Air	TO-15	3 days
VP-07C-061219-0001	N	9F12015-02	6/12/2019	Air	TO-15	3 days
VP-09D-061219-0001	N	9F12015-03	6/12/2019	Air	TO-15	3 days
VP-10B-061219-0001	N	9F12015-04	6/12/2019	Air	TO-15	3 days
VP-13B-061219-0001	N	9F12015-05	6/12/2019	Air	TO-15	3 days
VP-14B-061219-0001	N	9F12015-06	6/12/2019	Air	TO-15	3 days
VP-14C-061219-0001	N	9F12015-07	6/12/2019	Air	TO-15	3 days
VP-14D-061219-0001	N	9F12015-08	6/12/2019	Air	TO-15	3 days

2.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

2.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

2.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

2.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

2.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits.

2.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

2.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
VP-10B-061219-0001	Isopropyl Alcohol	45 E	45 J	The concentration was above the calibration range for the instrument.
VP-10B-061219-0001	2-Butanone (Methyl Ethyl Ketone)	36 E	36 J	
VP-13B-061219-0001	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	69 E	69 J	
VP-13B-061219-0001	Toluene	41 E	41 J	

3. Sample Delivery Group Number A874357

3.1 SUMMARY

This DUSR summarizes the review of SDG number A874357. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACI-061219-0001	N	9F12016-01	6/12/2019	Air	TO-15	3 days

3.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

3.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

3.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

3.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

3.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits.

3.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

3.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

4. Sample Delivery Group Number A874363

4.1 SUMMARY

This DUSR summarizes the review of SDG number A874363. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
SVE-VGACE-062619-0001	N	9F26010-01	6/26/2019	Air	TO-15, TO-3	3 days
SVE-VGACM-062619-0001	N	9F26010-02	6/26/2019	Air	TO-15, TO-3	3 days
SVE-VGACI-062619-0001	N	9F26010-03	6/26/2019	Air	TO-15, TO-3	3 days

4.2 HOLDING TIMES/PRESERVATION

The samples were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

4.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
SVE-VGACM-062619-0001	9F26010-02	TO15	2x	Dilution required due abundance of target analytes
SVE-VGACI-062619-0001	9F26010-03	TO15	2x	Dilution required due abundance of target analytes

4.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

4.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

4.6 LABORATORY CONTROL SAMPLE / LABORATORY CONTROL SAMPLE DUPLICATE

The laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits.

4.7 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

4.8 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

References

1. United States Environmental Protection Agency, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.

Glossary

- Sample Types:
  - N Primary Sample
  - FD Field Duplicate Sample
  - FB Field Blank Sample
  - EB Equipment Blank Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg or ug/kg microgram per kilogram
  - µg/L or ug/L microgram per liter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
- Matrices:
  - SO Soil
  - WG Groundwater
  - AA Ambient Air
- Table Footnotes
  - NA Not applicable
  - ND Non-detect

Results are qualified with the following codes in accordance with EPA National Functional Guidelines:

- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is therefore an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

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Data Usability Summary Report

Project Name: Cooper Drum – South Gate

Analytical Laboratory: American Analytics – Chatsworth, CA

Validation Performed by: Emily Heuer

Validation Reviewed by: Katherine Miller

Validation Date: July 2019

Haley & Aldrich, Inc., prepared this Data Usability Summary Report (DUSR) to summarize the review and validation of the Cooper Drum South Gate groundwater samples collected in March and June of 2019. The analytical results for Sample Delivery Group(s) (SDG) listed below were reviewed to determine the data's usability. This data validation and usability assessment was performed per the guidance and requirements established by the U.S. Environmental Protection Agency's (EPA) "National Functional Guidelines for Organic Data Review." Data in this report has been reviewed against the most recent NFG. The following quality assurance/quality control criteria from the analysis of the project samples were reviewed as applicable:

1. Sample Delivery Group Number A874346
2. Sample Delivery Group Number A874353
3. Sample Delivery Group Number A874354
4. Sample Delivery Group Number A874358
5. Sample Delivery Group Number A874359 (Level IV)
6. Sample Delivery Group Number A874360
7. Sample Delivery Group Number A874361

- Holding Times/Preservation
- Reporting Limits and Sample Dilution
- Blank Sample Analysis
- Surrogate Recovery Compliance
- Laboratory Control Samples
- Matrix Spike Samples
- Laboratory and Field Duplicate Sample Analysis
- Gas Chromatograph/Mass Spectrometer Instrument Performance Checks (A874359 only)
- Initial Calibration (A874359 only)
- Initial and Continuing Calibration Verification (A874359 only)
- Internal Standards (A874359 only)
- Target Analyte Identification (A874359 only)
- System Performance and Overall Assessment

Analytical precision and accuracy were evaluated based on the laboratory control analysis performed concurrently with the project samples.

Data reported in this sampling event were reported to the laboratory method detection limit (MDL). If reported to the MDL, results found between the MDL and RL are flagged "J" estimated.

Sample data were qualified in accordance with laboratory's standard operating procedures (SOPs). The results presented in each laboratory report were found to be compliant with the data quality objectives for the project and usable; any exceptions are noted in the following pages.

1. Sample Delivery Group Number A874346

1.1 SUMMARY

This DUSR summarizes the review of SDG number A874346. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
QC1-031319	TB	9C14002-01	3/13/2019	Groundwater	8260B	14 days
MW-63-031319	N	9C14002-02	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC2-031319	FD	9C14002-03	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-64A-031319	N	9C14002-04	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC3-031319	EB	9C14002-05	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-64B-031319	N	9C14002-06	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC4-031319	FB	9C14002-07	3/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

1.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 5.0 Degrees C.

1.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
MW-64A-031319	9C14002-04	8260B	100x	Dilution required due abundance of target analytes.

1.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred with the following exceptions:

Blank Type	Batch ID	Analyte Detected in Blank	Concentration (ug/L)	Qualifier	Affected Samples
Method Blank	B9C2208	Naphthalene	0.2 J	Detect: RL U, ND: no qual	None.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control had no detections, indicating that no contamination from field activities occurred.

1.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

1.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260B	B9C1918	Carbon Tetrachloride	**136/**127/7.13	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	1,2-Dibromo-3-chloropropane	**132/140**/5.29	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	1,2-Dichloroethane	**137/133**/2.44	Detect: J, ND: no qual	MW-64B-031319
LCS/LCSD	8260B	B9C1918	2,2-Dichloropropane	**137**/120/12.7	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	4-Isopropyltoluene	**140/131**/6.58	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	1,1,1-Trichloroethane	**141/131**/7.23	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	1,2,4-Trimethylbenzene	**128/126**/18.4	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C1918	1,3,5-Trimethylbenzene	**133/126**/5.27	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9C2208	Acetone	76.8/**40.5/61.9**	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	Bromomethane	91.1/**68.2/**28.8	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	Chloromethane	80.4/**31.8/86.6**	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	2-Hexanone	**56.8/47.6**/17.4	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	MTBE	76.6/**40.2/62.4**	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	Styrene	82.6/**46.9/55.1**	J/UJ	All samples
LCS/LCSD	8260B	B9C2208	1,1,2-Trichloro-1,2,2-trifluoroethane	122**/127/**4.30	J/UJ	All samples

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260B	B9C2208	Vinyl chloride	**63.6/64.2/4.30**	J/UJ	All samples

1.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. The sample(s) below were used for MS/MSD:

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
9C14002-04	MW-64A-031319	8260B, 8270C

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	8260B	MW-64A-031319	1,1,1-Trichloroethane	**133/136**/NC	None, native sample diluted 100x	None.

1.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			MW-63-031319	QC2-031319		
8260B	Trichloroethene	µg/L	0.44 J	0.43 J	NA	None, Abs. Diff. < RL
8260B	Cis-1,2-Dichloroethene	µg/L	3.3	3.2	3.1	None, RPD < 35%
8260B	Benzene	µg/L	4.4	4.2	4.7	None, RPD < 35%
8260B	1,1-DIchloroethene	µg/L	5.2	5	3.9	None, RPD < 35%
Method	**Analyte (µg/L)**	**Units**	**Primary Sample ID**	**Duplicate Sample ID**	**% RPD**	**Qualification**
			MW-63-031319	**QC2-031319**		
8270C	1,4-Dioxane	µg/L	25	25	0.0	None, RPD < 35%

1.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
MW-64B-031319	1,2-Dichloroethane	1.3	1.3 J	LCS % recovery outside of limits
All samples	Acetone, Bromomethane, Chloromethane, 2-Hexanone, MTBE, Styrene, 1,1,2-Trichloro-1,2,2-trifluoroethane, Vinyl chloride	U	UJ	LCS % recovery outside of limits

2. Sample Delivery Group Number A874353

2.1 SUMMARY

This DUSR summarizes the review of SDG number A874353. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
QC01-061119	TB	9F12012-01	6/11/2019	Groundwater	8260B	14 days
MW-23-061119	N	9F12012-02	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-23B-061119	N	9F12012-03	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-20B-061119	N	9F12012-04	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-63-061119	N	9F12012-05	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC03-061119	EB	9F12012-06	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC02-061119	FB	9F12012-07	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-37-061119	N	9F12012-08	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-32-061119	N	9F12012-09	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-28-061119	N	9F12012-10	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC05-061119	FD	9F12012-11	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-29-061119	N	9F12012-12	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-41-061119	N	9F12012-13	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-64B-061119	N	9F12012-14	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-64A-061119	N	9F12012-15	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC04-061119	EB	9F12012-16	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

2.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.3 Degrees C.

2.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Any non-detects with elevated reported limits are noted and explained below.

Sample ID	Lab ID	Analyte/ Method	Dilution Factor	Issue/Explanation
MW-64A-061119	9F12012-15	8260B	200x	Dilution required due abundance of target analytes.

2.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control had no detections, indicating that no contamination from field activities occurred with the following exceptions:

Blank Type	Date of Blank	Analyte Detected in Blank	Concentration (ug/L)	Qualifier	Affected Samples
FB	6/11/2019	Acetone	11	None – results already J qualified.	None
EB	6/11/2019	Acetone	12	None – results already J qualified.	None
EB	6/11/2019	Acetone	16	None – results already J qualified.	None

2.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

2.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260B	B9F1914	Chloroethane	**202**/126/**46.6**	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1914	Bromomethane	125/84/**39.3**	Detect: J, ND: no qual	None

2.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. The sample(s) below were used for MS/MSD:

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
9F12012-04	MW-20B-061119	8260B, 8270C

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	8260B	MW-20B-061119	Chloroethane	**210/216**/2.56	Detect: J, ND: no qual	None
MS/MSD	8260B	MW-20B-061119	Bromomethane	82.4/113/**31.3**	Detect: J, ND: no qual	None

2.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			MW-28-061119	QC05-061119		
8260B	1,2-Dichloroethane	µg/L	1.9	1.9	0.0	None, RPD < 35%
8260B	Acetone	µg/L	9.2 J	9.8 J	NA	None, Abs. Diff. < RL
8260B	Benzene	µg/L	0.45 J	0.48 J	NA	None, Abs. Diff. < RL
8260B	cis-1,2-Dichloroethene	µg/L	16	17	6.1	None, RPD < 35%
8260B	trans-1,2-Dichloroethene	µg/L	2	2.1	4.9	None, RPD < 35%
8260B	Trichloroethene	µg/L	0.92	1	NA	None, Abs. Diff. < RL
8260B	Vinyl chloride	µg/L	4	4.3	7.2	None, RPD < 35%
Method	**Analyte (µg/L)**	**Units**	**Primary Sample ID**	**Duplicate Sample ID**	**% RPD**	**Qualification**
			MW-28-061119	QC05-061119		
8270C	1,4-Dioxane	µg/L	1.4 J	1.7 J	NA	None, Abs. Diff. < RL

2.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

3. Sample Delivery Group Number A874354

3.1 SUMMARY

This DUSR summarizes the review of SDG number A874354. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
MW-20-061119	N	9F12013-01	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-21-061119	N	9F12013-02	6/11/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

3.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.3 Degrees C.

3.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

3.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control were not collected in this SDG.

3.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

3.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260B	B9F1305	Acetone	120/**144**/18.3	Detect: J, ND: no qual	MW-20-061119, MW-21-061119
LCS/LCSD	8260B	B9F1305	Bromomethane	**147/185/**22.6	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1305	2-Butanone	**140/142/**1.74	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1305	1,2-Dichloroethane	118/**132**/2.81	Detect: J, ND: no qual	MW-20-061119, MW-21-061119
LCS/LCSD	8260B	B9F1305	2-Hexanone	**149/168/**12	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1305	MTBE	**137/146/**6.39	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1305	4-Methyl-2-pentanone	**148/147/**0.744	Detect: J, ND: no qual	None
LCS/LCSD	8260B	B9F1305	Vinyl chloride	122/**132**/7.74	Detect: J, ND: no qual	MW-21-061119

3.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

3.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. No field duplicates were collected in this data set.

3.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. A summary of qualifiers applied to this SDG are shown below.

Sample ID	Analyte	Reported Result	Validated Result	Reason for Qualifier
MW-20-061119	1,2-Dichloroethane	1.7	1.7 J	LCS % recovery outside of limits.
MW-20-061119	Acetone	25	25 J	LCS % recovery outside of limits.
MW-21-061119	1,2-Dichloroethane	1.5	1.5 J	LCS % recovery outside of limits.
MW-21-061119	Acetone	21	21 J	LCS % recovery outside of limits.
MW-21-061119	Vinyl chloride	4.4	4.4 J	LCS % recovery outside of limits.

4. Sample Delivery Group Number A874358

4.1 SUMMARY

This DUSR summarizes the review of SDG number A874358. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
QC06-061219	TB	9F13001-01	6/12/2019	Groundwater	8260B	14 days
MW-60A-061219	N	9F13001-02	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-60B-061219	N	9F13001-03	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-62B(R)-061219	N	9F13001-04	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-62A-061219	N	9F13001-05	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
PZ-7B-061219	N	9F13001-06	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC10-061219	FD	9F13001-07	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
PZ-7A-061219	N	9F13001-08	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-19-061219	N	9F13001-09	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC07-061219	EB	9F13001-10	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-57B-061219	N	9F13001-11	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC08-061219	EB	9F13001-12	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-57A-061219	N	9F13001-13	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-58-061219	N	9F13001-14	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-59C-061219	N	9F13001-15	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
EW-07B-061219	N	9F13001-16	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
EW-07A-061219	N	9F13001-17	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
EW-05-061219	N	9F13001-18	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-22-061219	N	9F13001-19	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC09-061219	FB	9F13001-20	6/12/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

4.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.4 Degrees C.

4.3 REPORTING LIMITS AND SAMPLE DILUTION

All dilutions were reviewed and found to be justified. Only detected analytes were reported from a dilution.

4.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control had no detections, indicating that no contamination from field activities occurred with the following exceptions:

Blank Type	Date of Blank	Analyte Detected in Blank	Concentration (ug/L)	Qualifier	Affected Samples
EB	6/12/19	Acetone	22 J	None – results already J qualified or ND.	None
FB	6/12/19	Acetone	9.1 J	None – results already J qualified or ND.	None

4.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

4.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS/LCSD	8260B	B9F2004	Chloroethane	113/**239/71.4**	Detect: J, ND: no qual	None
LCS	8260B	B9F2101	Chloroethane	**214**	Detect: J, ND: no qual	None

4.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. The sample(s) below were used for MS/MSD:

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
9F13001-18	EW-05-061219	8260B, 8270C

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	8260B	EW-05-061219	Chloroethane	161/**228/34.6**	Detect: J, ND: no qual	None

4.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			PZ-7B-061219	QC10-061219		
8260B	1,1-Dichloroethane	µg/L	1.2	1	18.2	None, RPD < 35%
8260B	Acetone	µg/L	8.8 J	7.9 J	NA	None, Abs. Diff. < RL
8260B	cis-1,2-Dichloroethene	µg/L	20	19	5.1	None, RPD < 35%
8260B	trans-1,2-Dichloroethene	µg/L	4.8	4.5	6.5	None, RPD < 35%
8260B	Trichloroethene	µg/L	0.34 J	0.37 J	NA	None, Abs. Diff. < RL
8260B	Vinyl chloride	µg/L	0.46 J	0.4 U	NA	None, Abs. Diff. < RL
Method	**Analyte (µg/L)**	**Units**	**Primary Sample ID**	**Duplicate Sample ID**	**% RPD**	**Qualification**
			PZ-7B-061219	**QC10-061219**		
8270C	1,4-Dioxane	µg/L	3.8	4	NA	None, Abs. Diff. < RL

4.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

5. Sample Delivery Group Number A874359 (Level IV)

5.1 SUMMARY

This DUSR summarizes the review of SDG number A874359. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
EW-A-061319	N	9F14004-01	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-33B-061319	N	9F14004-02	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-17-061319	N	9F14004-03	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-59B-061319	N	9F14004-04	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-4B-061319	N	9F14004-05	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC15-061319	FD	9F14004-06	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
EW-2-061319	N	9F14004-07	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

5.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

5.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

5.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control were not collected in this SDG.

5.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

5.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9F2101	Chloroethane	**214**	Detect: J, ND: no qual	None

5.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. No client samples were used for MS/MSD analysis in this SDG.

5.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			MW-4B-061319	QC15-061319		
8260B	1,2-Dichloroethane	µg/L	4.6	4.7	2.2	None, RPD < 35%
8260B	Acetone	µg/L	14 J	7.7 U	NA	None, Abs. Diff. < RL
8260B	Benzene	µg/L	6.6	6.6	0.0	None, RPD < 35%
8260B	cis-1,2-Dichloroethene	µg/L	55	55	0.0	None, RPD < 35%
8260B	trans-1,2-Dichloroethene	µg/L	24	25	4.1	None, RPD < 35%
8260B	Trichloroethene	µg/L	1.1	1	NA	None, Abs. Diff. < RL
8260B	Vinyl chloride	µg/L	8	7.8	2.5	None, RPD < 35%

5.9 GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECKS

When analyzing organic compounds, the instrument performance check solution known as Bromofluorobenzene (BFB) for volatiles or Decafluorotriphenylphosphine (DFTPP) for semi-volatiles is run every 12 hours to ensure adequate mass resolution, identification, and sensitivity, and to document this level of performance prior to analyzing any sequence of standards or samples. Ion abundance criteria were within the specified limits.

5.10 INITIAL CALIBRATION

Organic methods require an initial calibration to ensure the instrument is capable of producing acceptable qualitative and quantitative data. Standards of varying concentrations are run to create a calibration curve, which is then used to ensure the validity of compound quantitation. Percent Relative Standard Deviation (%RSD) and Relative Response Factors (RRF) are reported and must be within the specified limits.

Proper concentrations for standards were used for the instruments and Relative Response Factors (RRFs) and %RSDs were within the specified limits.

5.11 INITIAL AND CONTINUING CALIBRATION VERIFICATION

Organic methods require an additional Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) to ensure that the instrument continues to meet the sensitivity and linearity criteria to produce acceptable qualitative and quantitative data throughout each analytical sequence. CCVs must be run at the beginning and end of every 12-hour period of operation. Relative Response Factors (RRFs) and the Percent Difference (%D) were within the specified limits.

5.12 INTERNAL STANDARDS

Internal standards are compounds added to each sample by the laboratory prior to volatile sample analysis to ensure that instrument sensitivity and response are stable during each analysis. Area response and retention time were reviewed and found to be within the specified limits.

5.13 TARGET ANALYTE IDENTIFICATION

A review of the sample chromatographs and retention times for all organic compounds indicated no problems with target compound identification.

5.14 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

6. Sample Delivery Group Number A874360

6.1 SUMMARY

This DUSR summarizes the review of SDG number A874360. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
QC11-061319	TB	9F14005-01	6/13/2019	Groundwater	8260B	14 days
EW-8-061319	N	9F14005-02	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-16-061319	N	9F14005-03	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-15-061319	N	9F14005-04	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-15B-061319	N	9F14005-05	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-18-061319	N	9F14005-06	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-61A-061319	N	9F14005-07	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC14-061319	FD	9F14005-08	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-61B-061319	N	9F14005-09	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC12-061319	EB	9F14005-10	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-04-061319	N	9F14005-11	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC13-061319	EB	9F14005-12	6/13/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

6.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.0 Degrees C.

6.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

6.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control had no detections, indicating that no contamination from field activities occurred.

6.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

6.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9F2101	Chloroethane	**214**	Detect: J, ND: no qual	None
LCS	8260B	B9F2416	Chloroethane	**205/232/**12.3	Detect: J, ND: no qual	None
LCS	8260B	B9F2416	Methylene Chloride	**143/152/**5.63	Detect: J, ND: no qual	None
LCS	8260B	B9F2512	Chloroethane	**218/212/2.98**	Detect: J, ND: no qual	None
LCS	8260B	B9F2512	Methylene chloride	**150**/91**/49.1**	Detect: J, ND: no qual	None
LCS	8260B	B9F2512	1,1,2,2-Tetrachloroethane	118/83.4**/34.5**	Detect: J, ND: no qual	None

6.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. The sample(s) below were used for MS/MSD:

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
9F14005-11	MW-04-061319	8260B, 8270C

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	8260B	MW-04-061319	Chloroethane	**213/232**/8.71	Detect: J, ND: no qual	None
MS/MSD	8260B	MW-04-061319	Bromomethane	76.8/126/**48.3**	Detect: J, ND: no qual	None

6.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			MW-61A-061319	QC14-061319		
8260B	1,1-Dichloroethane	µg/L	3.2	3.2	0.0	None, RPD < 35%
8260B	1,1-Dichloroethene	µg/L	0.98	0.89	NA	None, Abs. Diff. < RL
8260B	1,2-Dichloroethane	µg/L	2.7	2.8	3.6	None, RPD < 35%
8260B	Acetone	µg/L	13 J	9.2 J	NA	None, Abs. Diff. < RL
8260B	Benzene	µg/L	2.8	2.8	0.0	None, RPD < 35%
8260B	Chlorobenzene	µg/L	0.59	0.58	NA	None, Abs. Diff. < RL
8260B	cis-1,2-Dichloroethene	µg/L	40	42	4.9	None, RPD < 35%
8260B	trans-1,2-Dichloroethene	µg/L	2.1	2.1	0.0	None, RPD < 35%
8260B	Vinyl chloride	µg/L	0.74	0.71	NA	None, Abs. Diff. < RL
Method	**Analyte (µg/L)**	**Units**	**Primary Sample ID**	**Duplicate Sample ID**	**% RPD**	**Qualification**
			MW-61A-061319	**QC14-061319**		
8270C	1,4-Dioxane	µg/L	5	4.9	NA	None, Abs. Diff. < RL

6.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

7. Sample Delivery Group Number A874361

7.1 SUMMARY

This DUSR summarizes the review of SDG number A874361. Samples were collected, preserved, and shipped following standard chain of custody protocol. Samples were also received appropriately, identified correctly, and analyzed according to the monitoring schedule. Chains of custody were appropriately signed and dated by the field and/or laboratory personnel.

Analyses were performed on the following samples:

Sample ID	Sample Type	Lab ID	Sample Collection Date	Matrix	Methods	Holding Time
QC17-061419	TB	9F17012-01	6/14/2019	Groundwater	8260B	14 days
MW-1-061419	N	9F17012-02	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC19-061419	N	9F17012-03	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-2B-061419	N	9F17012-04	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-2C-061419	N	9F17012-05	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
EW-4-061419	N	9F17012-06	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC21-061419	EB	9F17012-07	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-23A-061419	N	9F17012-08	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC18-061419	EB	9F17012-09	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-55-061419	N	9F17012-10	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-26-061419	N	9F17012-11	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-25-061419	N	9F17012-12	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
QC20-061419	FD	9F17012-13	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days
MW-25B-061419	N	9F17012-14	6/14/2019	Groundwater	8260B, 8270C	14 days, 7 days/40 days

**# days/# days notation indicates the holding time is 3 days for extraction, and then an additional 3 days for analysis.*

7.2 HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified per method protocol.

Cooler temperature on arrival to the laboratory was: 4.2 Degrees C.

7.3 REPORTING LIMITS AND SAMPLE DILUTION

No dilutions were performed on data in this report.

7.4 BLANK SAMPLE ANALYSIS

Method blanks are prepared by the analytical laboratory and analyzed concurrently with the project samples to assess possible laboratory contamination. Method blank samples had no detections, indicating that no contamination from laboratory activities occurred.

Field blanks are prepared to identify contamination that may have been introduced during field activity. Equipment blanks are prepared to identify contamination that may have been introduced while decontaminating sampling equipment. Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. Blank samples for field quality control had no detections, indicating that no contamination from field activities occurred.

7.5 SURROGATE RECOVERY COMPLIANCE

Surrogates, also known as deuterated monitoring compounds, are compounds added to each sample prior to sample preparation to evaluate the percent recovery (%R) to ensure that the organic analytical method is efficient. The %R were within the specified limits.

7.6 LABORATORY CONTROL SAMPLES

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. Compounds associated with the LCS/LCSD analyses exhibited recoveries and relative percent difference (RPDs) within the specified limits with the following exceptions:

Sample Type	Method	Batch ID	Analyte	%R	Qualifier	Affected Samples
LCS	8260B	B9F2416	Chloroethane	**205/232/**12.3	Detect: J, ND: no qual	None
LCS	8260B	B9F2416	Methylene Chloride	**143/152/**5.63	Detect: J, ND: no qual	None

7.7 MATRIX SPIKE SAMPLES

Matrix spike/matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method and evaluate the effect of the sample matrix on the sample preparation procedures and measurement methodologies. The sample(s) below were used for MS/MSD:

Lab Sample Number	Matrix Spike/ Matrix Spike Duplicate Sample Client ID	Method(s)
9F17012-06	EW-4-061419	8260B, 8270C

The MS/MSD recoveries and the RPD between the MS and MSD results were within the specified limits with the following exceptions:

Sample Type	Method	Parent Sample Number	Analyte	%R/RPD	Qualifier	Affected Samples
MS/MSD	8260B	EW-4-061419	Chloroethane	**235**/120/**64.7**	Detect: J, ND: no qual	None

7.8 LABORATORY AND FIELD DUPLICATE SAMPLES

The laboratory duplicate sample analysis is used by the laboratory at the time of analysis to demonstrate acceptable method precision. No client samples were used for laboratory duplicate analysis in this SDG.

The field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. The RPD comparison for any field duplicates in this SDG is shown below. RPDs were all below 35% for water (or the absolute difference rule was satisfied if detects were less than 5x the RL). Any exceptions are noted below and qualified.

Field Duplicate RPD Calculations:

Method	Analyte (µg/L)	Units	Primary Sample ID	Duplicate Sample ID	% RPD	Qualification
			MW-25-061419	QC20-061419		
8260B	cis-1,2-Dichloroethene	µg/L	22	24	8.7	None, RPD < 35%
8260B	trans-1,2-Dichloroethene	µg/L	5.7	6.4	11.6	None, RPD < 35%
8260B	Trichloroethene	µg/L	0.48 J	0.46	NA	None, Abs. Diff. < RL
Method	**Analyte (µg/L)**	**Units**	**Primary Sample ID**	**Duplicate Sample ID**	**% RPD**	**Qualification**
			MW-25-061419	**QC20-061419**		
8270C	1,4-Dioxane	µg/L	2	1	NA	None, Abs. Diff. < RL

7.9 SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

The results presented in this report were found to comply with the data quality objectives for the project and the guidelines specified by analytical method. Based on the review of this report, the data are 100% useable. No qualifiers were applied to any data in this report.

References

1. United States Environmental Protection Agency, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review. EPA-540-R-2017-002. January.

Glossary

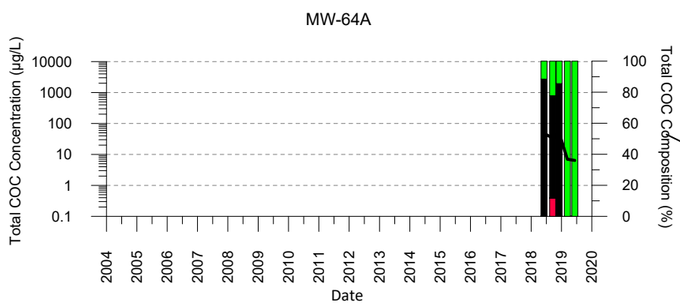
- Sample Types:
  - N Primary Sample
  - FD Field Duplicate Sample
  - FB Field Blank Sample
  - EB Equipment Blank Sample
  - TB Trip Blank Sample
- Units:
  - µg/kg or ug/kg microgram per kilogram
  - µg/L or ug/L microgram per liter
  - mg/kg milligram per kilogram
  - mg/L milligram per liter
- Matrices:
  - SO Soil
  - WG Groundwater
  - AA Ambient Air
- Table Footnotes
  - NA Not applicable
  - ND Non-detect

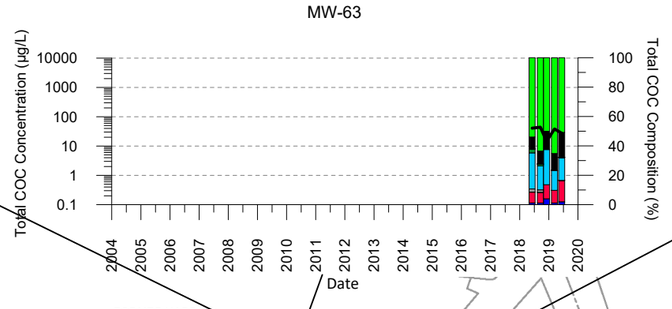
Results are qualified with the following codes in accordance with EPA National Functional Guidelines:

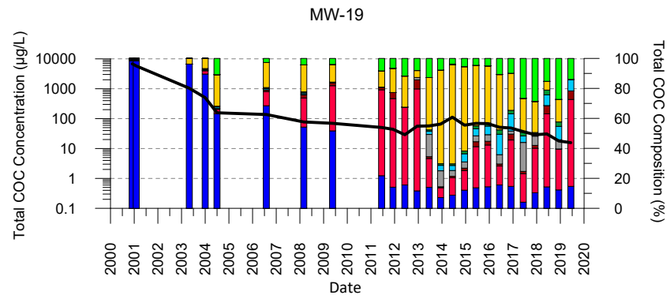
- Concentration (C) Qualifiers:
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound was found in the sample and its associated blank. Its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers:
  - E The compound was quantitated above the calibration range.
  - D The concentration is based on a diluted sample analysis.
- Validation Qualifiers:
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicated the presence of a compound for which there is presumptive evidence to make a tentative identification; the associated numerical value is therefore an estimated concentration only.
  - R The sample results were rejected as unusable; the compound may or may not be present in the sample.

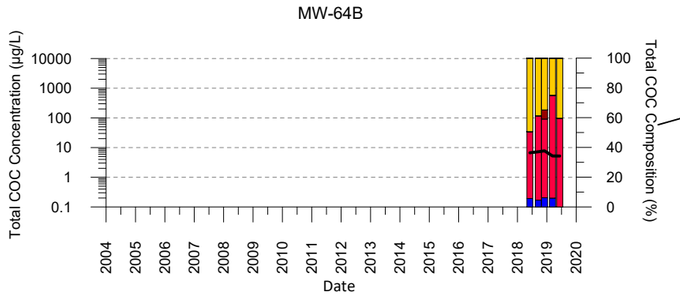
APPENDIX F

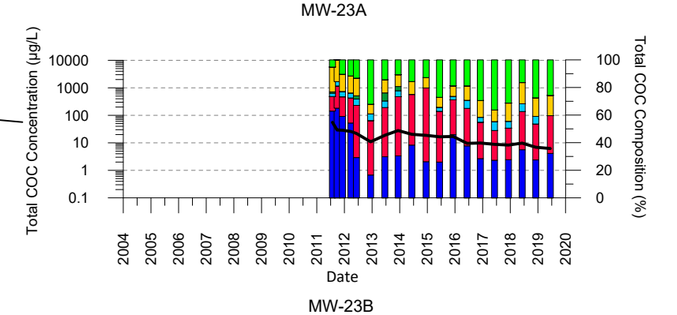
Total COC Concentration and COC Composition Versus Time Plots

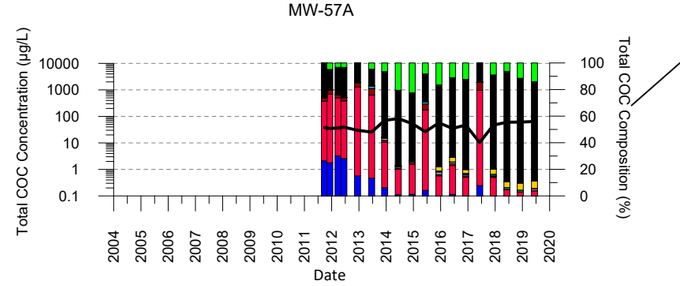


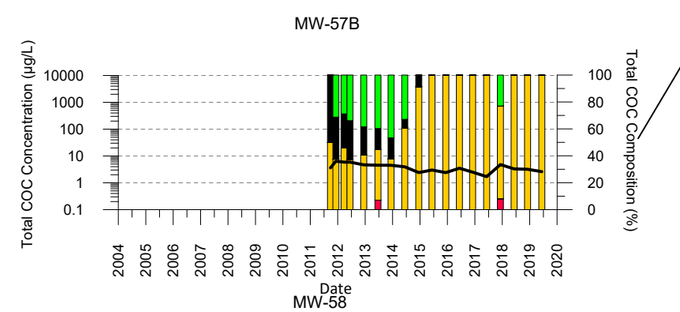


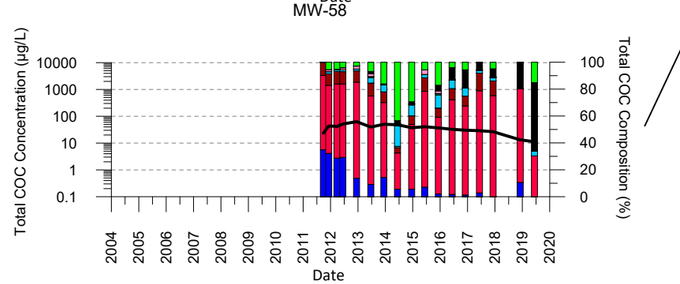


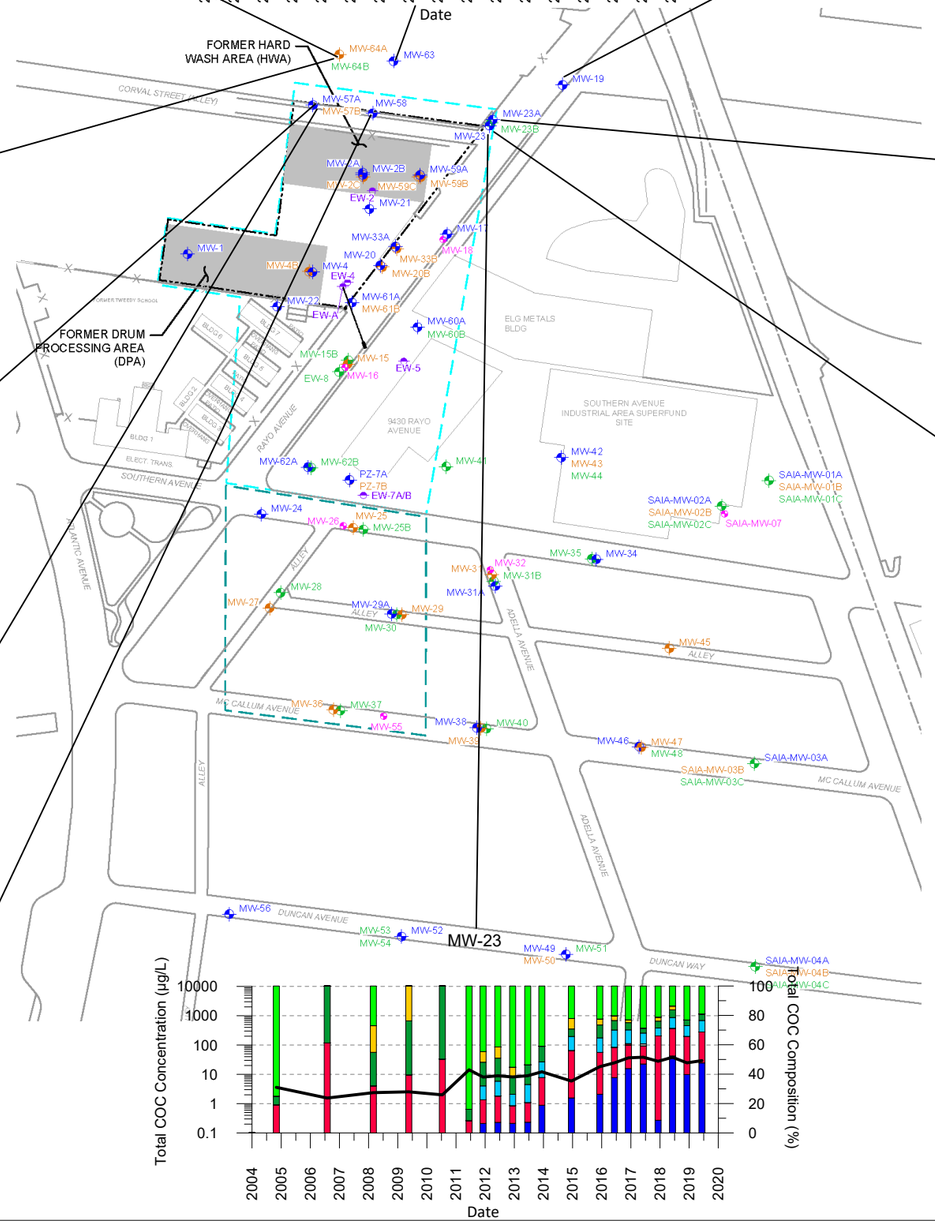












ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

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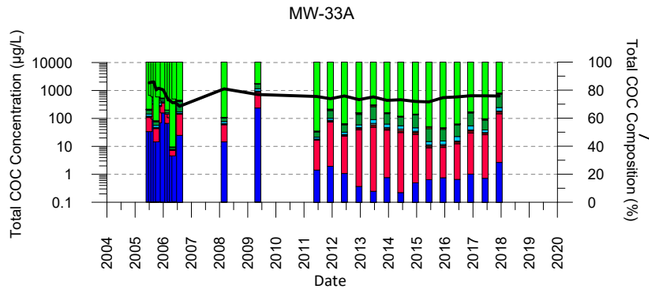
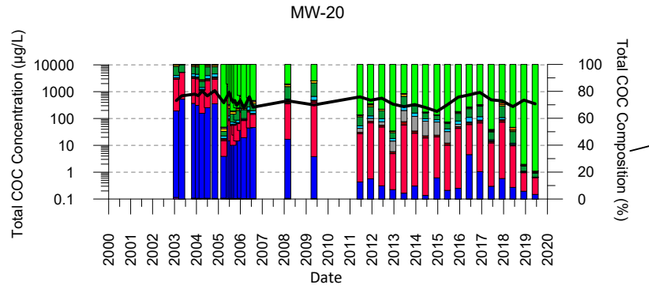
CONCENTRATION TRENDS FOR UPGRADIENT MONITORING WELLS

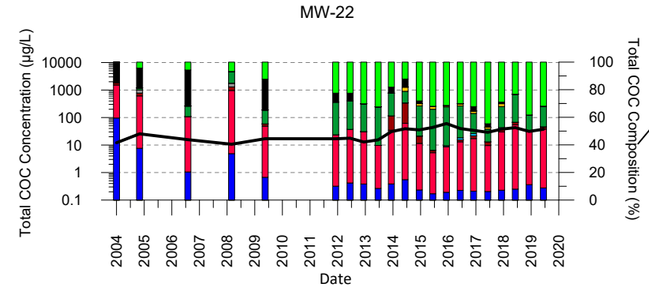
AUGUST 2019

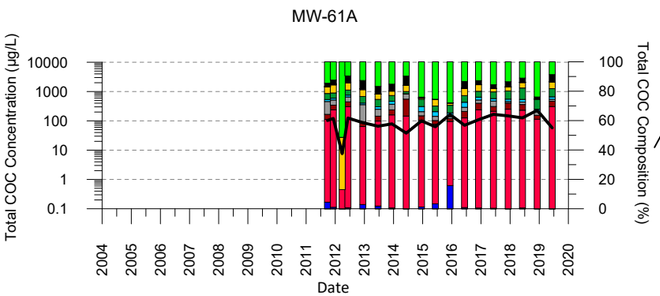
FIGURE F-1

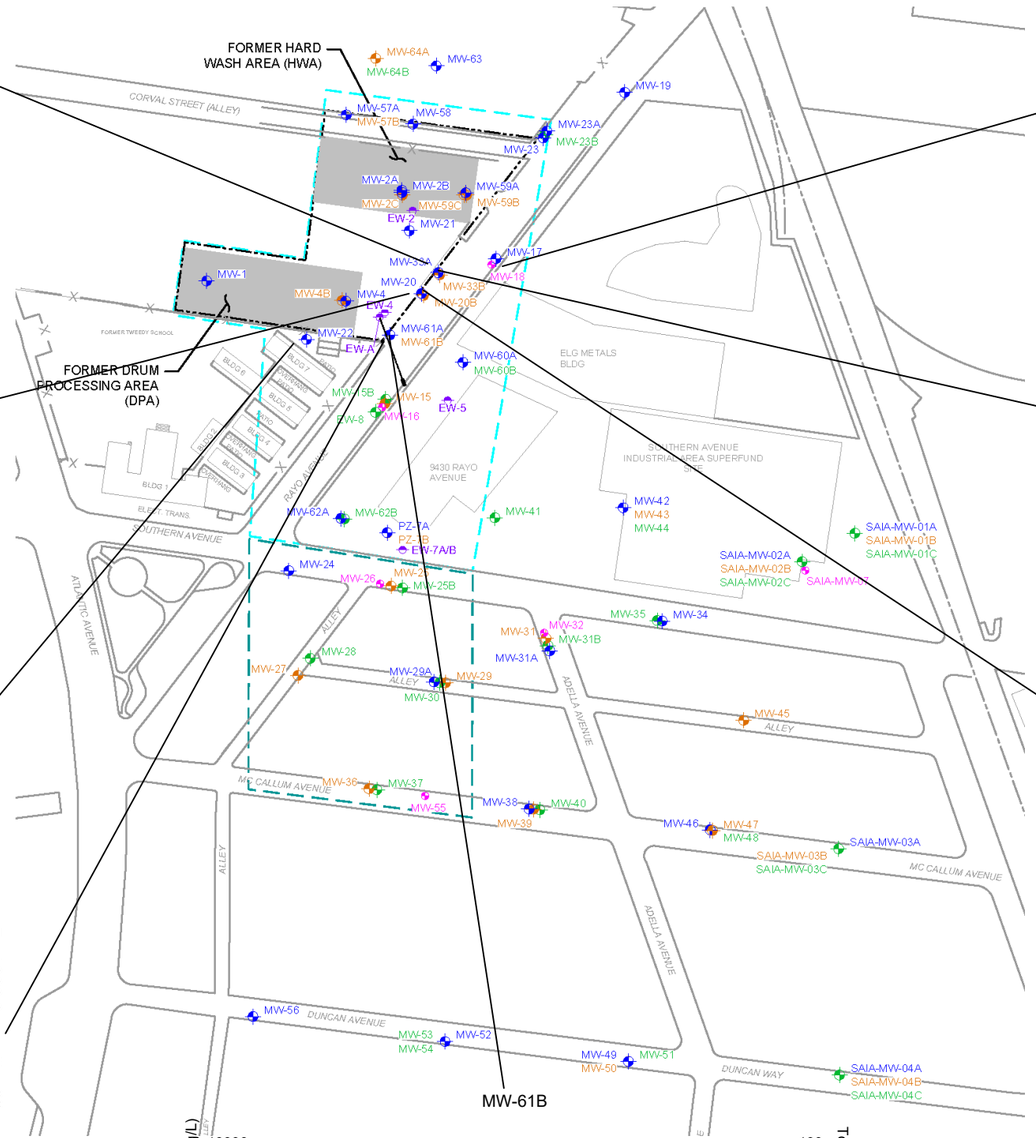
\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Upgradient-Grapher.grf

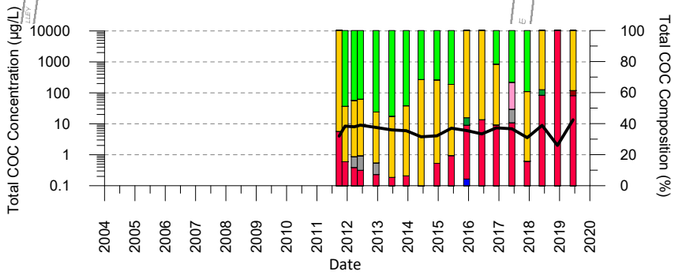


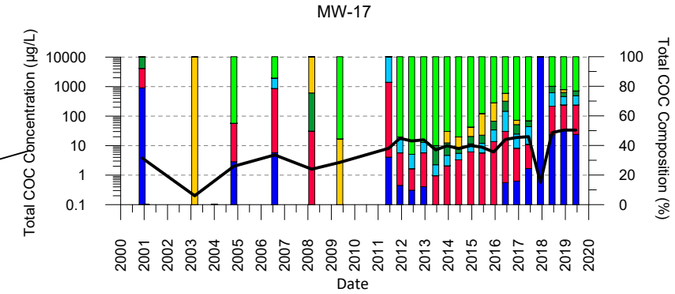


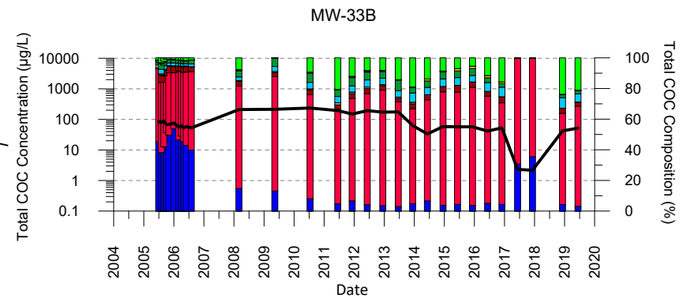


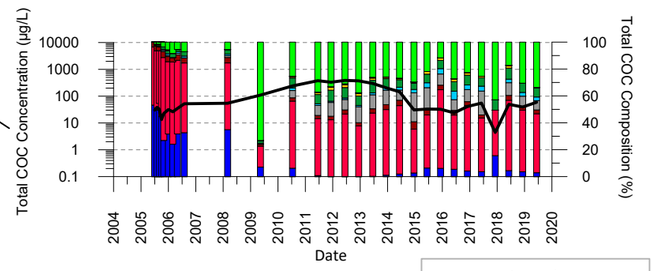












ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

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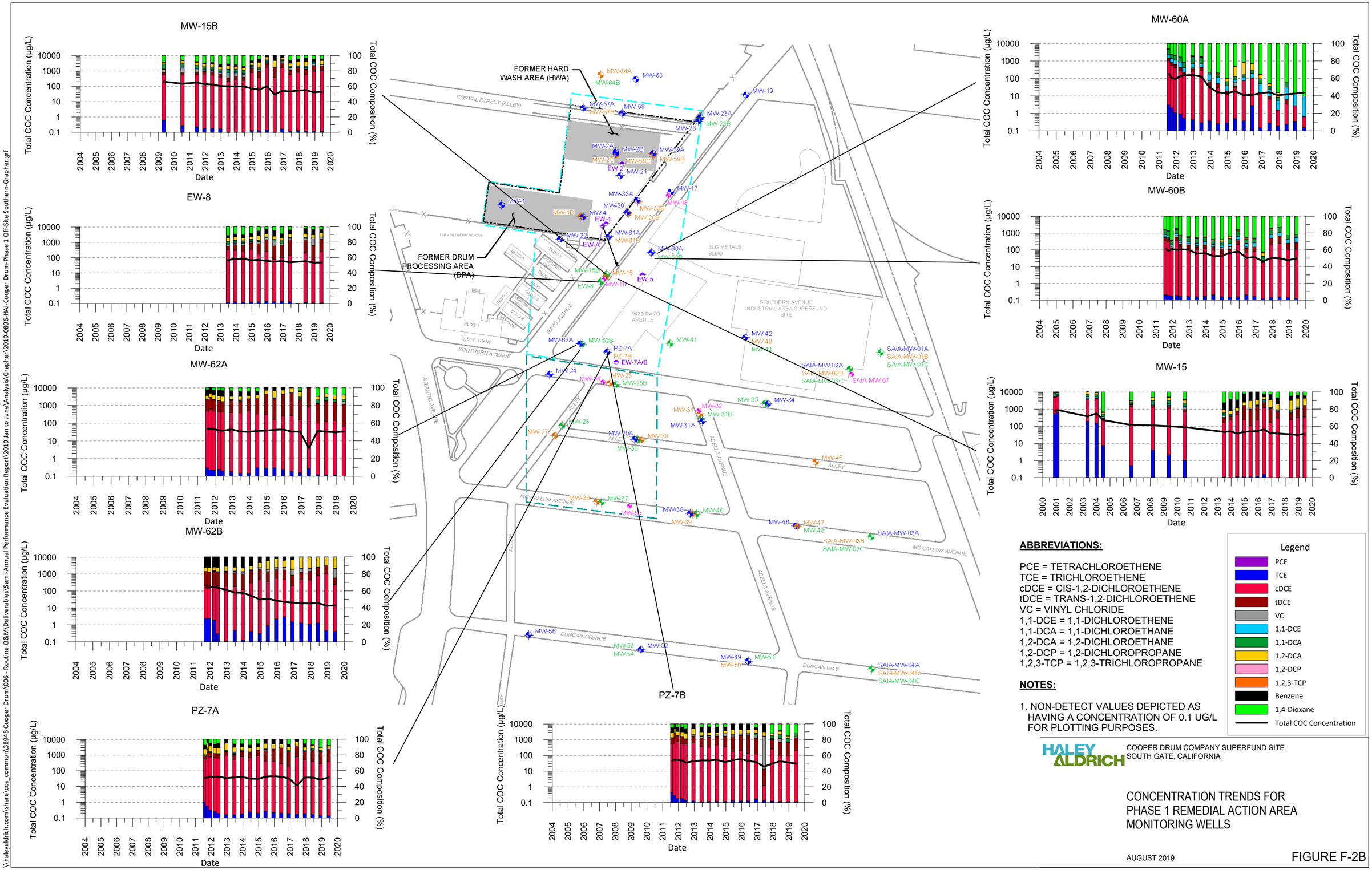
CONCENTRATION TRENDS FOR PHASE 1 REMEDIAL ACTION AREA MONITORING WELLS

AUGUST 2019

FIGURE F-2A

\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Phase 1 Off-Site Northern-Grapher.grf



ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

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CONCENTRATION TRENDS FOR PHASE 1 REMEDIAL ACTION AREA MONITORING WELLS

AUGUST 2019

FIGURE F-2B

\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Phase 1 Off-Site Southern-Grapher.grf

\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Phase I On-Site-Grapher.grf

ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

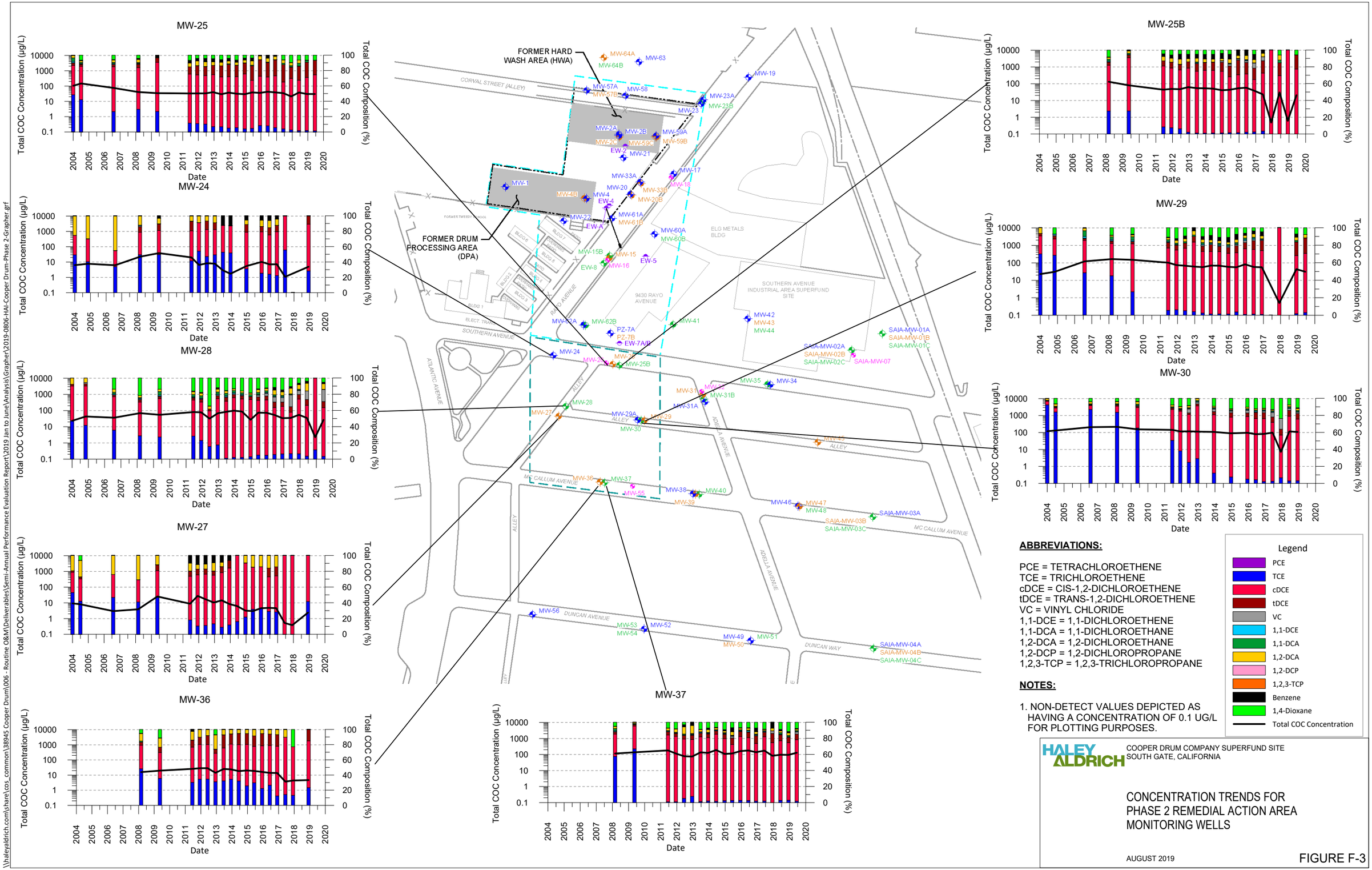
HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CONCENTRATION TRENDS FOR PHASE 1 REMEDIAL ACTION AREA MONITORING WELLS

AUGUST 2019

FIGURE F-2C



ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CONCENTRATION TRENDS FOR PHASE 2 REMEDIAL ACTION AREA MONITORING WELLS

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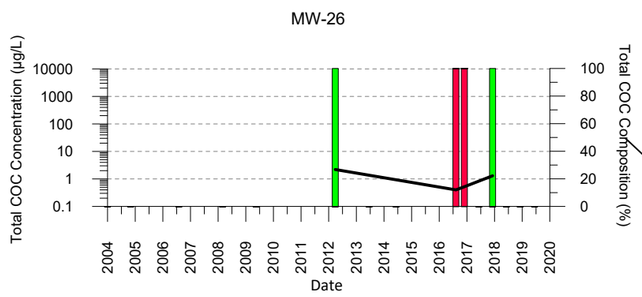
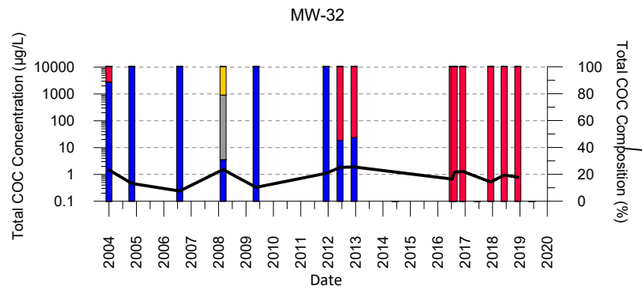
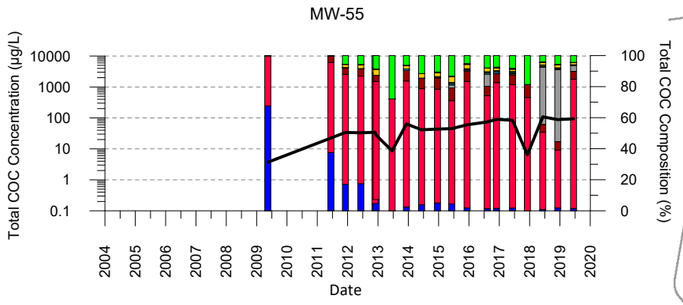
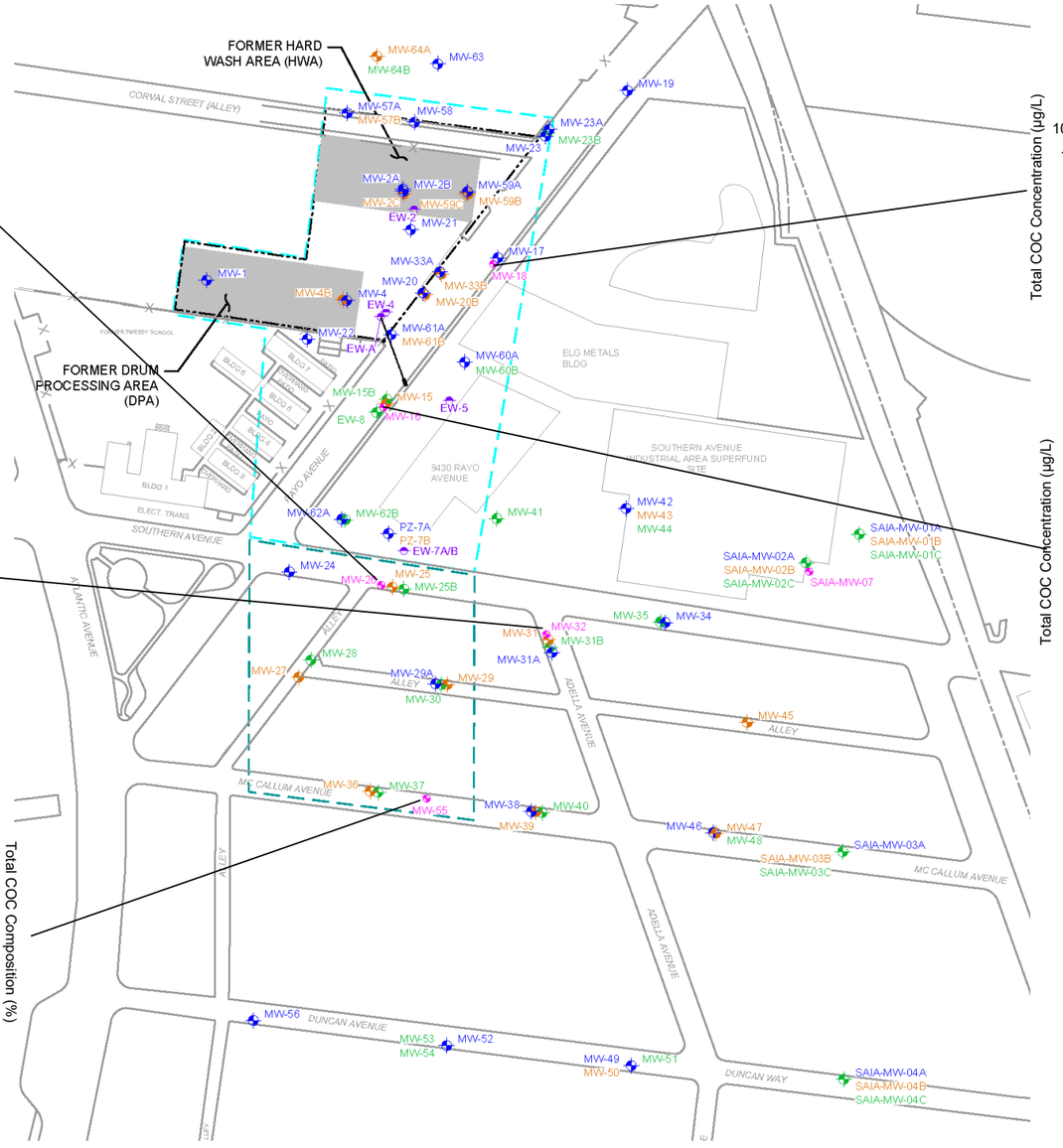
FIGURE F-3

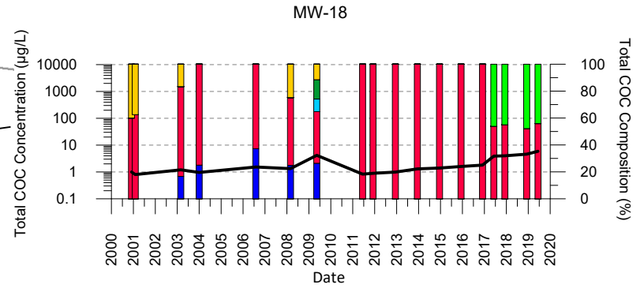
\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Phase 2-Grapher.grf

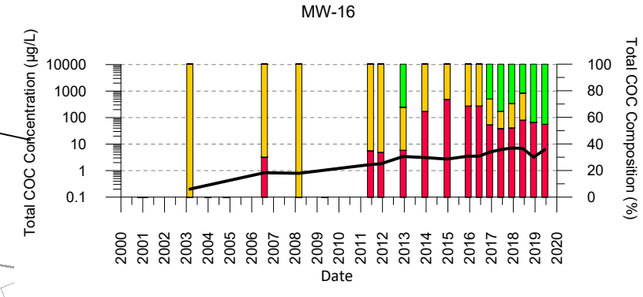












ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

HALEY ALDRICH

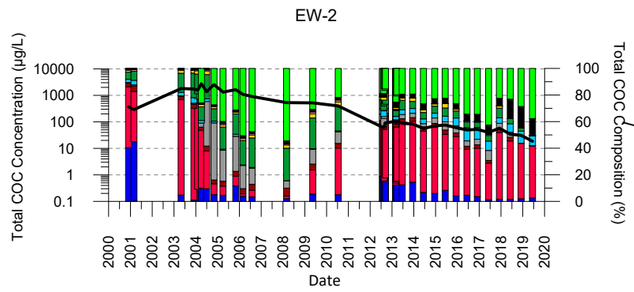
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

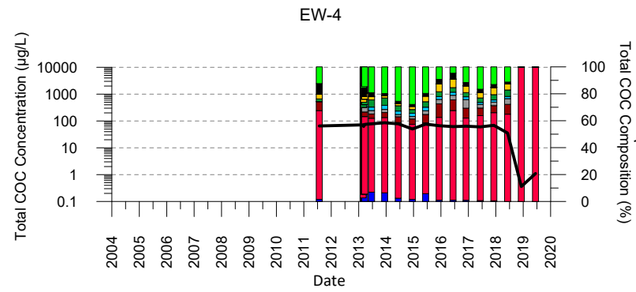
CONCENTRATION TRENDS FOR EXPOSITION MONITORING WELLS

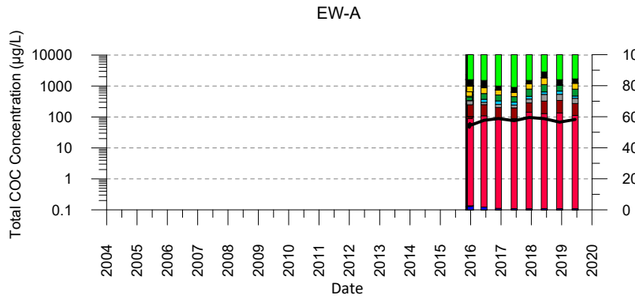
AUGUST 2019

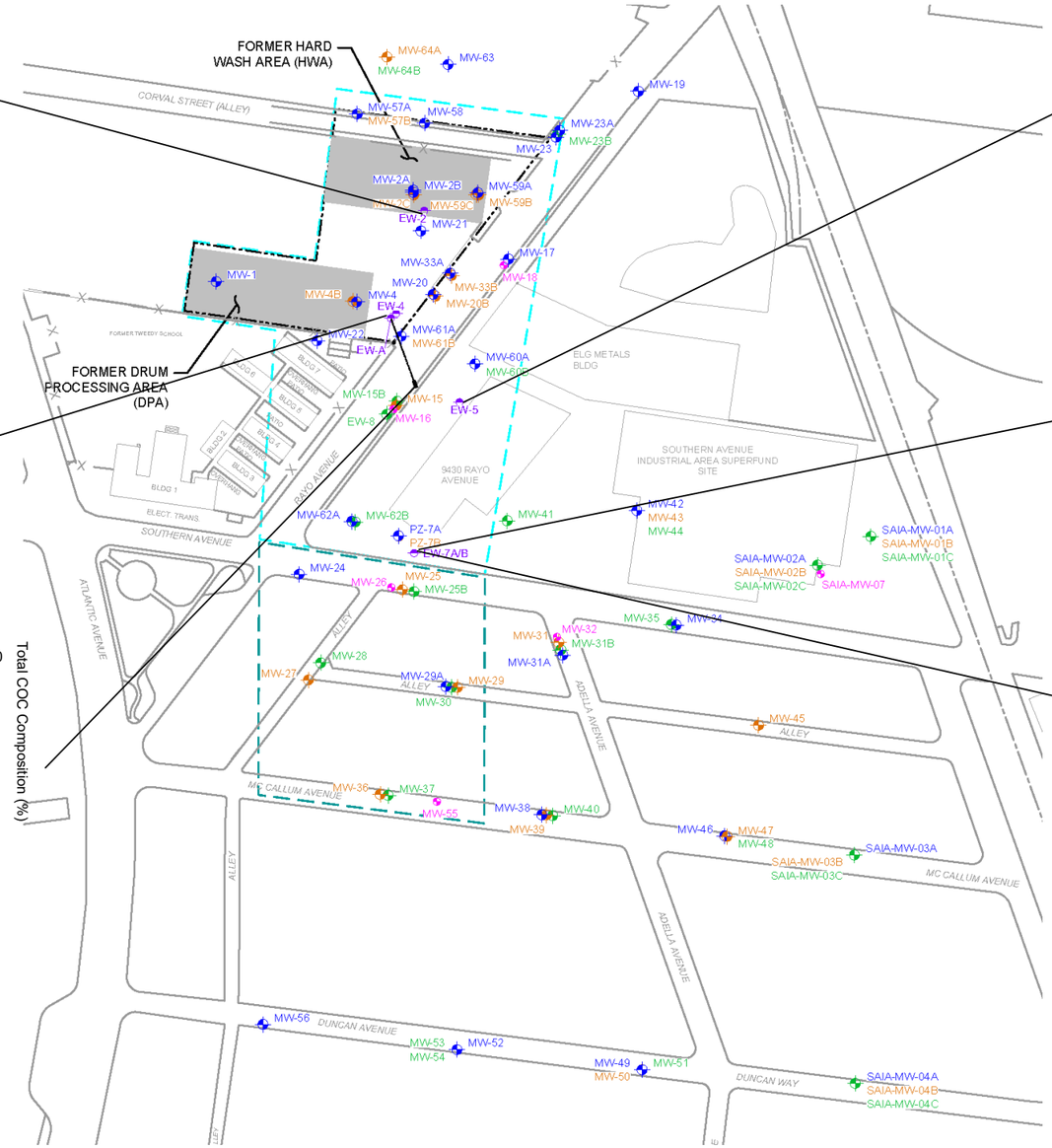
FIGURE F-4

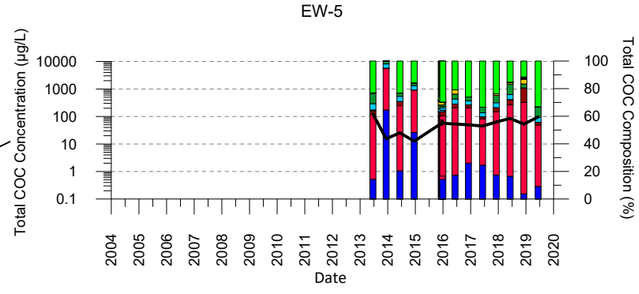
\\haleyaldrich.com\share\cos_common\38945_Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Exposition-Grapher.grf

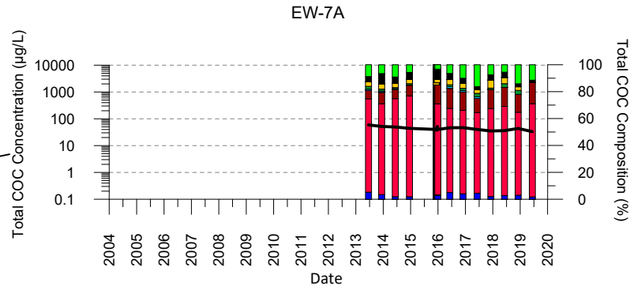


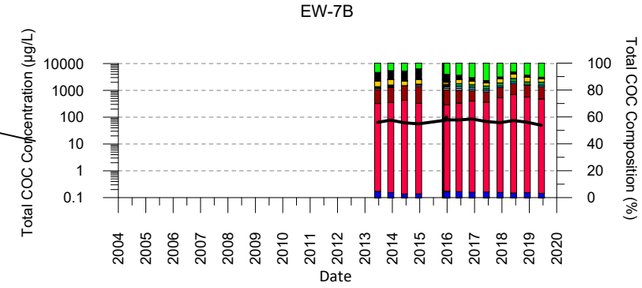












ABBREVIATIONS:

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TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

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COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CONCENTRATION TRENDS FOR EXTRACTION WELLS

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FIGURE F-5

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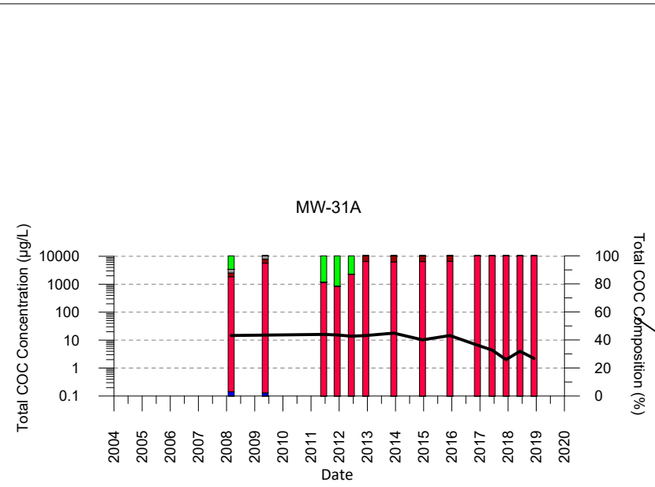
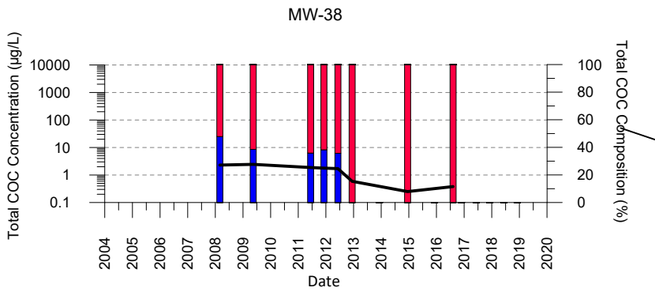
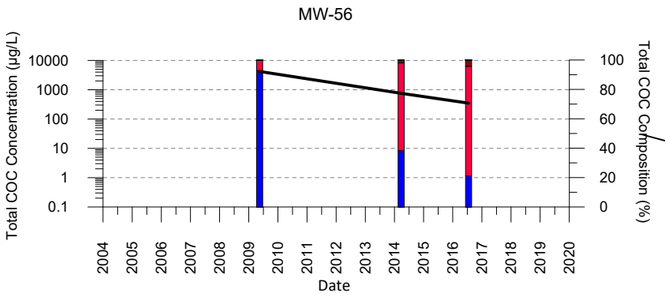
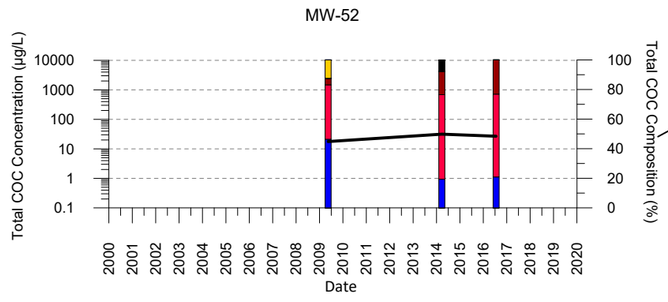
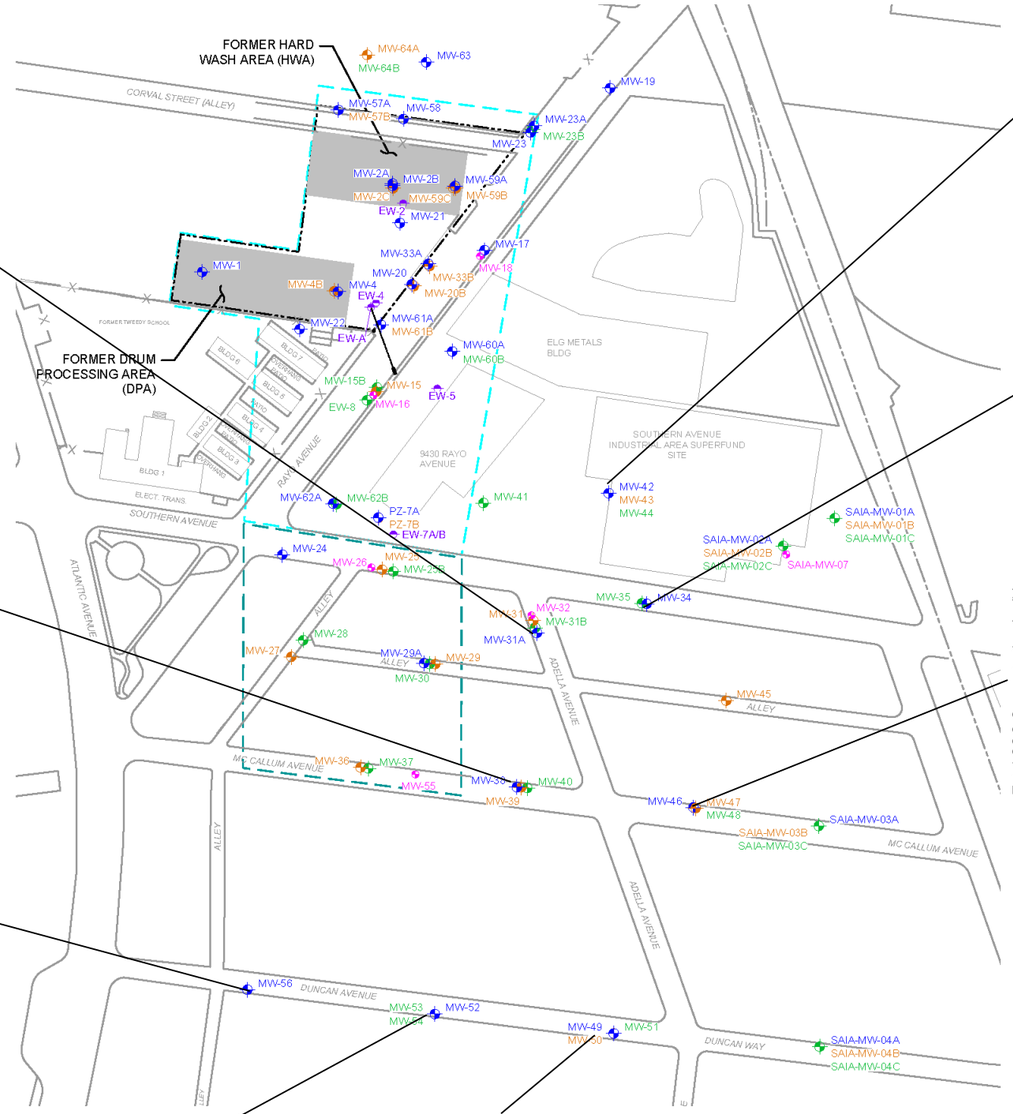
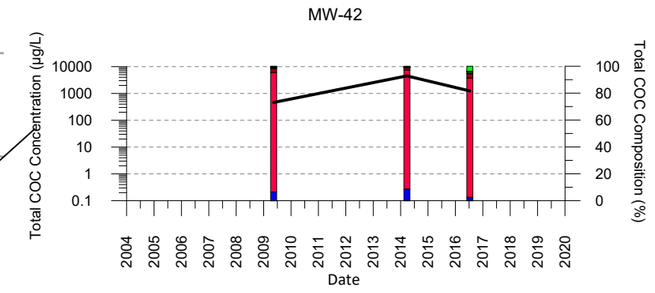


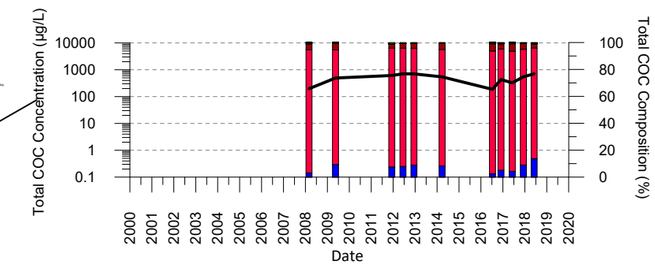


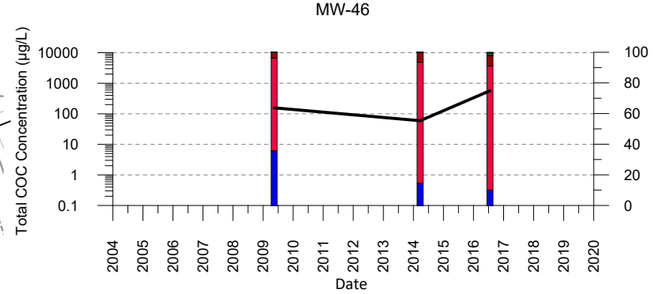


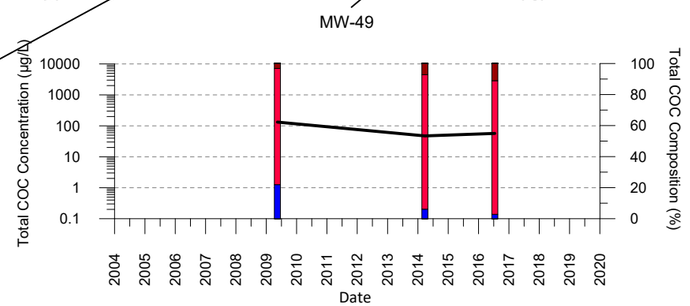












ABBREVIATIONS:

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

HALEY ALDRICH

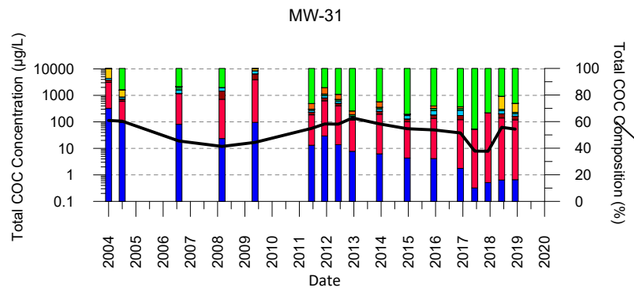
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

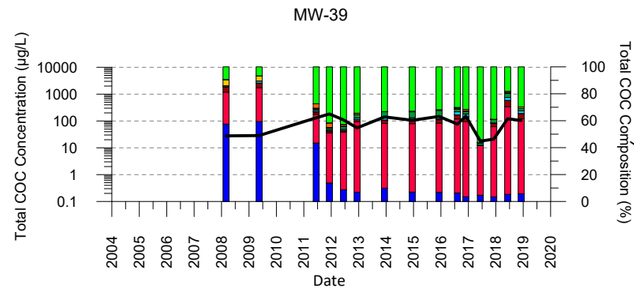
CONCENTRATION TRENDS FOR MONITORING WELLS, OTHER SHALLOW GASPUR WELLS

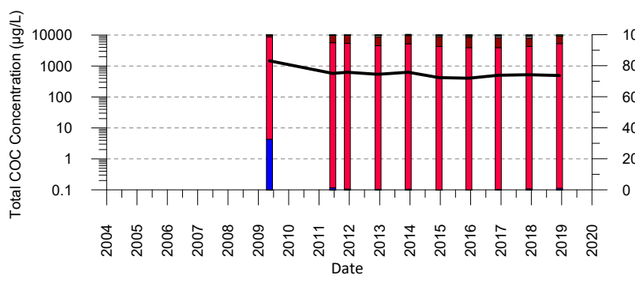
AUGUST 2019

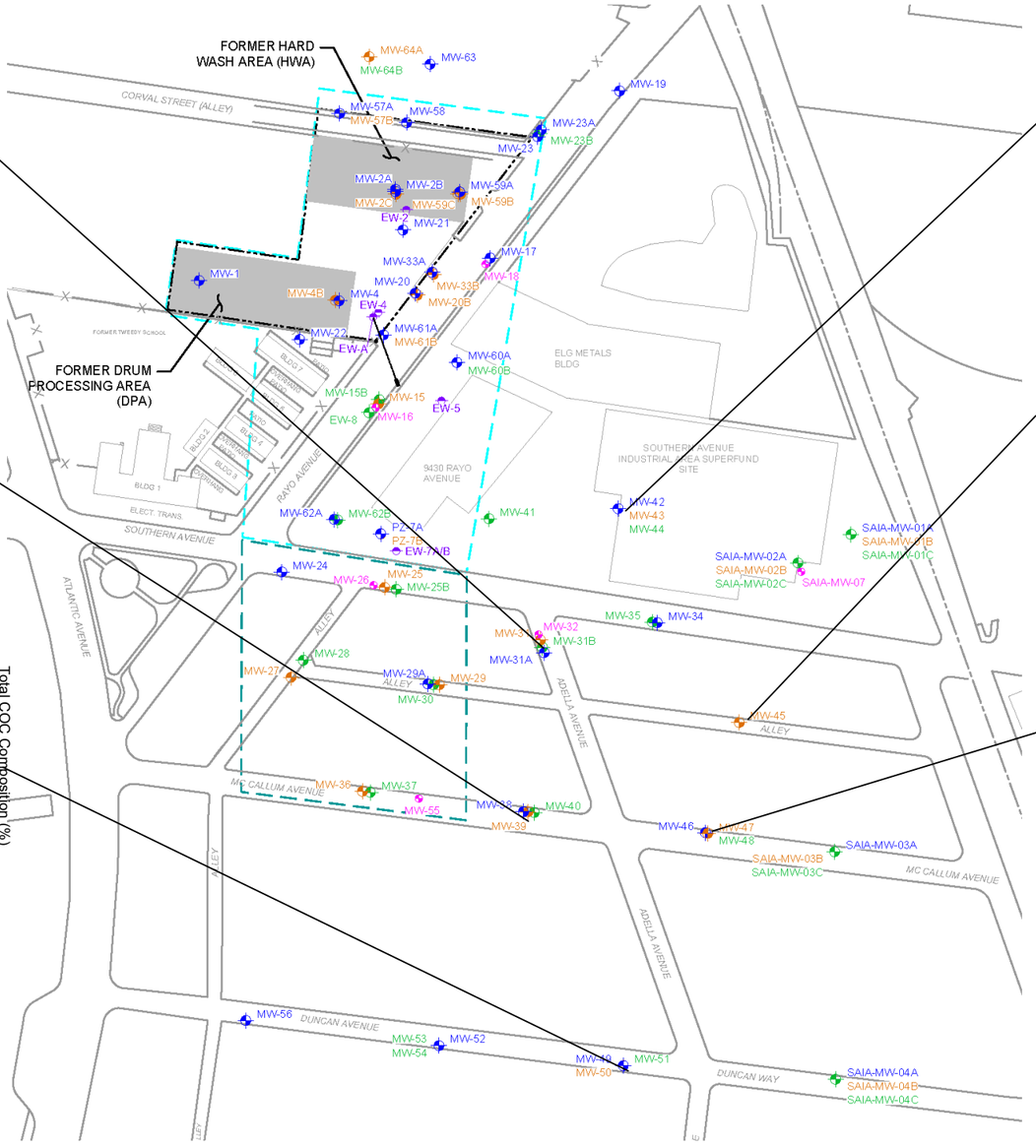
FIGURE F-6A

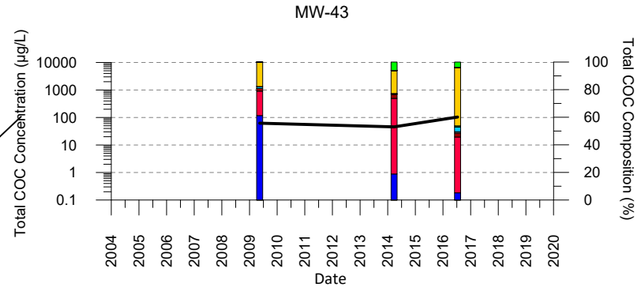
\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Other Shallow-Grapher.grf

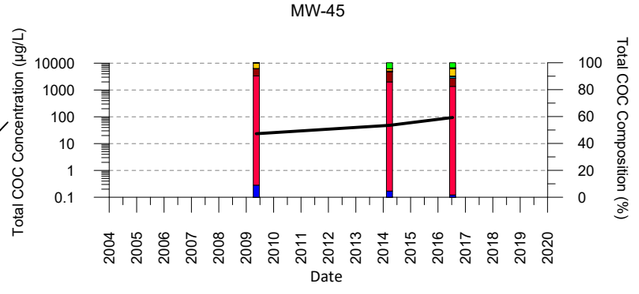


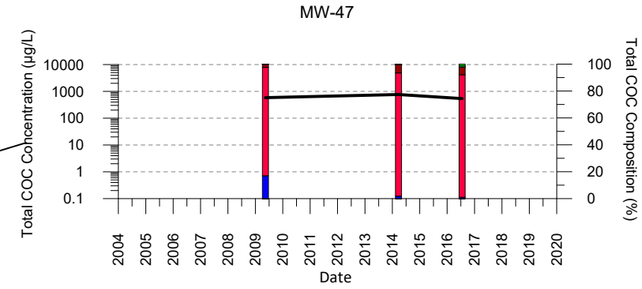












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1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

HALEY ALDRICH

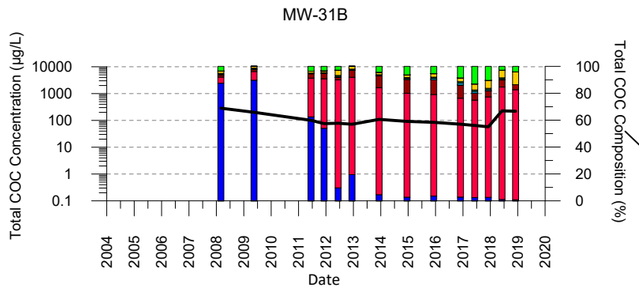
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

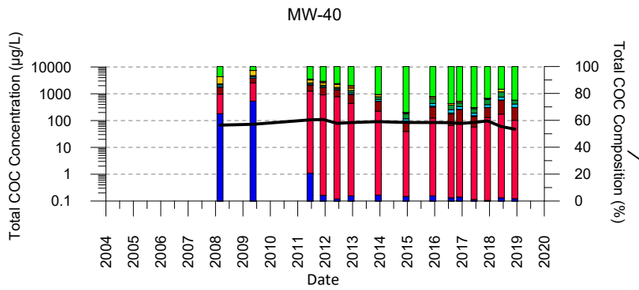
CONCENTRATION TRENDS FOR MONITORING WELLS, OTHER INTERMEDIATE GASPUR WELLS

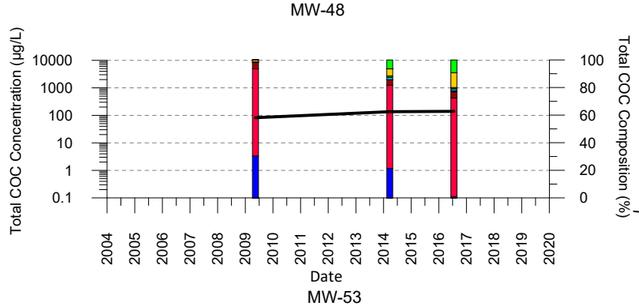
AUGUST 2019

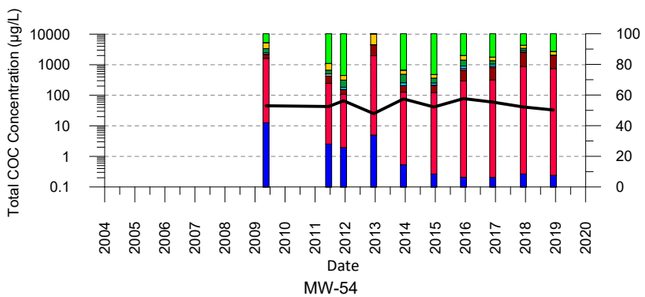
FIGURE F-6B

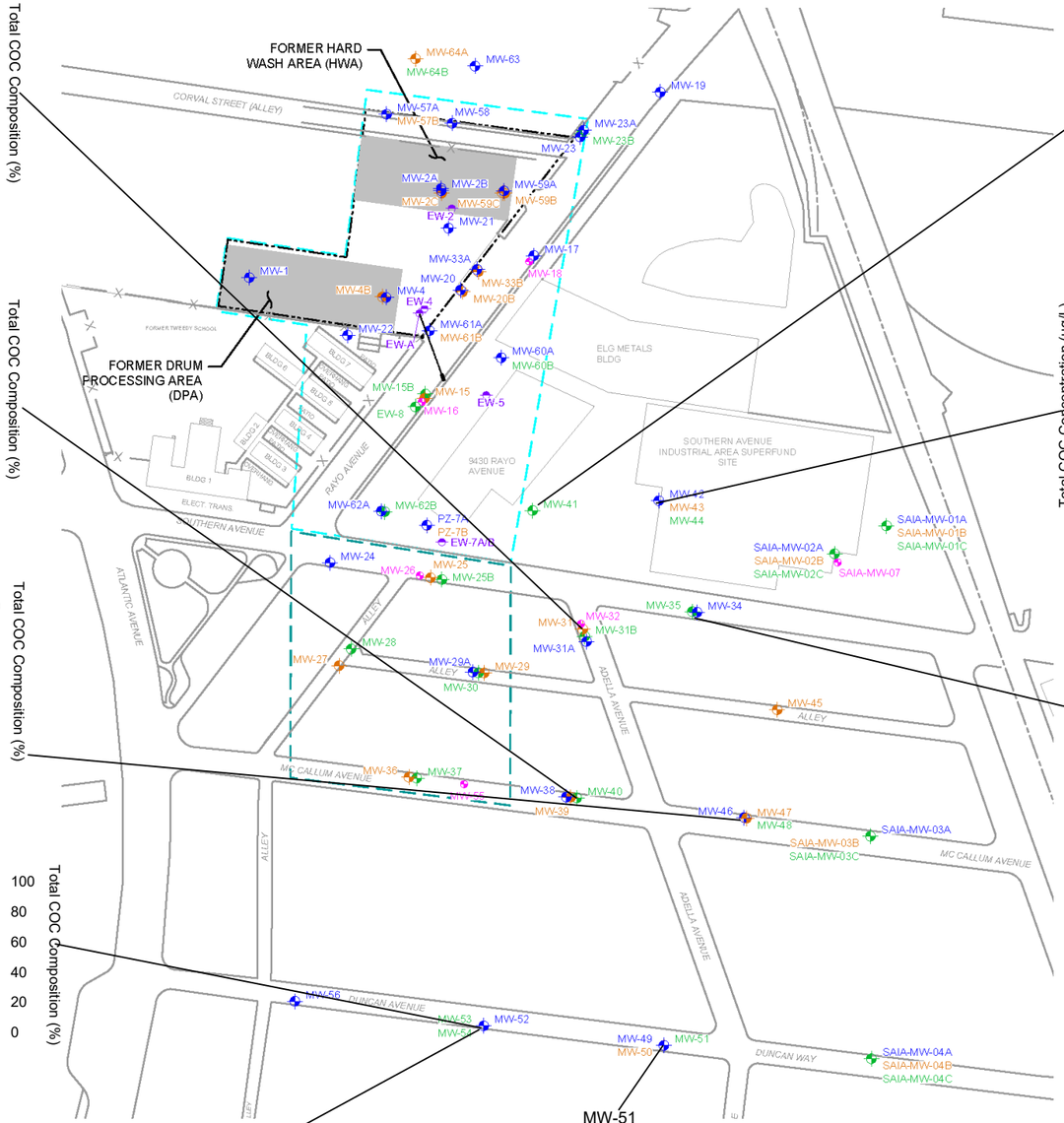
\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HA-Cooper Drum-Other-Intermediate-Grapher.grf

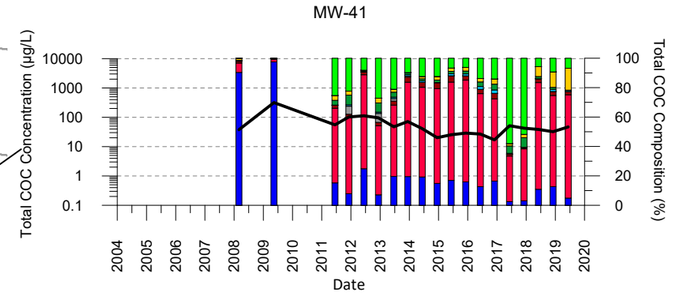


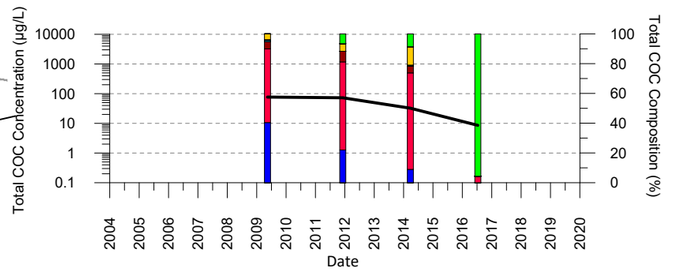


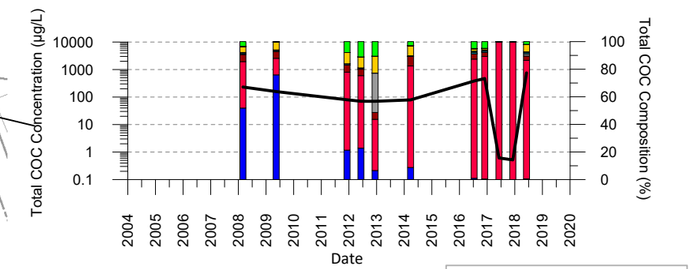


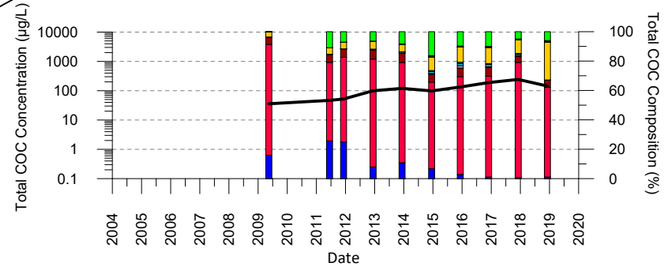












ABBREVIATIONS:

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TCE = TRICHLOROETHENE
cDCE = CIS-1,2-DICHLOROETHENE
tDCE = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
1,1-DCE = 1,1-DICHLOROETHENE
1,1-DCA = 1,1-DICHLOROETHANE
1,2-DCA = 1,2-DICHLOROETHANE
1,2-DCP = 1,2-DICHLOROPROPANE
1,2,3-TCP = 1,2,3-TRICHLOROPROPANE

NOTES:

1. NON-DETECT VALUES DEPICTED AS HAVING A CONCENTRATION OF 0.1 UG/L FOR PLOTTING PURPOSES.

Legend
- PCE
- TCE
- cDCE
- tDCE
- VC
- 1,1-DCE
- 1,1-DCA
- 1,2-DCA
- 1,2-DCP
- 1,2,3-TCP
- Benzene
- 1,4-Dioxane
- Total COC Concentration

HALEY ALDRICH

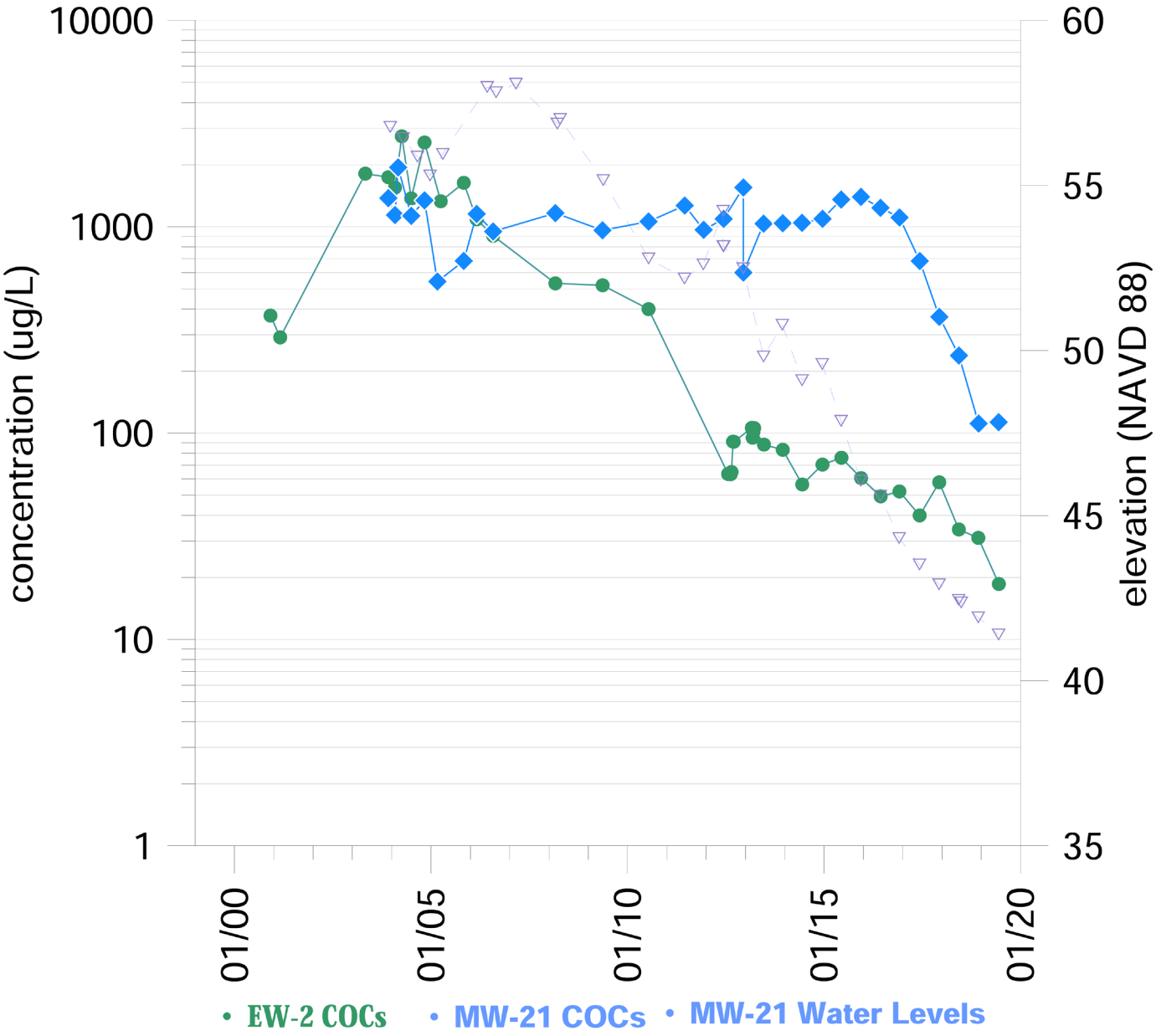
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

CONCENTRATION TRENDS FOR MONITORING WELLS, OTHER LOWER GASPUR WELLS

AUGUST 2019

FIGURE F-6C

\\haleyaldrich.com\share\cos_common\38945 Cooper Drum\006 - Routine O&M\Deliverables\Semi-Annual Performance Evaluation Report\2019 Jan to June\Analysis\Grapher\2019-0806-HAI-Cooper Drum-Other Lower-Grapher.grf



HALEY ALDRICH

Notes:

1. ug/L – micrograms per liter
2. NAVD88 – North American Vertical Datum of 1988

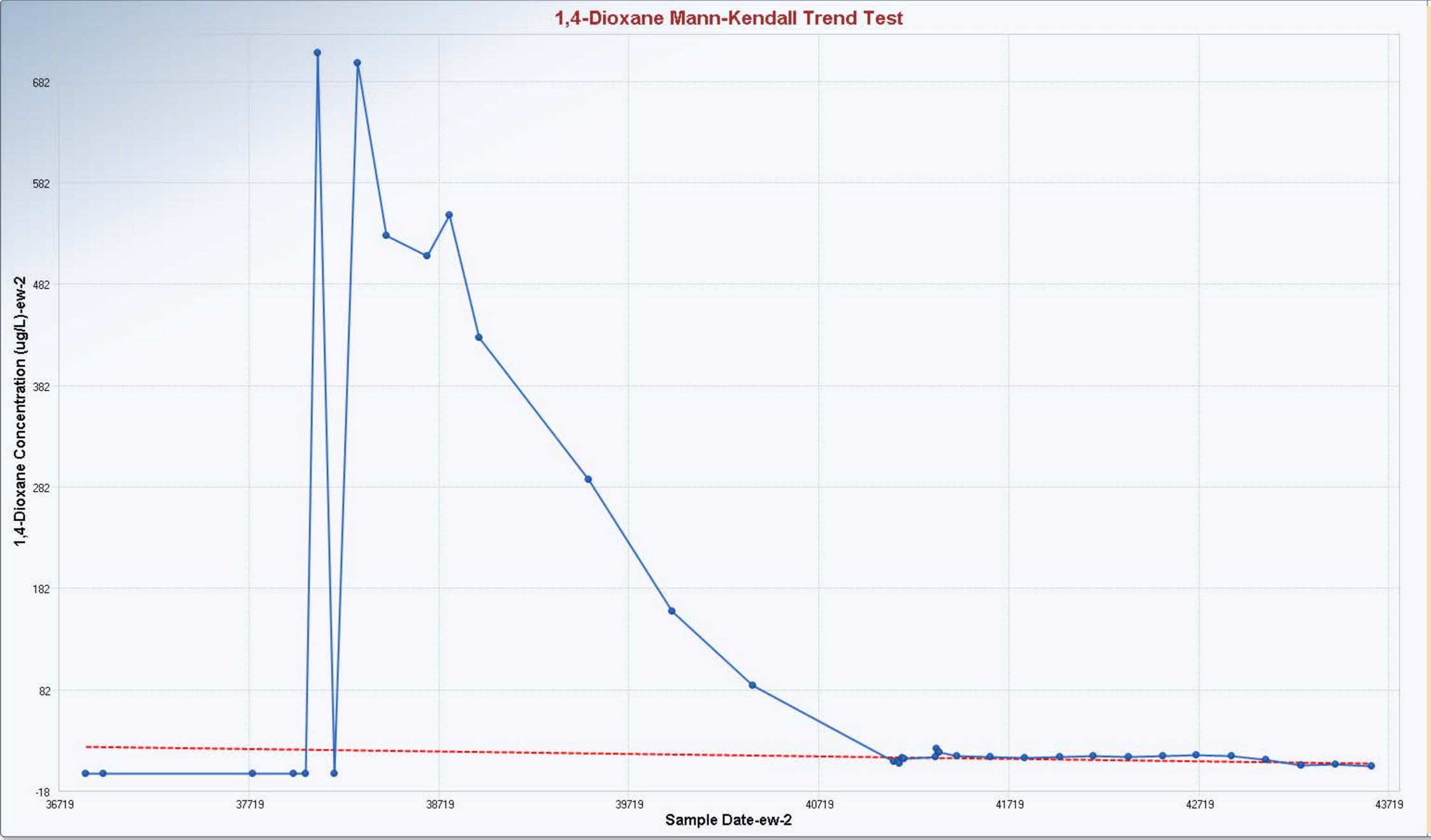
GROUNDWATER ELEVATION AND TOTAL COC TRENDS FOR EW-2 AND MW-21

FIGURE F-7

APPENDIX G

Concentration Trend Analyses

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	38
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	79.2359
Standardized Value of S	-0.9844
M-K Test Value (S)	-79
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.1625

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0025
Theil-Sen Intercept	117.0743

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

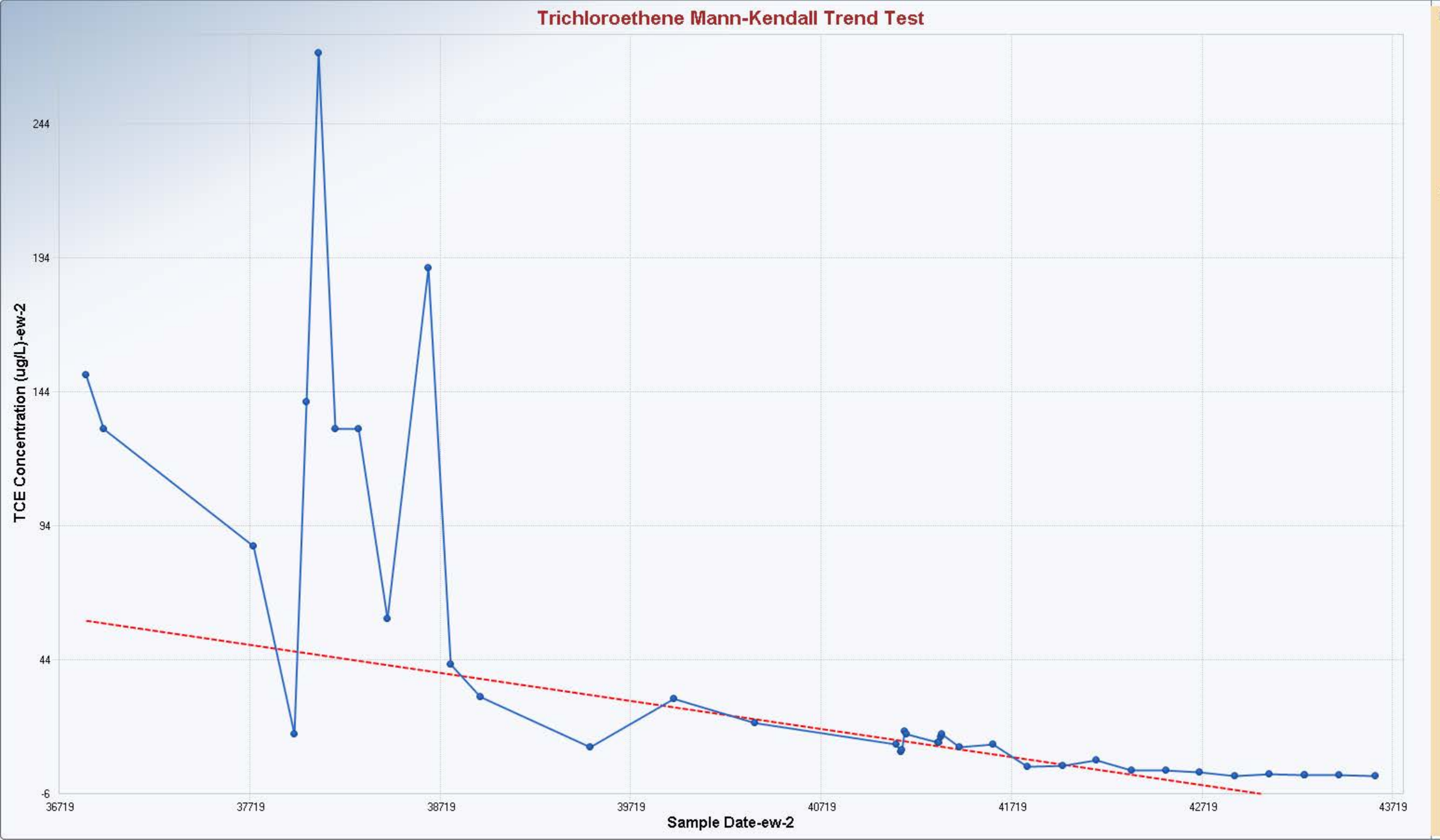
n	38
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	79.5110
Standardized Value of S	-5.5716
M-K Test Value (S)	-444
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0208
Theil-Sen Intercept	895.8589

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

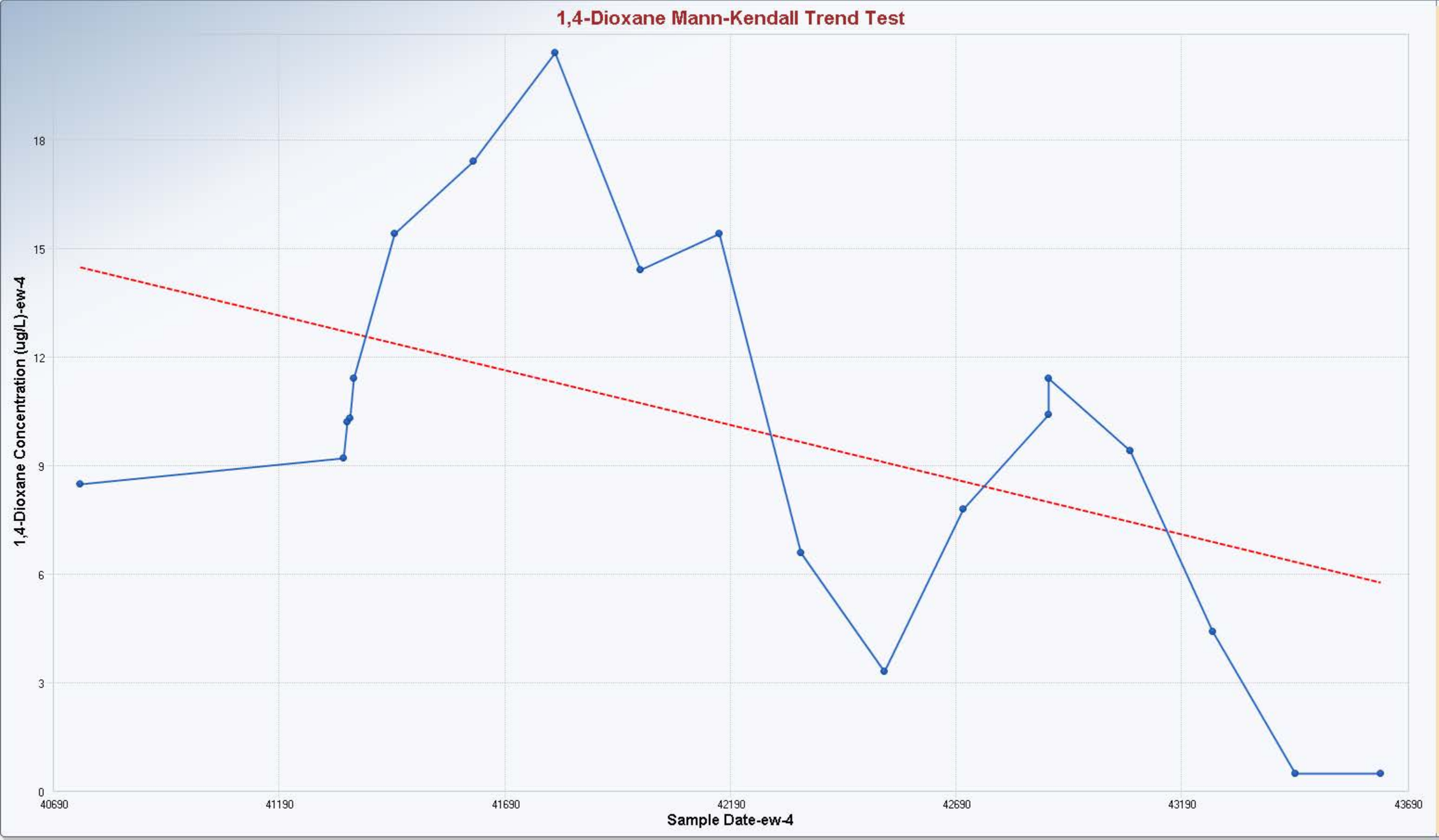
n	38
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	79.4649
Standardized Value of S	-6.8332
M-K Test Value (S)	-544
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0105
Theil-Sen Intercept	447.2036

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

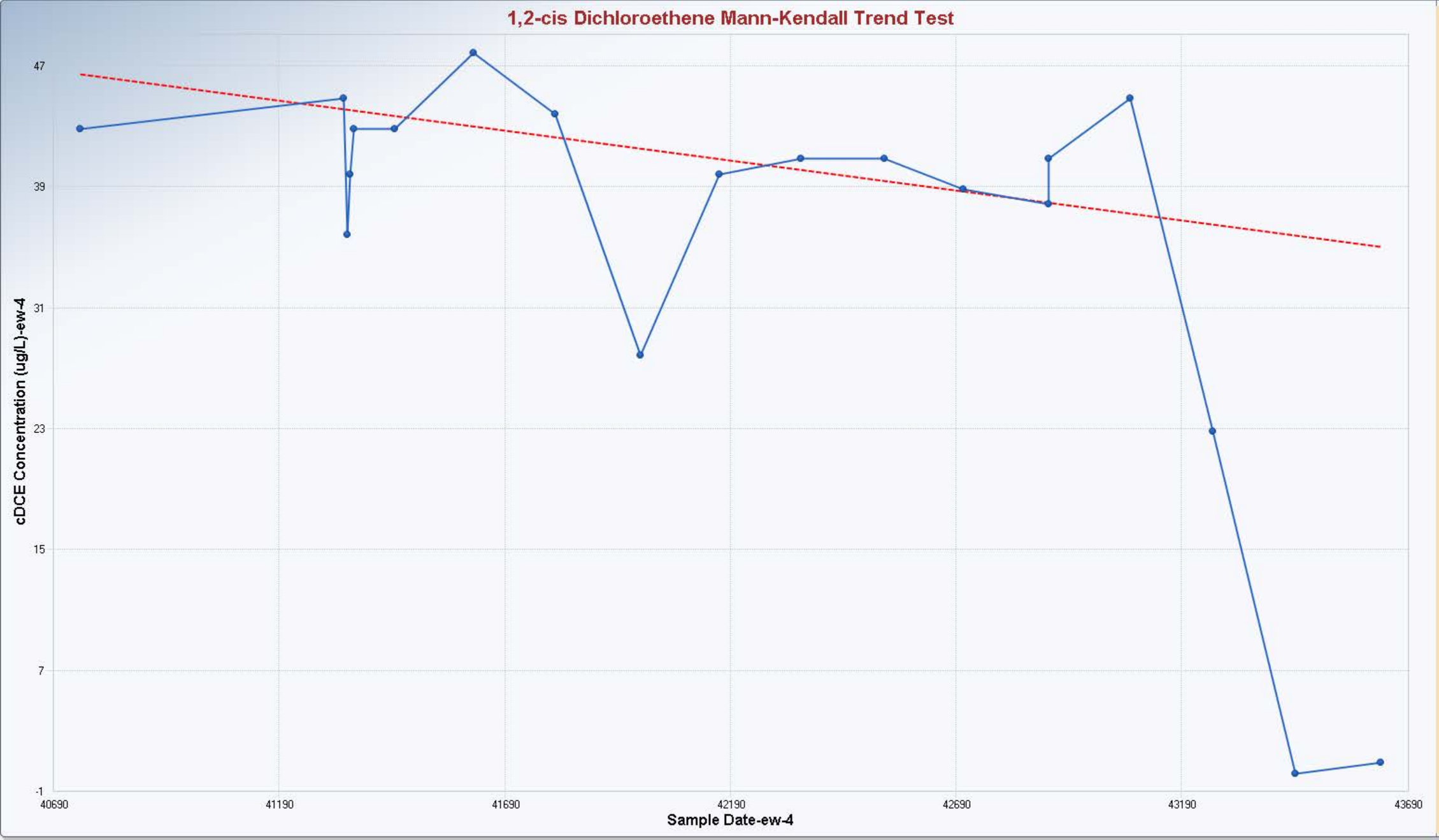
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5307
Standardized Value of S	-1.5071
M-K Test Value (S)	-44
Tabulated p-value	0.0620
Approximate p-value	0.0659

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0030
Theil-Sen Intercept	137.3758

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.4195
Standardized Value of S	-2.1112
M-K Test Value (S)	-61
Tabulated p-value	0.0170
Approximate p-value	0.0174

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0039
Theil-Sen Intercept	207.2697

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5015
Standardized Value of S	-3.7191
M-K Test Value (S)	-107
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0009
Theil-Sen Intercept	37.5524

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

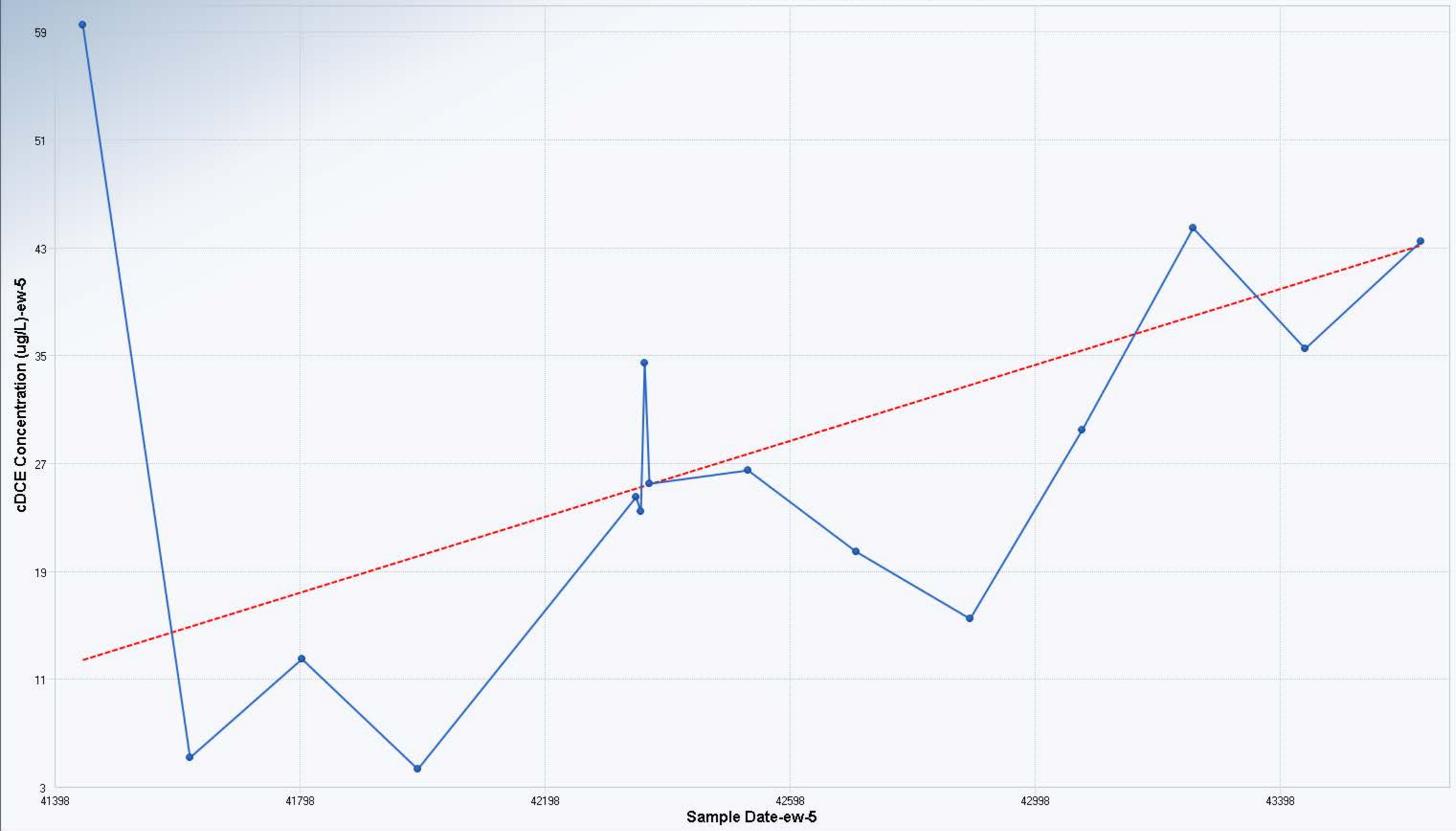
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1577
Standardized Value of S	0.5953
M-K Test Value (S)	13
Tabulated p-value	0.2790
Approximate p-value	0.2758

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0028
Theil-Sen Intercept	-105.8818

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.2073
Standardized Value of S	1.8805
M-K Test Value (S)	39
Tabulated p-value	0.0290
Approximate p-value	0.0300

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0141
Theil-Sen Intercept	-571.3481

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

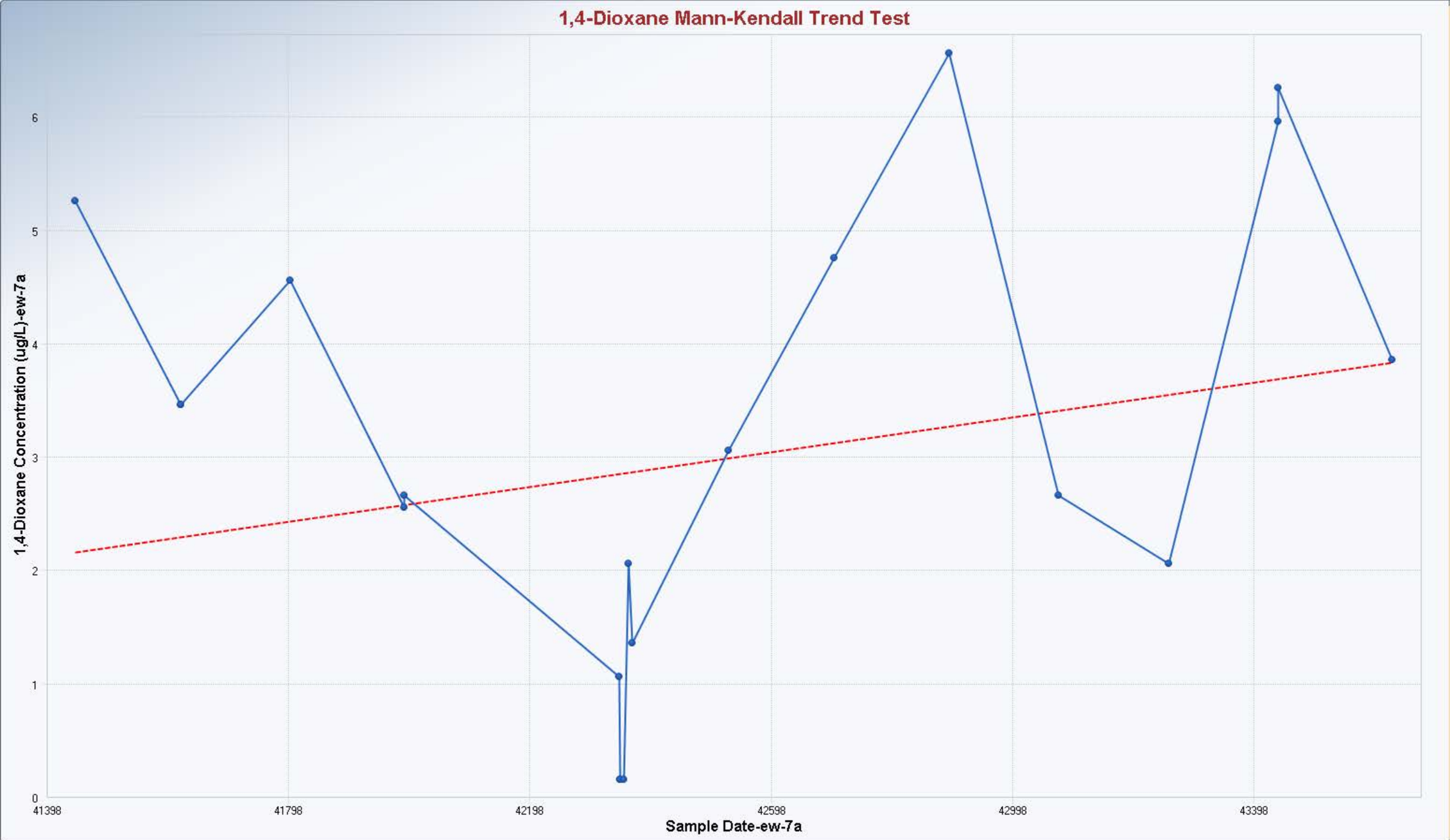
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.0915
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5000
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	10.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7137
Standardized Value of S	0.6837
M-K Test Value (S)	22
Tabulated p-value	0.2500
Approximate p-value	0.2471

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0008
Theil-Sen Intercept	-29.6225

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6105
Standardized Value of S	-3.7242
M-K Test Value (S)	-115
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0065
Theil-Sen Intercept	306.3181

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

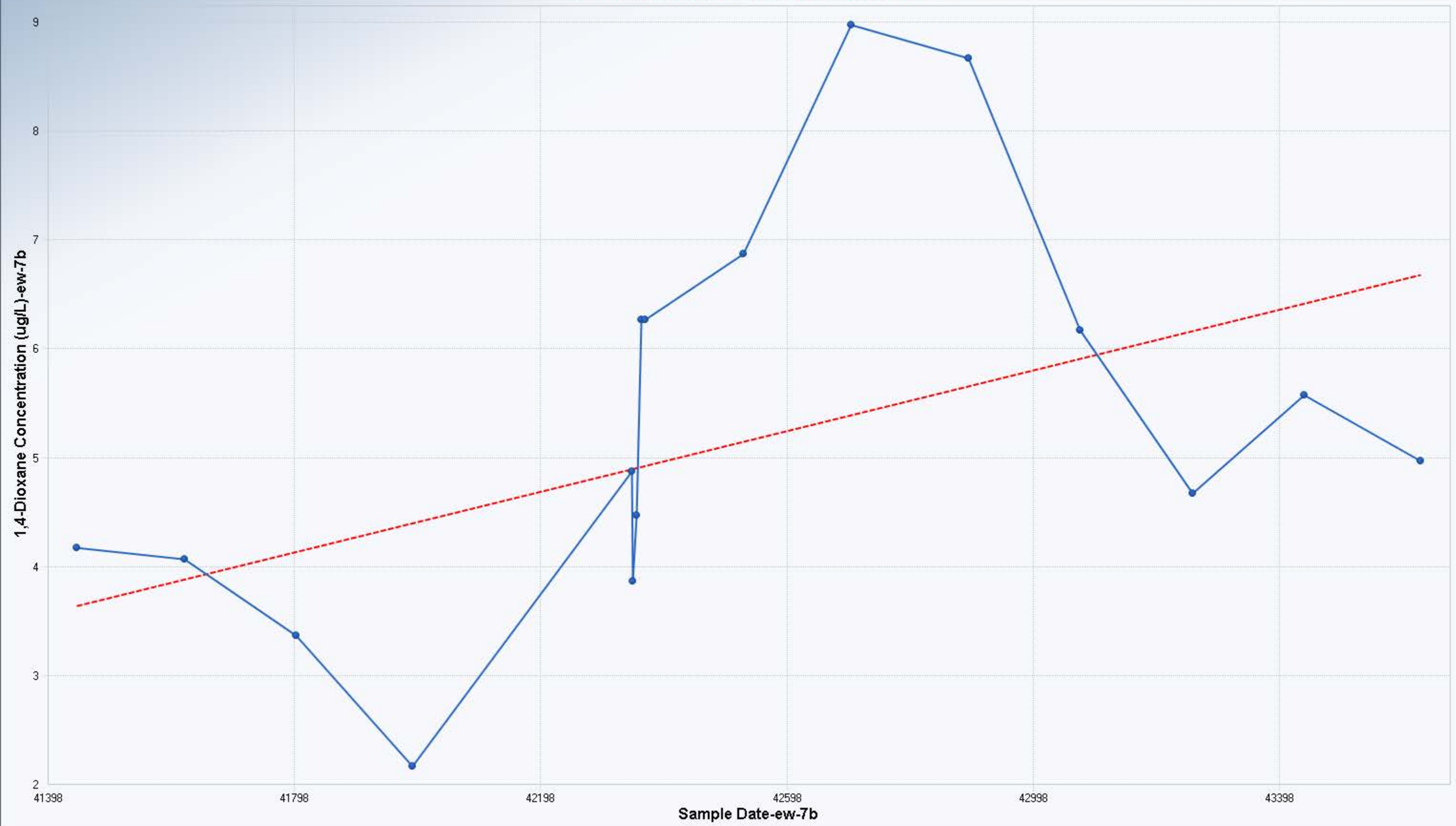
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.4302
Standardized Value of S	-1.0844
M-K Test Value (S)	-34
Tabulated p-value	0.1440
Approximate p-value	0.1391

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	9.9781

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	22.1886
Standardized Value of S	2.0731
M-K Test Value (S)	47
Tabulated p-value	0.0210
Approximate p-value	0.0191

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0014
Theil-Sen Intercept	-53.8512

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	22.1660
Standardized Value of S	0.0451
M-K Test Value (S)	2
Tabulated p-value	0.4820
Approximate p-value	0.4820

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	33.8734

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

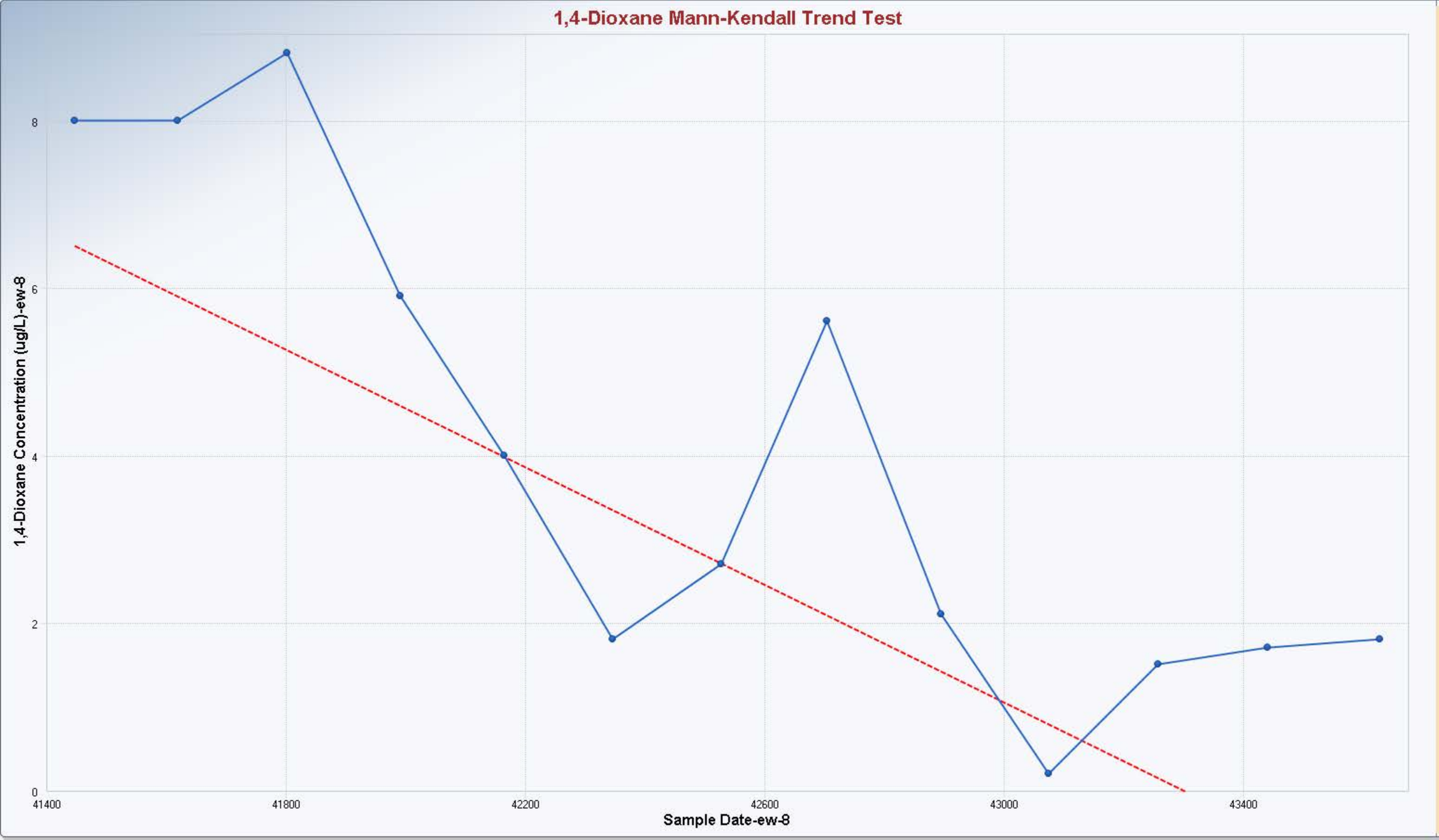
Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	22.1435
Standardized Value of S	-1.4451
M-K Test Value (S)	-33
Tabulated p-value	0.0830
Approximate p-value	0.0742

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0010
Theil-Sen Intercept	45.6249

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

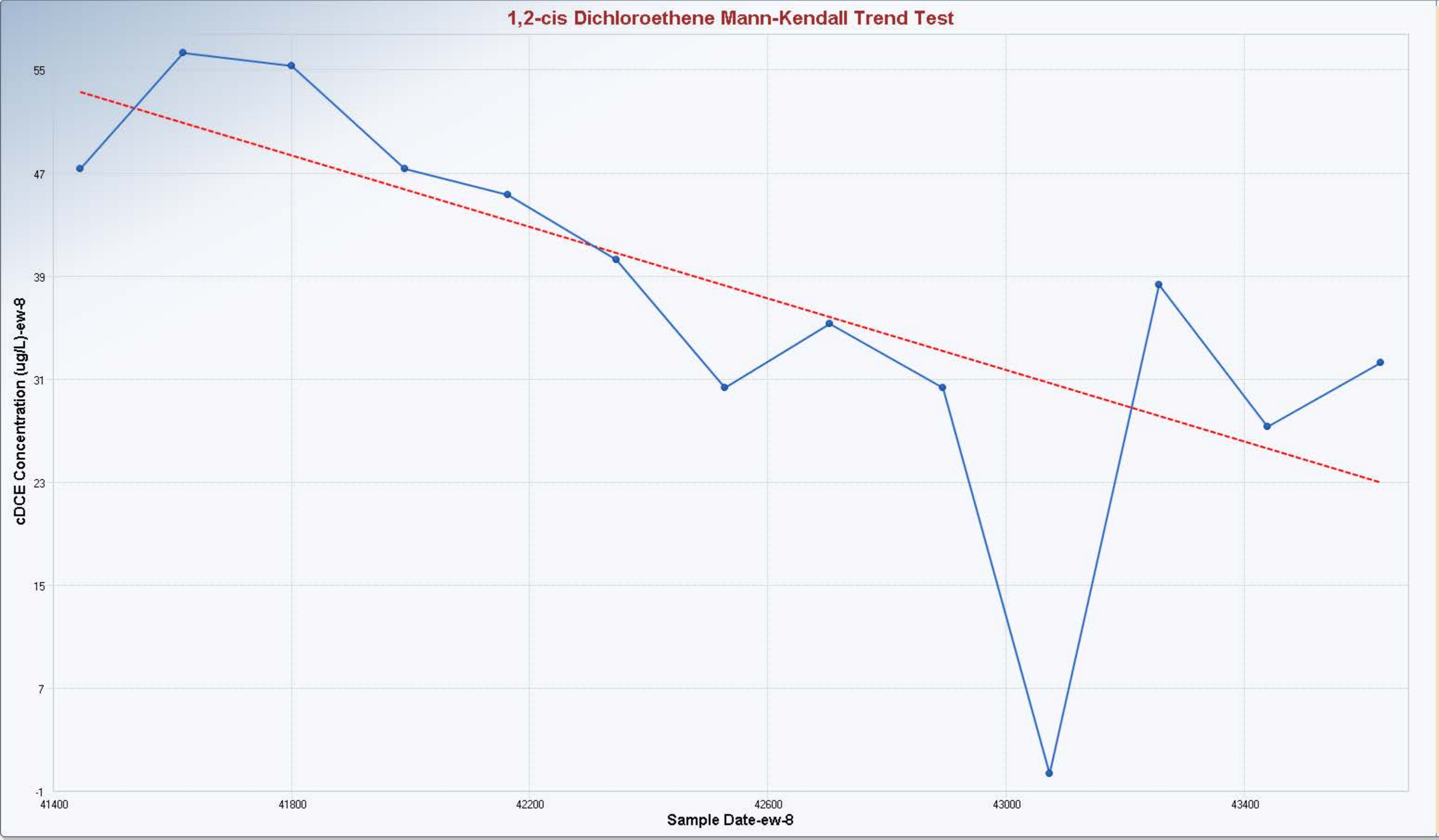
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	-3.0006
M-K Test Value (S)	-50
Tabulated p-value	0.0010
Approximate p-value	0.0013

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0035
Theil-Sen Intercept	151.7991

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	-3.1231
M-K Test Value (S)	-52
Tabulated p-value	0.0000
Approximate p-value	0.0009

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0139
Theil-Sen Intercept	628.4822

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

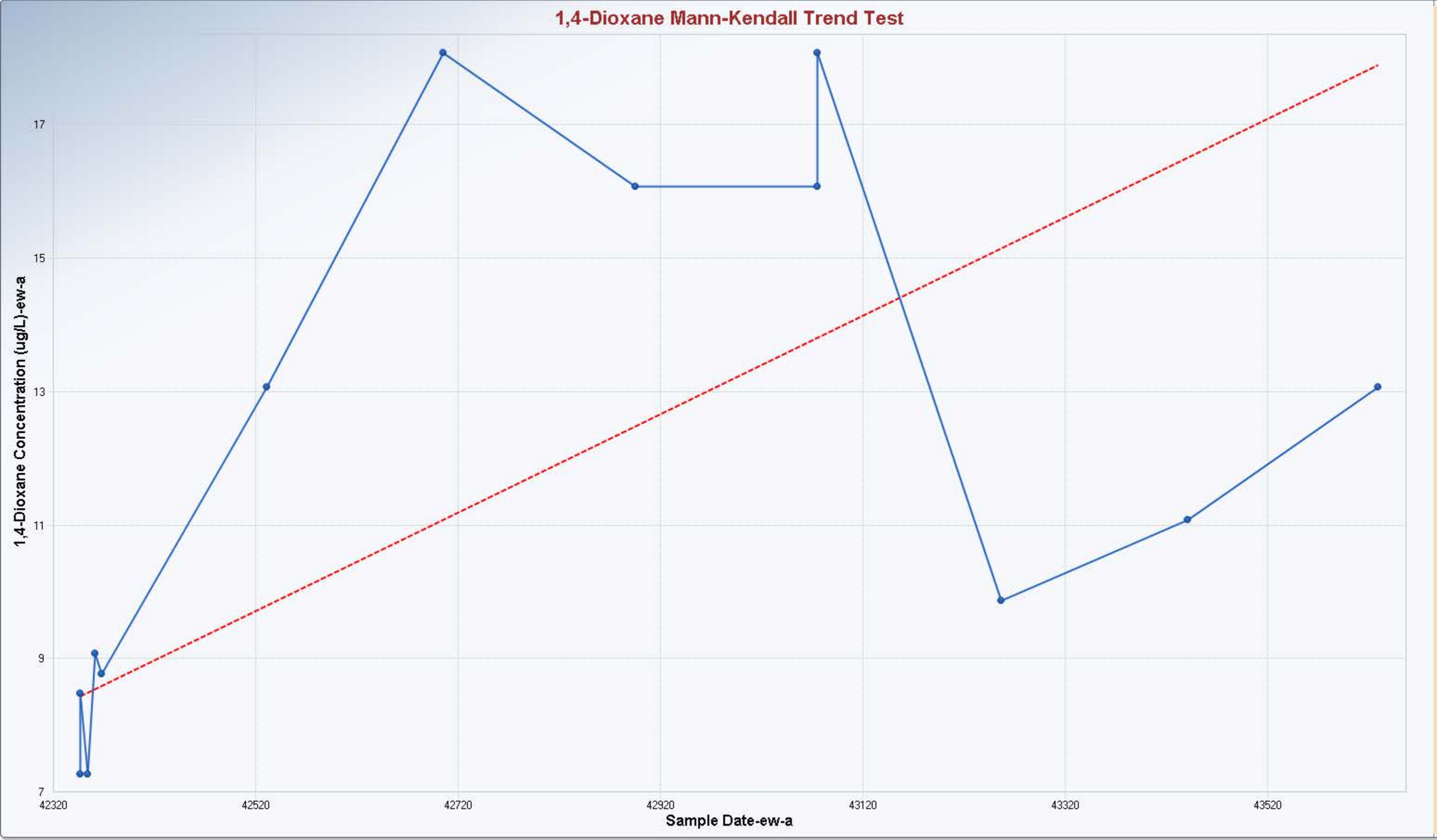
Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	-2.6332
M-K Test Value (S)	-44
Tabulated p-value	0.0030
Approximate p-value	0.0042

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0006
Theil-Sen Intercept	28.7711

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

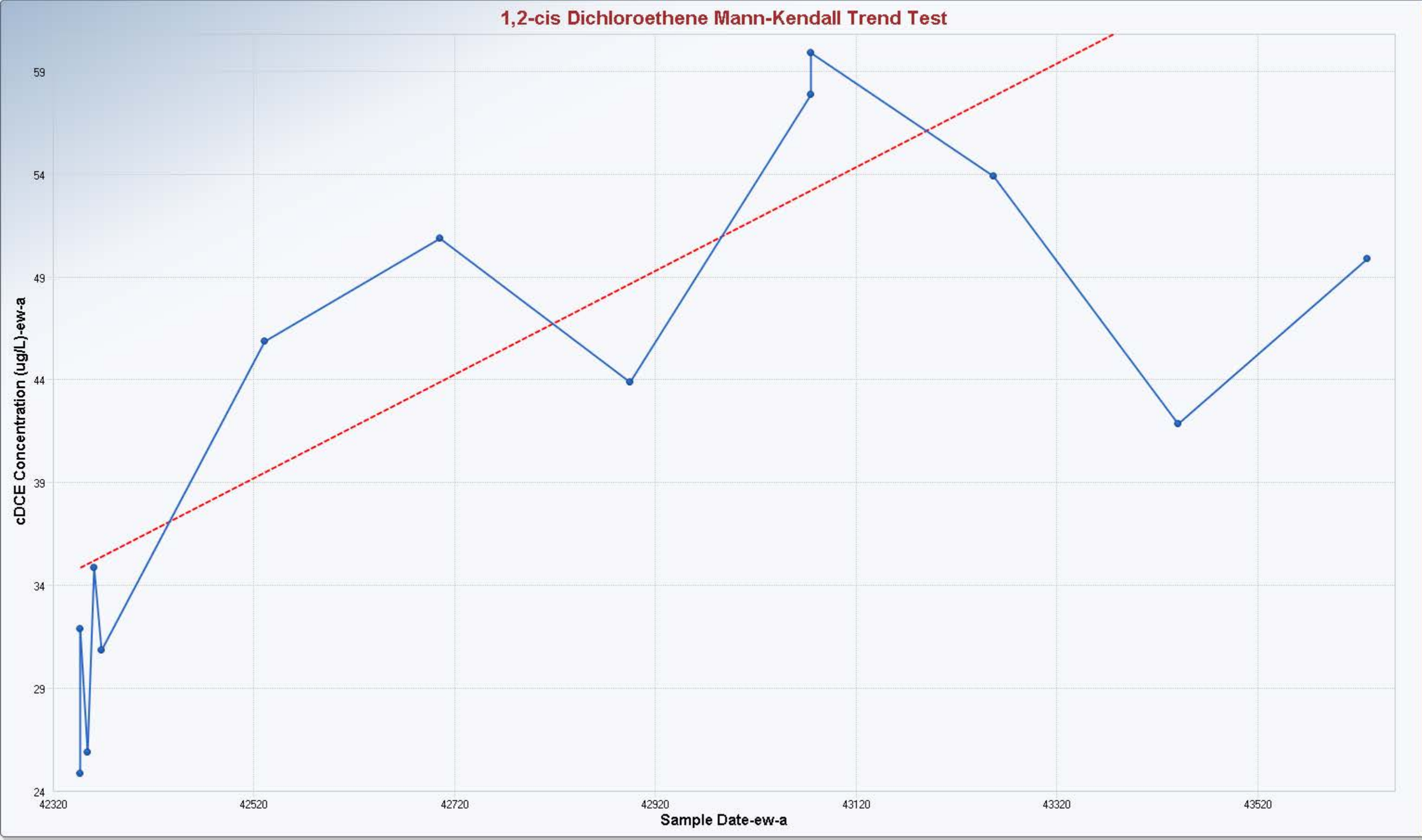
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.2686
Standardized Value of S	2.2743
M-K Test Value (S)	38
Tabulated p-value	0.0110
Approximate p-value	0.0115

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0074
Theil-Sen Intercept	-304.2376

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

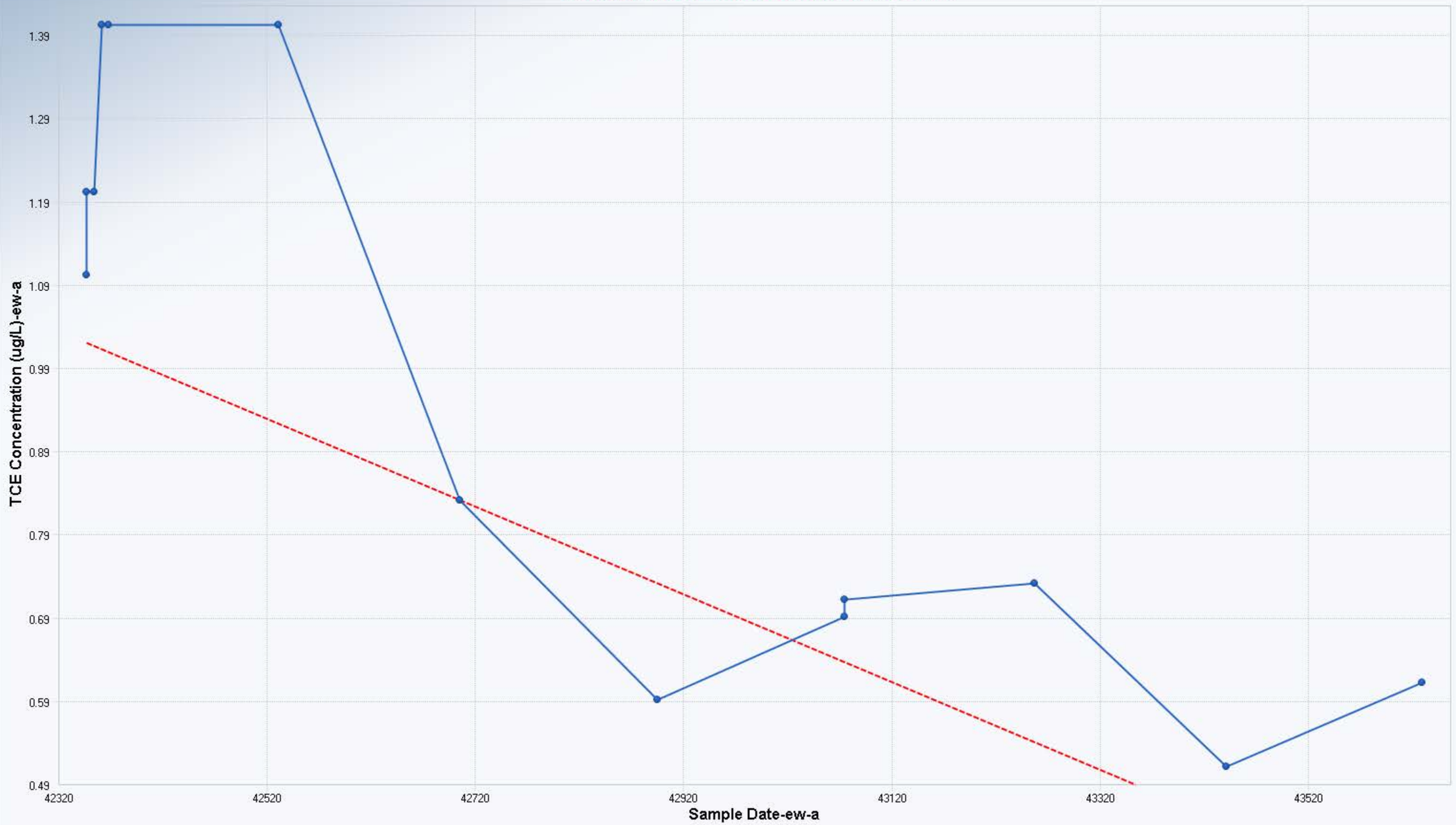
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3911
Standardized Value of S	2.6234
M-K Test Value (S)	44
Tabulated p-value	0.0030
Approximate p-value	0.0044

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0252
Theil-Sen Intercept	-1,032.2349

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.2481
Standardized Value of S	-2.1541
M-K Test Value (S)	-36
Tabulated p-value	0.0150
Approximate p-value	0.0156

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	23.3825

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

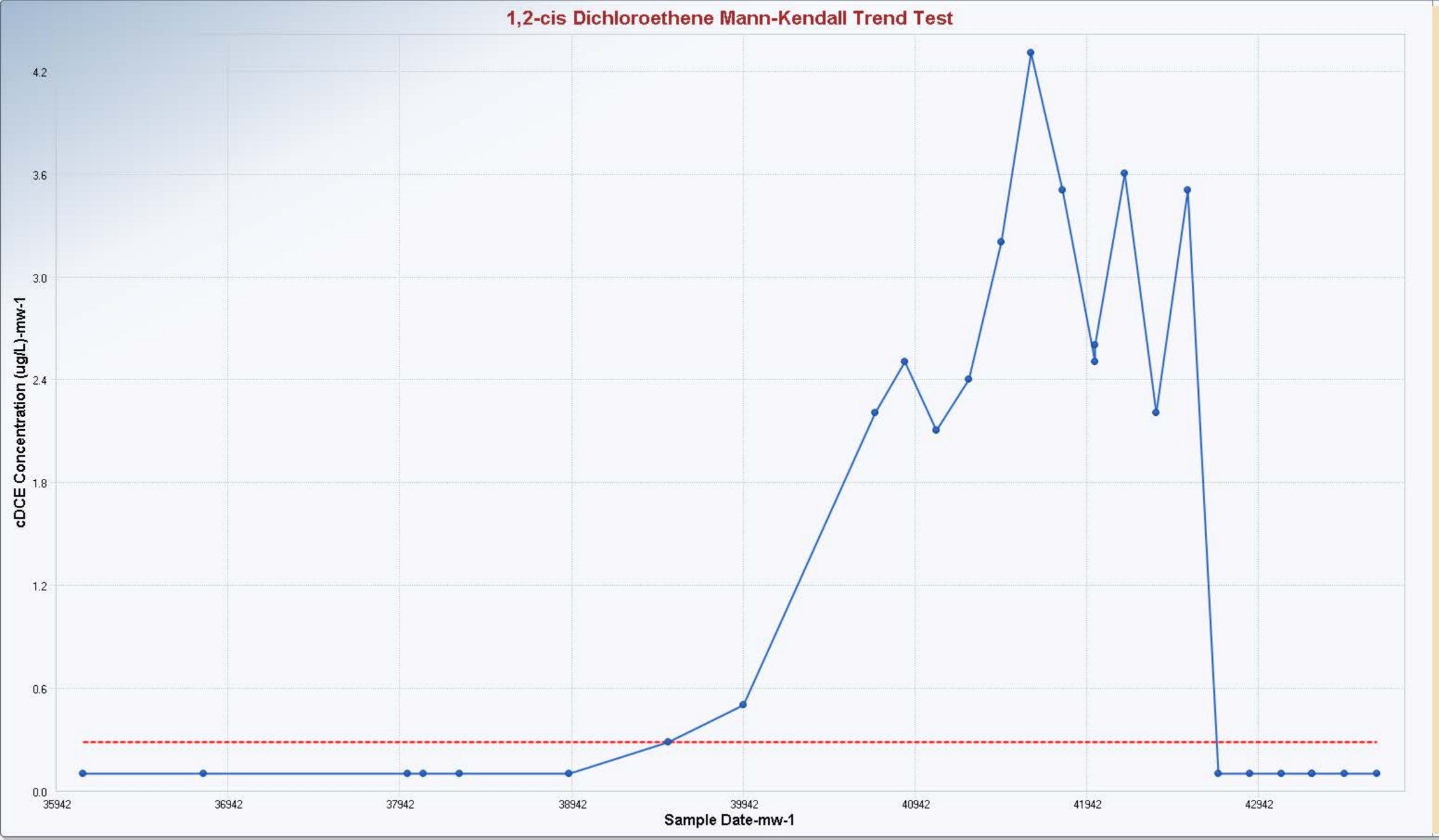
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.6025
Standardized Value of S	0.7353
M-K Test Value (S)	36
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.2311

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0002
Theil-Sen Intercept	-1.8852

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

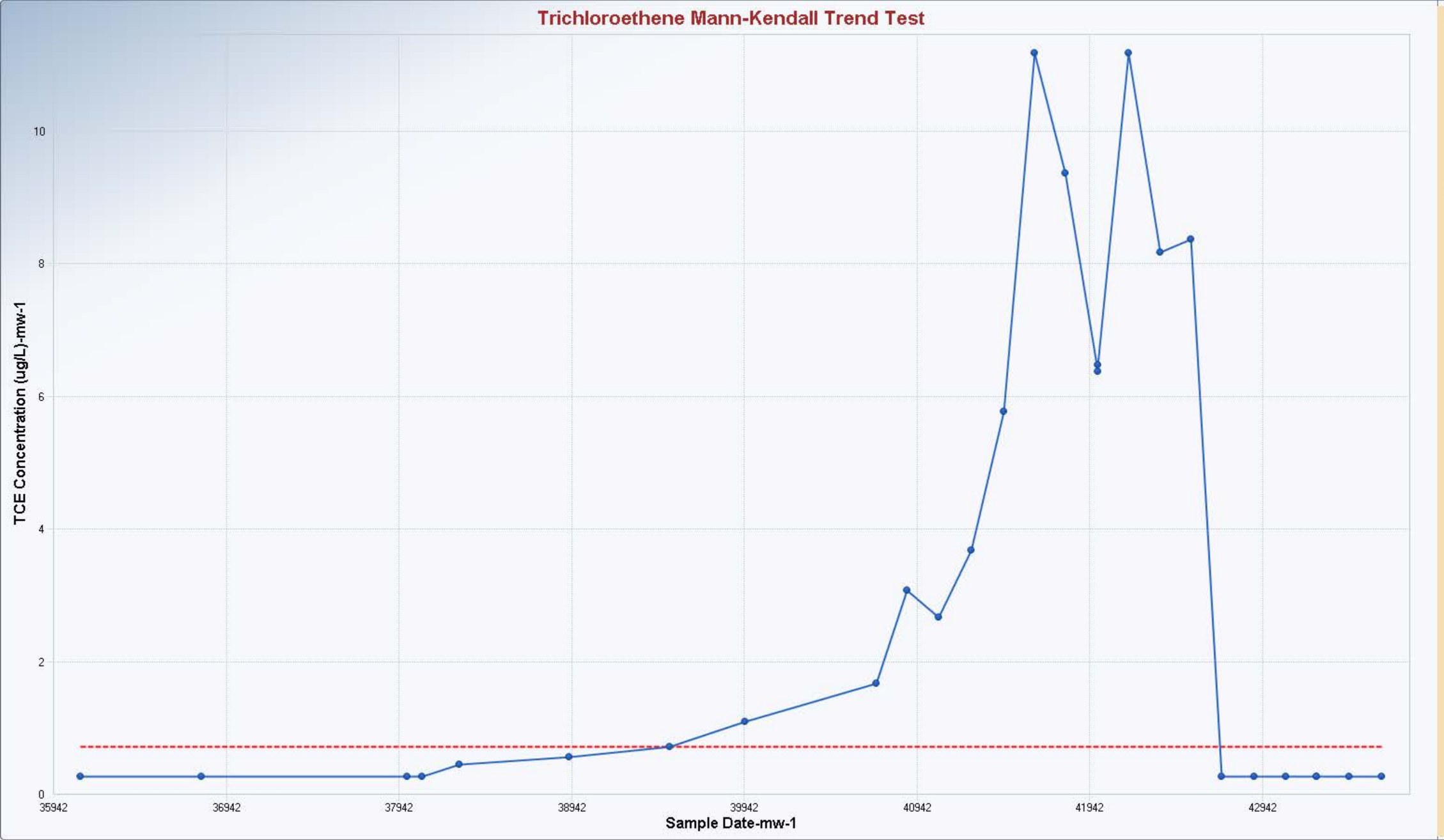
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	45.0481
Standardized Value of S	0.6882
M-K Test Value (S)	32
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.2457

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.2800

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	46.2061
Standardized Value of S	0.9955
M-K Test Value (S)	47
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.1597

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.5500

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2665
Standardized Value of S	-2.6278
M-K Test Value (S)	-49
Tabulated p-value	0.0030
Approximate p-value	0.0043

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0179
Theil-Sen Intercept	758.0456

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.0831
Standardized Value of S	-1.8802
M-K Test Value (S)	-35
Tabulated p-value	0.0310
Approximate p-value	0.0300

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0408
Theil-Sen Intercept	1,925.8299

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

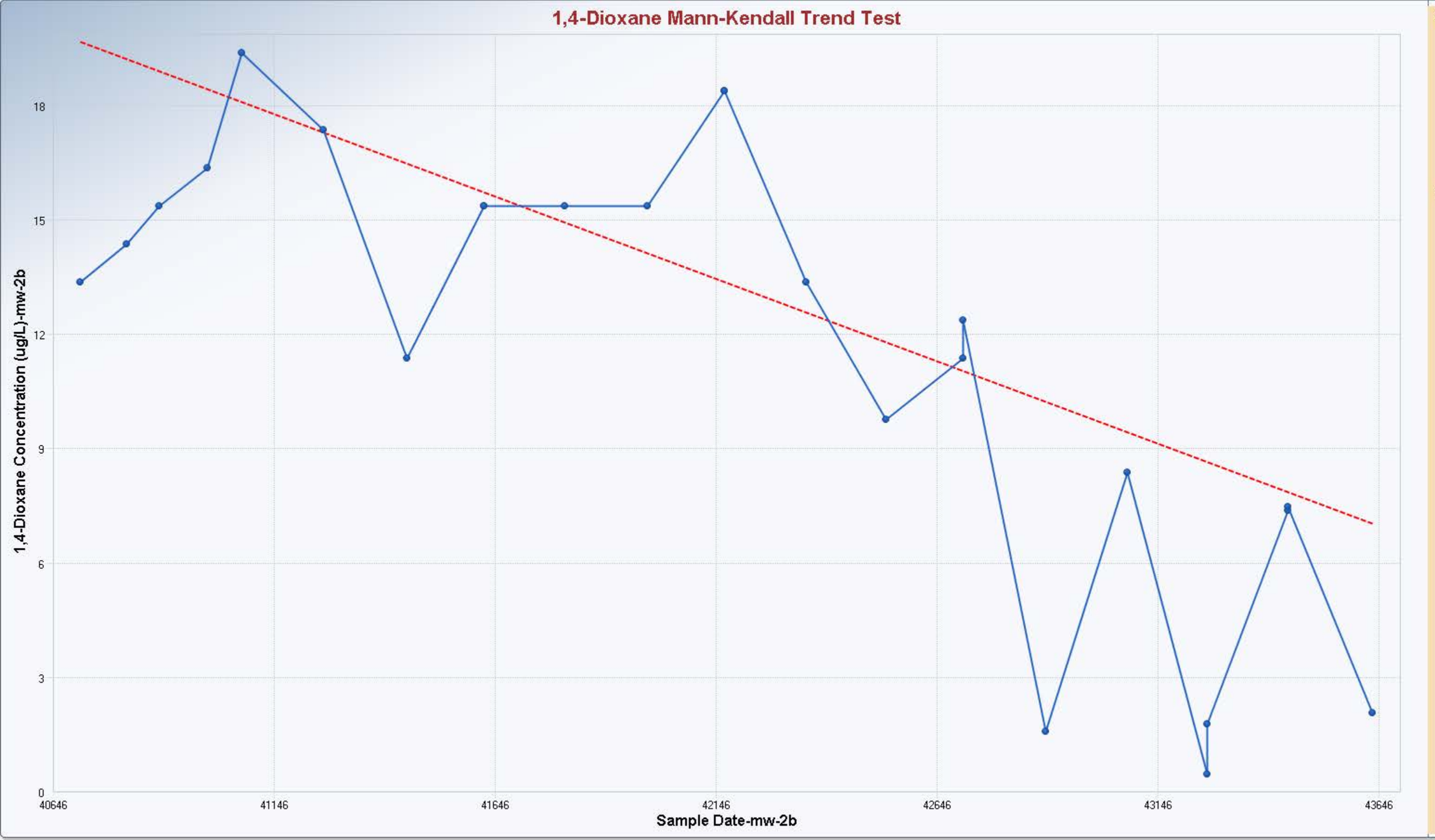
Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.2392
Standardized Value of S	-3.8927
M-K Test Value (S)	-72
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0588
Theil-Sen Intercept	2,486.4118

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	40.0708
Standardized Value of S	-3.3441
M-K Test Value (S)	-135
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0043
Theil-Sen Intercept	195.2058

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

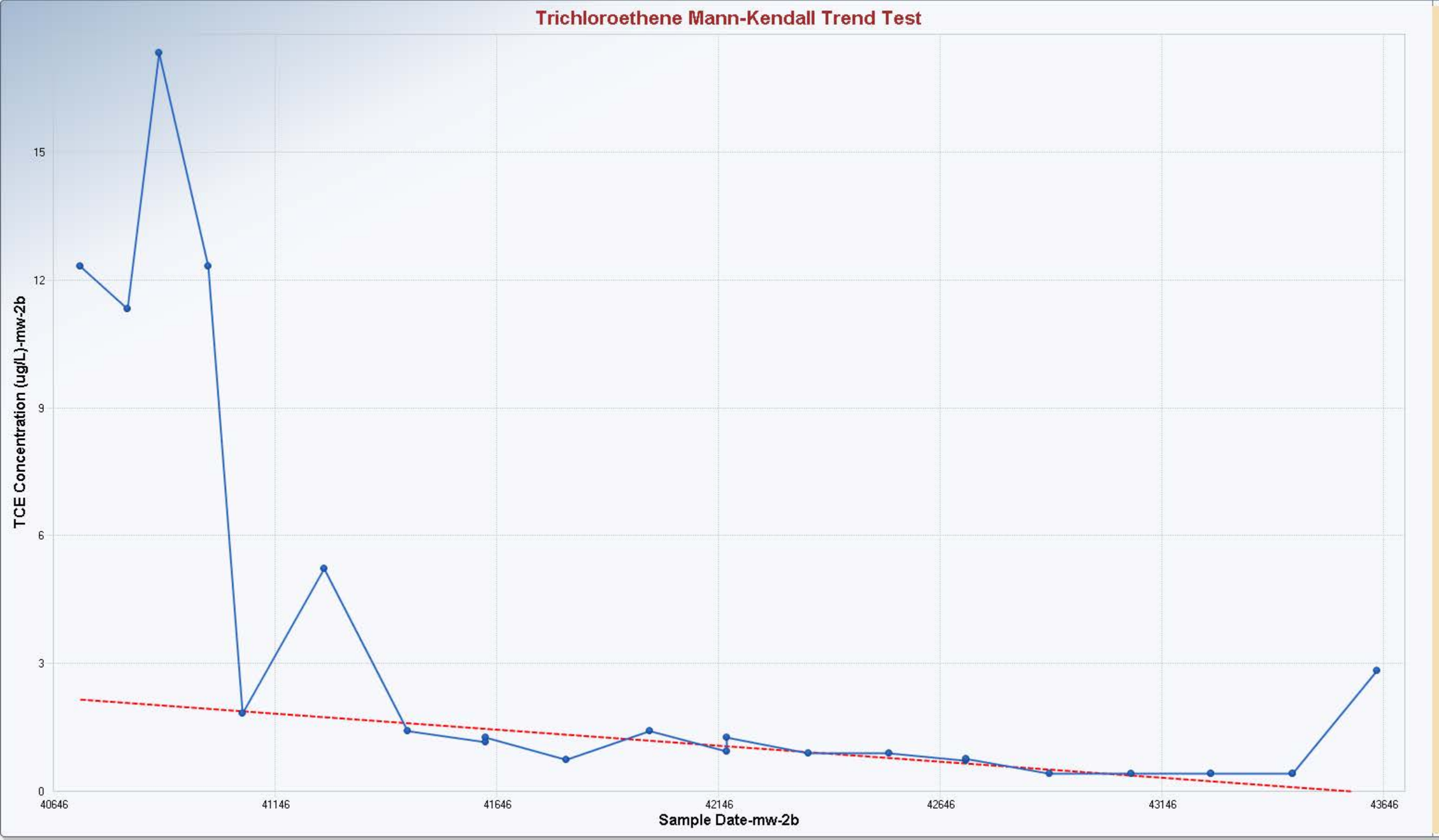
n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	40.2906
Standardized Value of S	-2.8046
M-K Test Value (S)	-114
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0025

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0063
Theil-Sen Intercept	274.9380

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

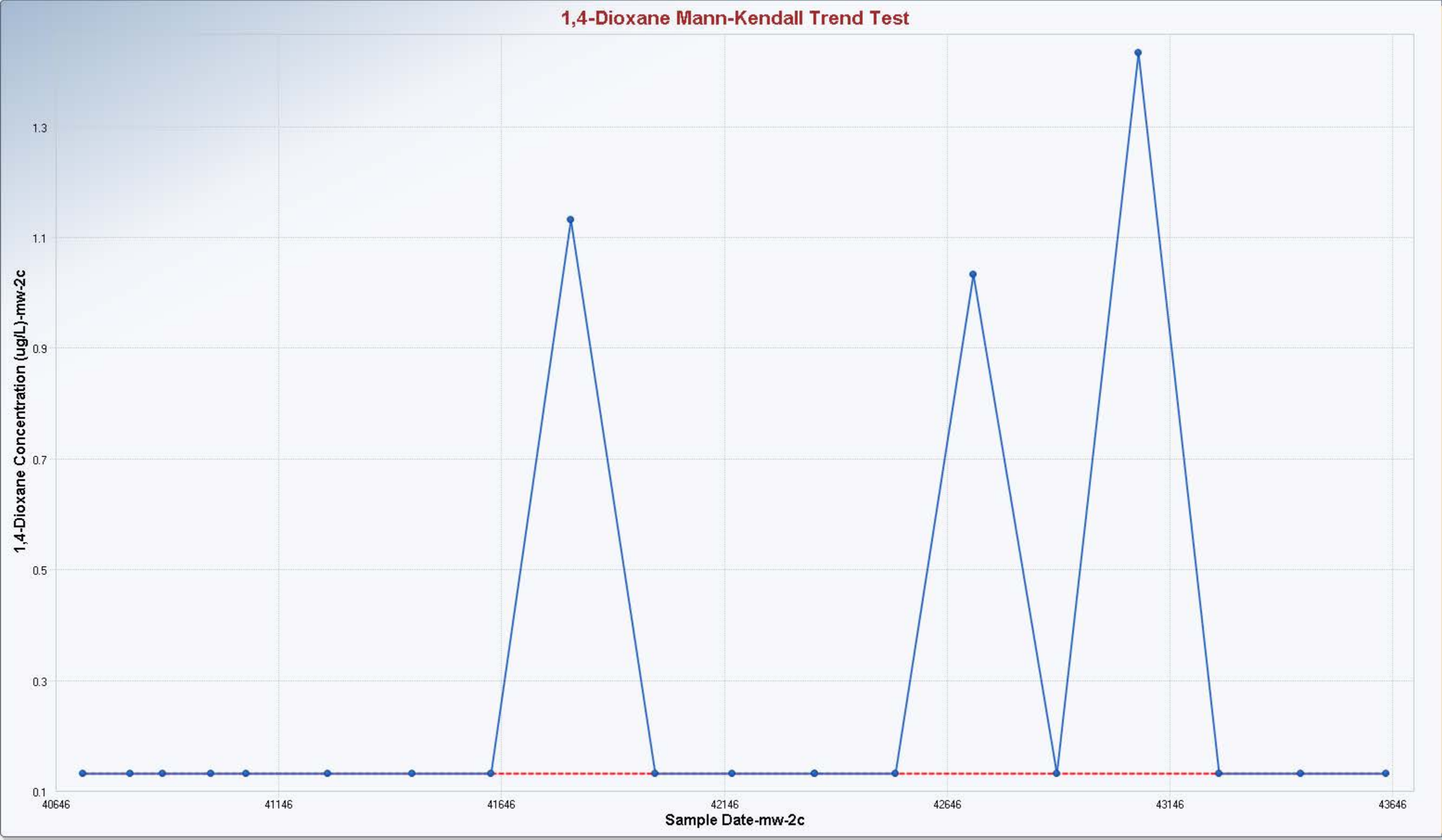
n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	39.9249
Standardized Value of S	-4.6838
M-K Test Value (S)	-188
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0008
Theil-Sen Intercept	32.7434

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

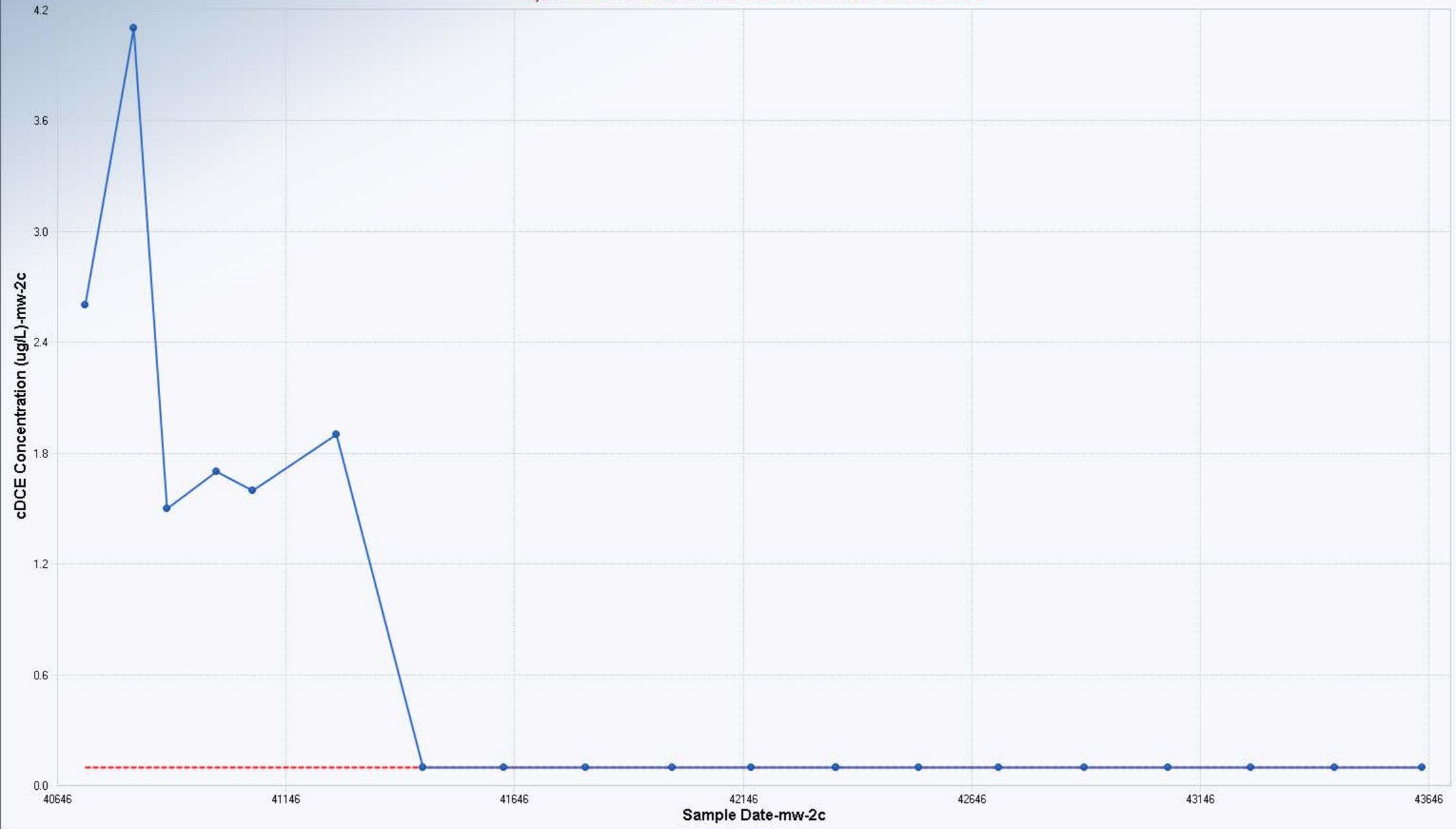
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.9912
Standardized Value of S	1.0005
M-K Test Value (S)	20
Tabulated p-value	0.2710
Approximate p-value	0.1585

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

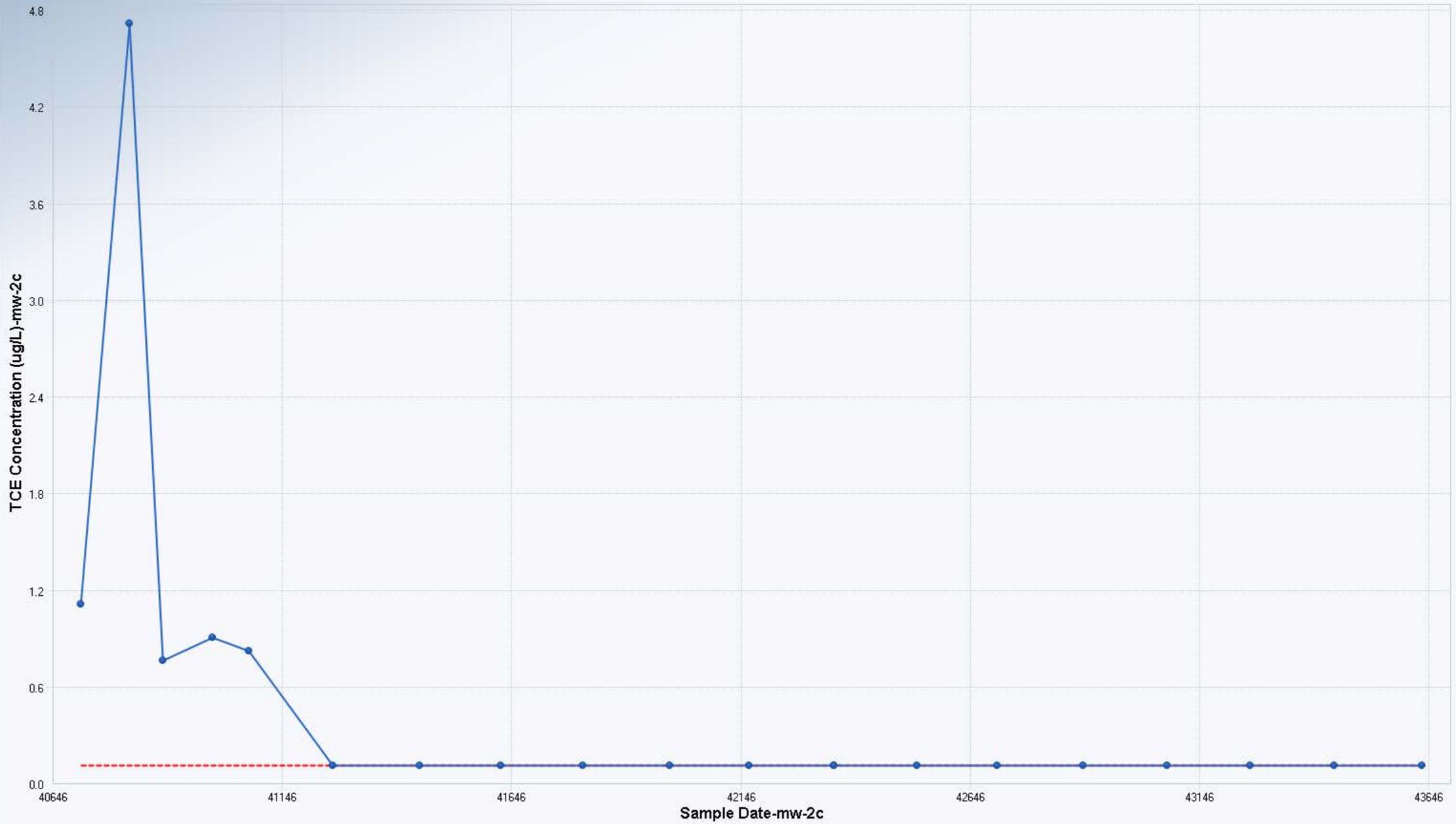
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.8261
Standardized Value of S	-3.4641
M-K Test Value (S)	-87
Tabulated p-value	0.0020
Approximate p-value	0.0003

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

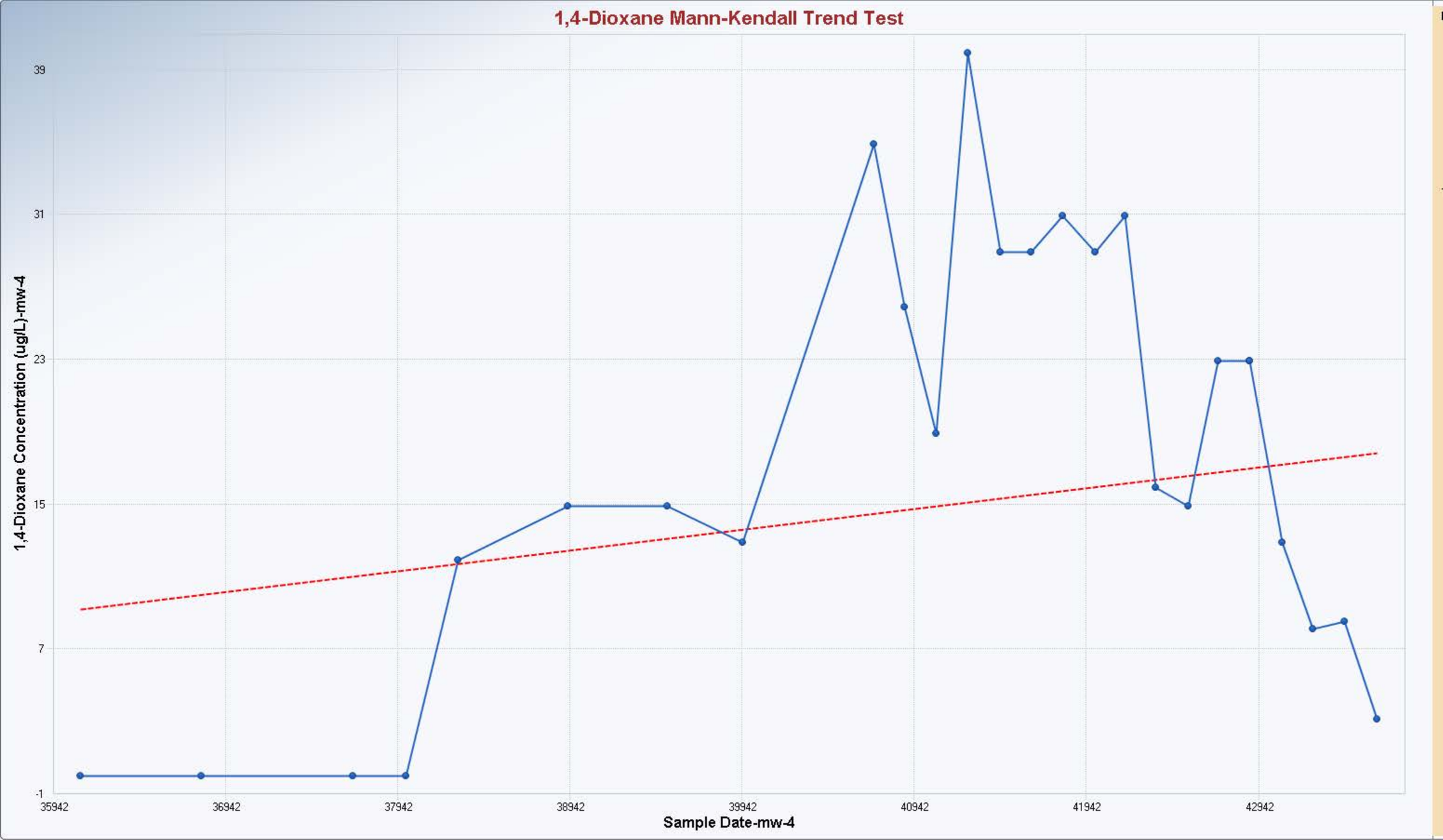
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	23.2737
Standardized Value of S	-3.3514
M-K Test Value (S)	-79
Tabulated p-value	0.0060
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

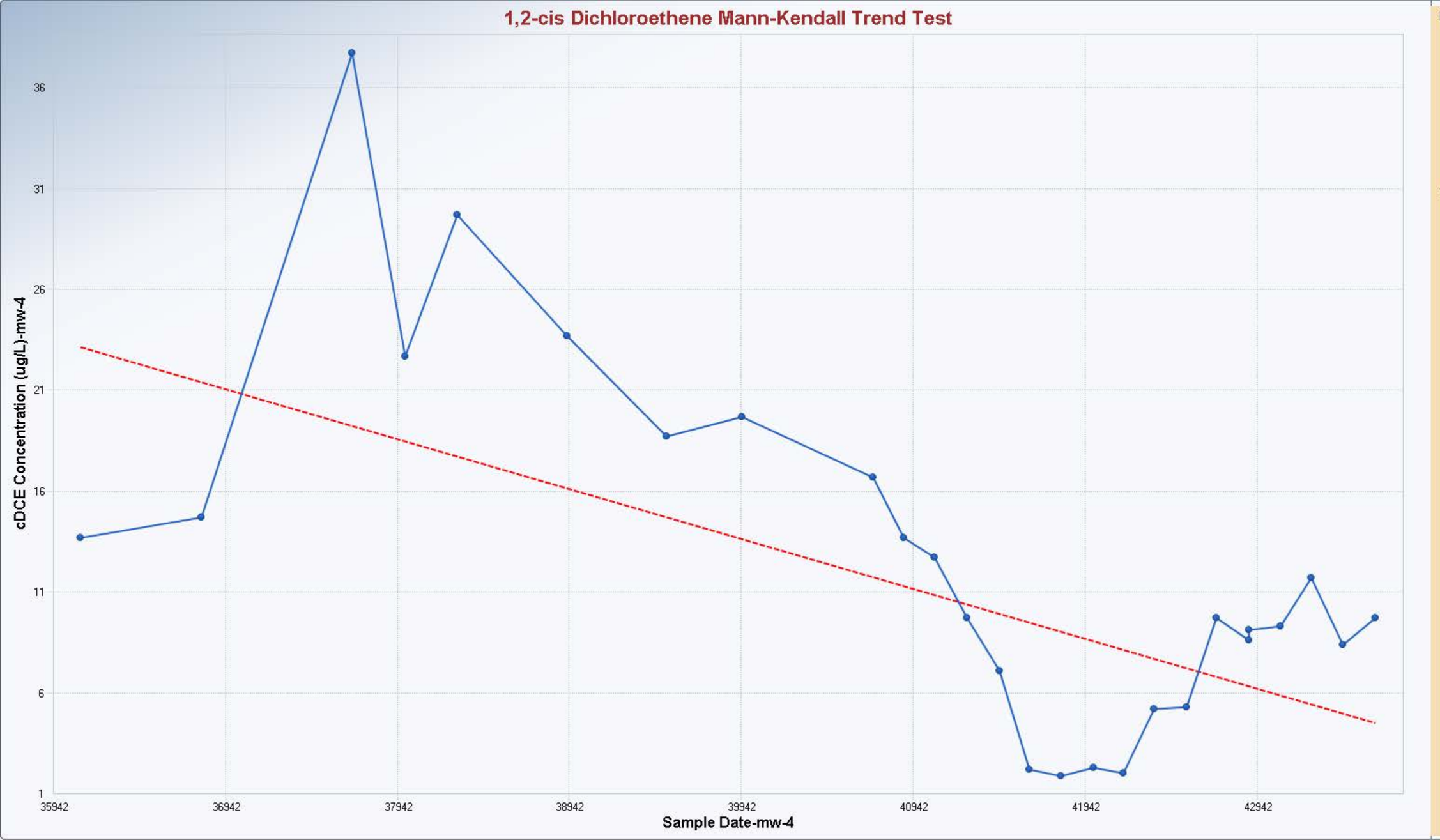
n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	45.1294
Standardized Value of S	0.8642
M-K Test Value (S)	40
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.1937

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0011
Theil-Sen Intercept	-32.0488

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	45.3174
Standardized Value of S	-3.0452
M-K Test Value (S)	-139
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0012

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0025
Theil-Sen Intercept	112.6865

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

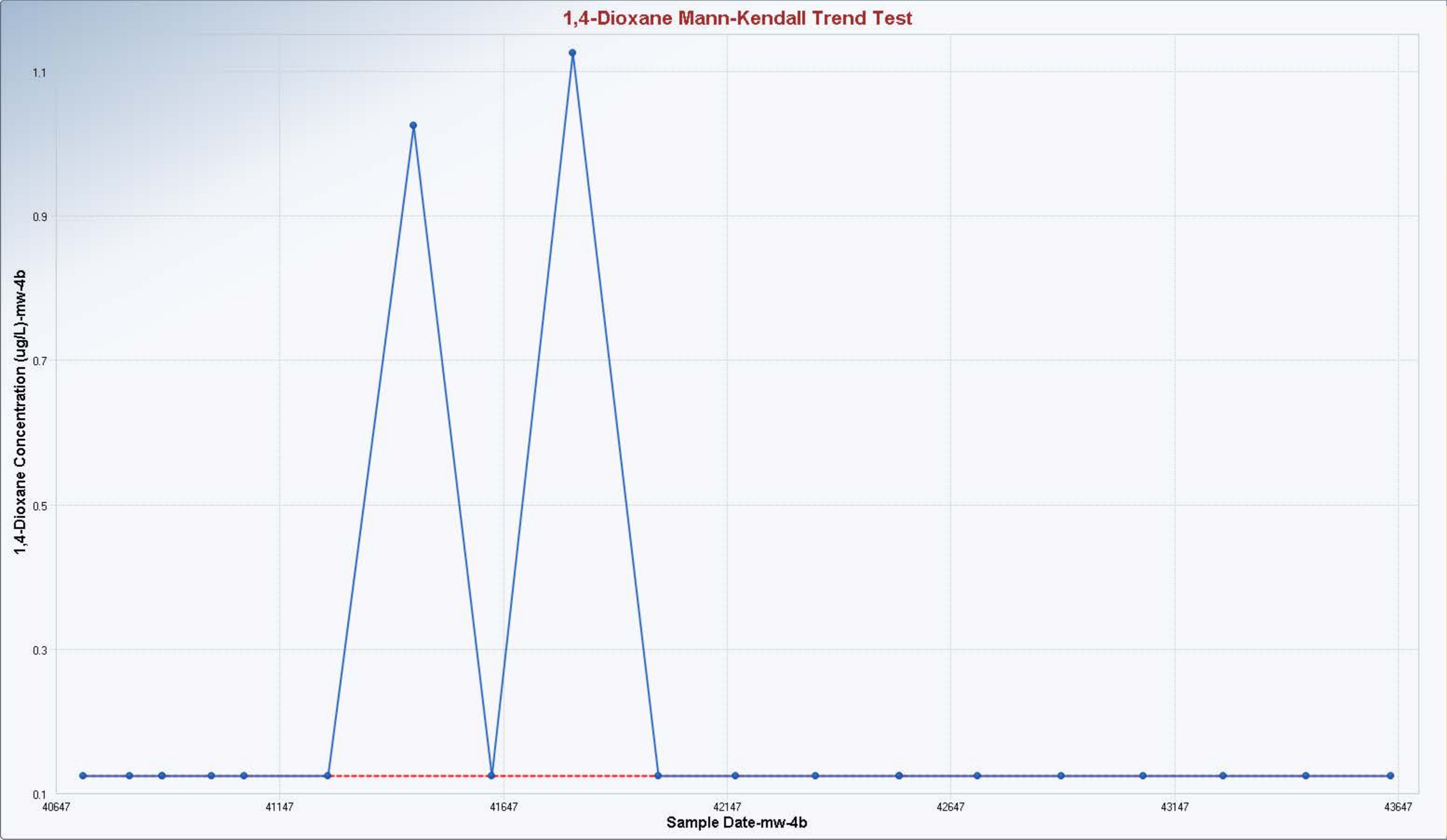
n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	45.3578
Standardized Value of S	-3.5055
M-K Test Value (S)	-160
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0014
Theil-Sen Intercept	60.5771

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.7232
Standardized Value of S	-0.3588
M-K Test Value (S)	-7
Tabulated p-value	0.4410
Approximate p-value	0.3599

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0857
Standardized Value of S	4.8661
M-K Test Value (S)	162
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0173
Theil-Sen Intercept	-700.4666

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

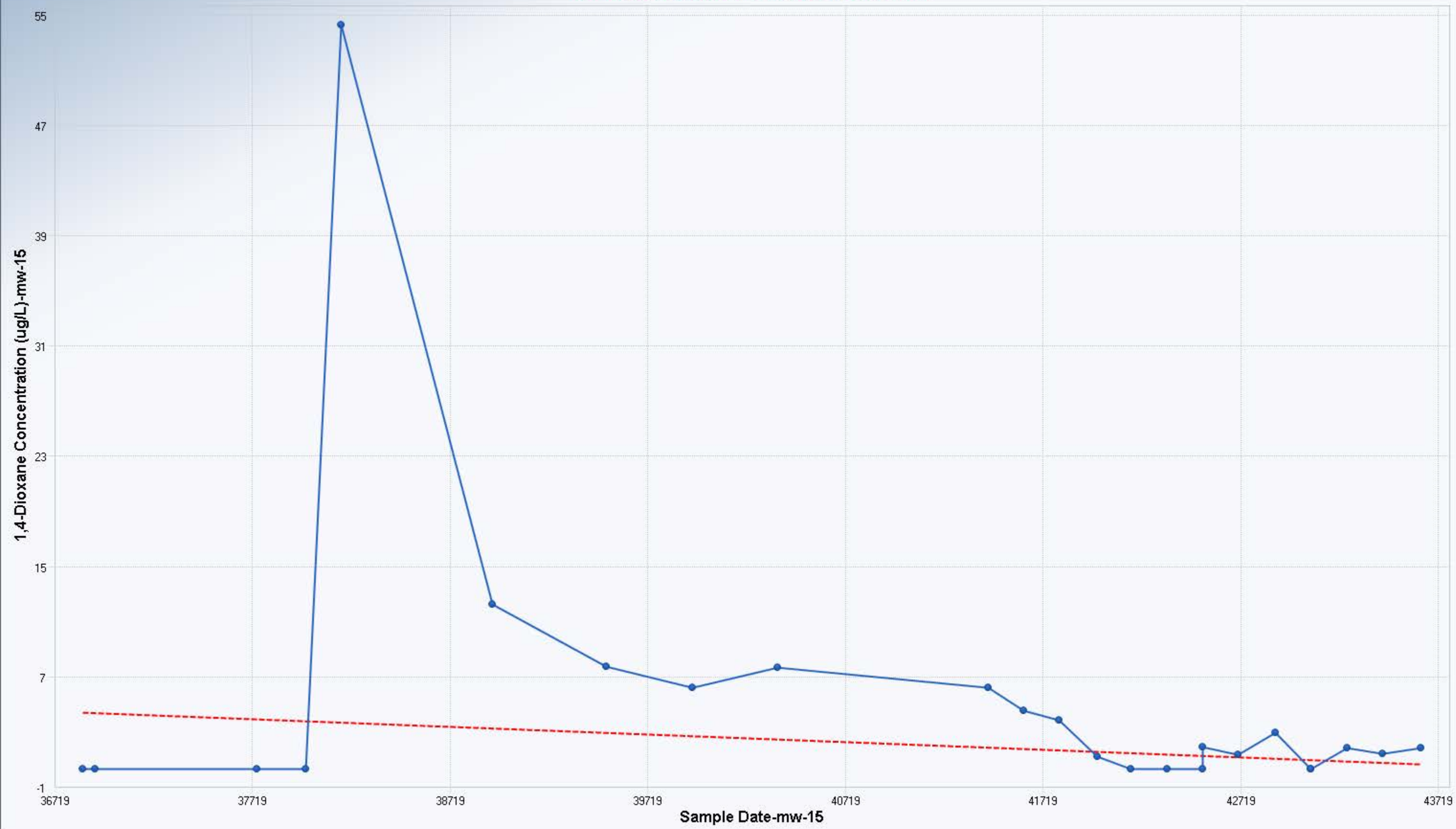
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.8735
Standardized Value of S	-1.7339
M-K Test Value (S)	-58
Tabulated p-value	0.0430
Approximate p-value	0.0415

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	10.3590

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	39.1323
Standardized Value of S	-1.0988
M-K Test Value (S)	-44
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.1359

Theil-Sen Trend Line (Red)	
Theil-Sen Slope	-0.0005
Theil-Sen Intercept	24.4201

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	40.3030
Standardized Value of S	-4.8632
M-K Test Value (S)	-197
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0134
Theil-Sen Intercept	596.1375

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

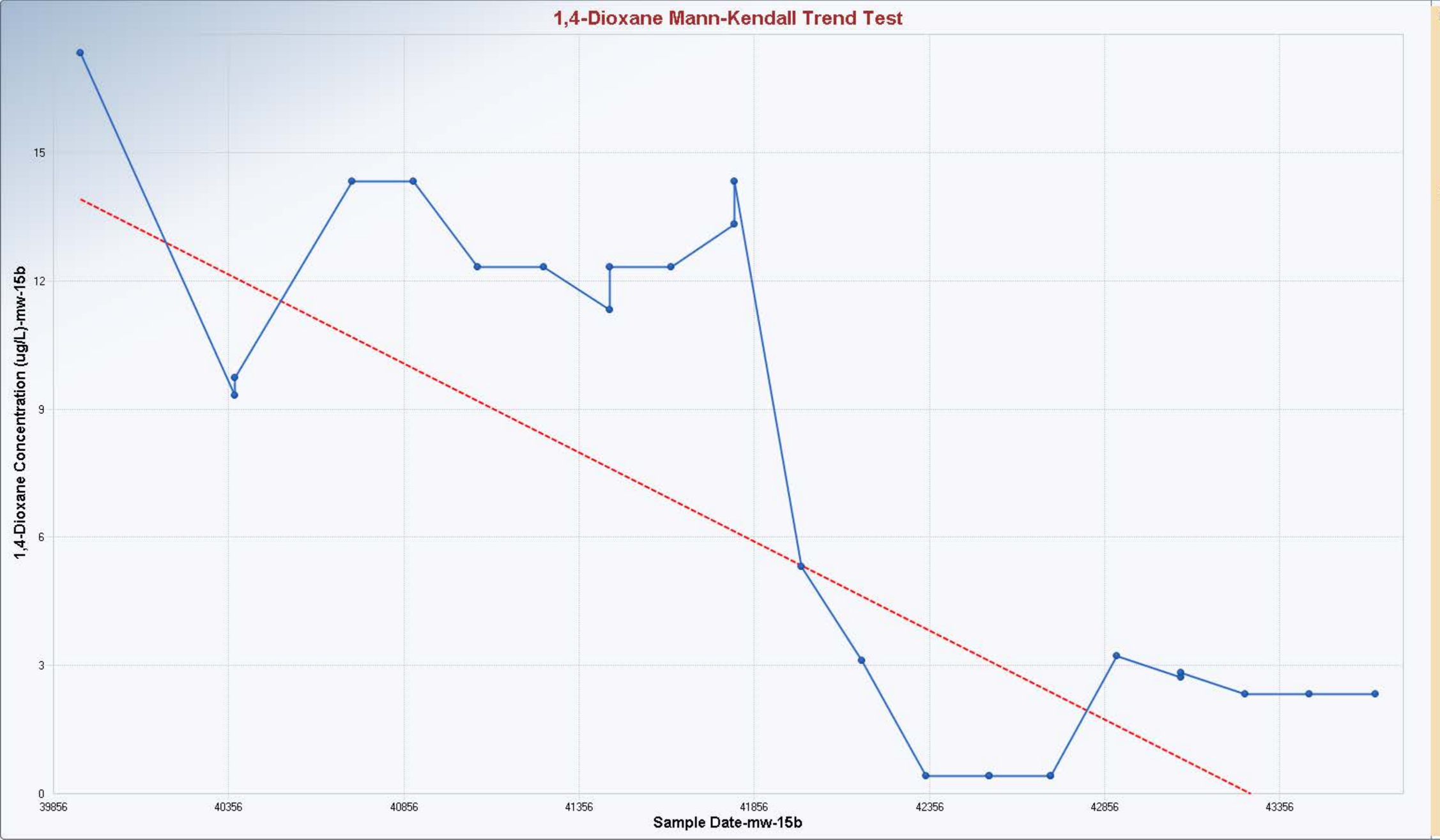
n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	39.4842
Standardized Value of S	-4.6601
M-K Test Value (S)	-185
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0090
Theil-Sen Intercept	379.4576

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

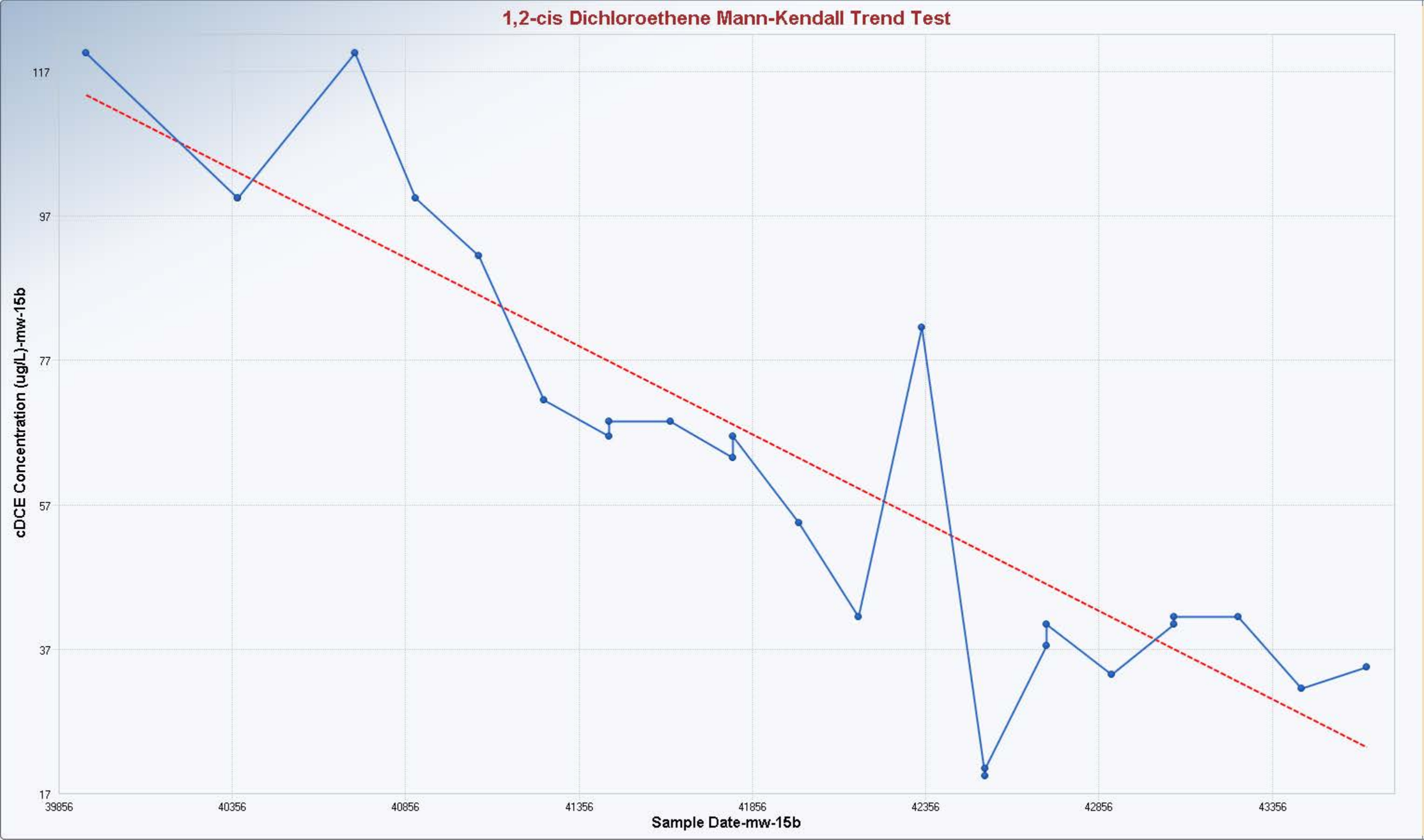
n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.4343
Standardized Value of S	-3.5113
M-K Test Value (S)	-150
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0042
Theil-Sen Intercept	180.1493

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.6849
Standardized Value of S	-4.7558
M-K Test Value (S)	-204
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0244
Theil-Sen Intercept	1,089.8964

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

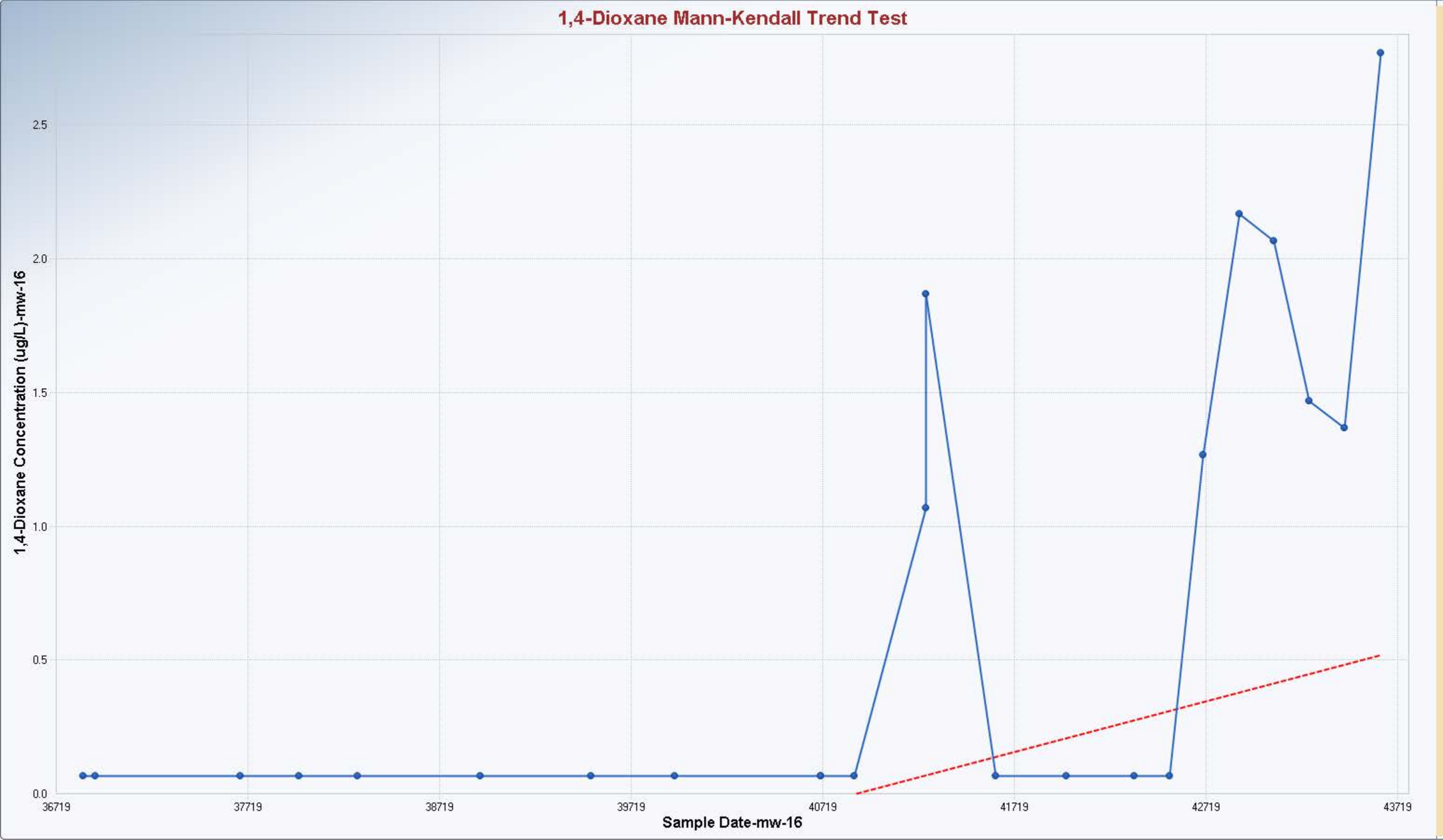
n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.4303
Standardized Value of S	-2.6396
M-K Test Value (S)	-113
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0041

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0026
Theil-Sen Intercept	111.7826

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.0208
Standardized Value of S	3.5290
M-K Test Value (S)	114
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0002
Theil-Sen Intercept	-7.7587

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

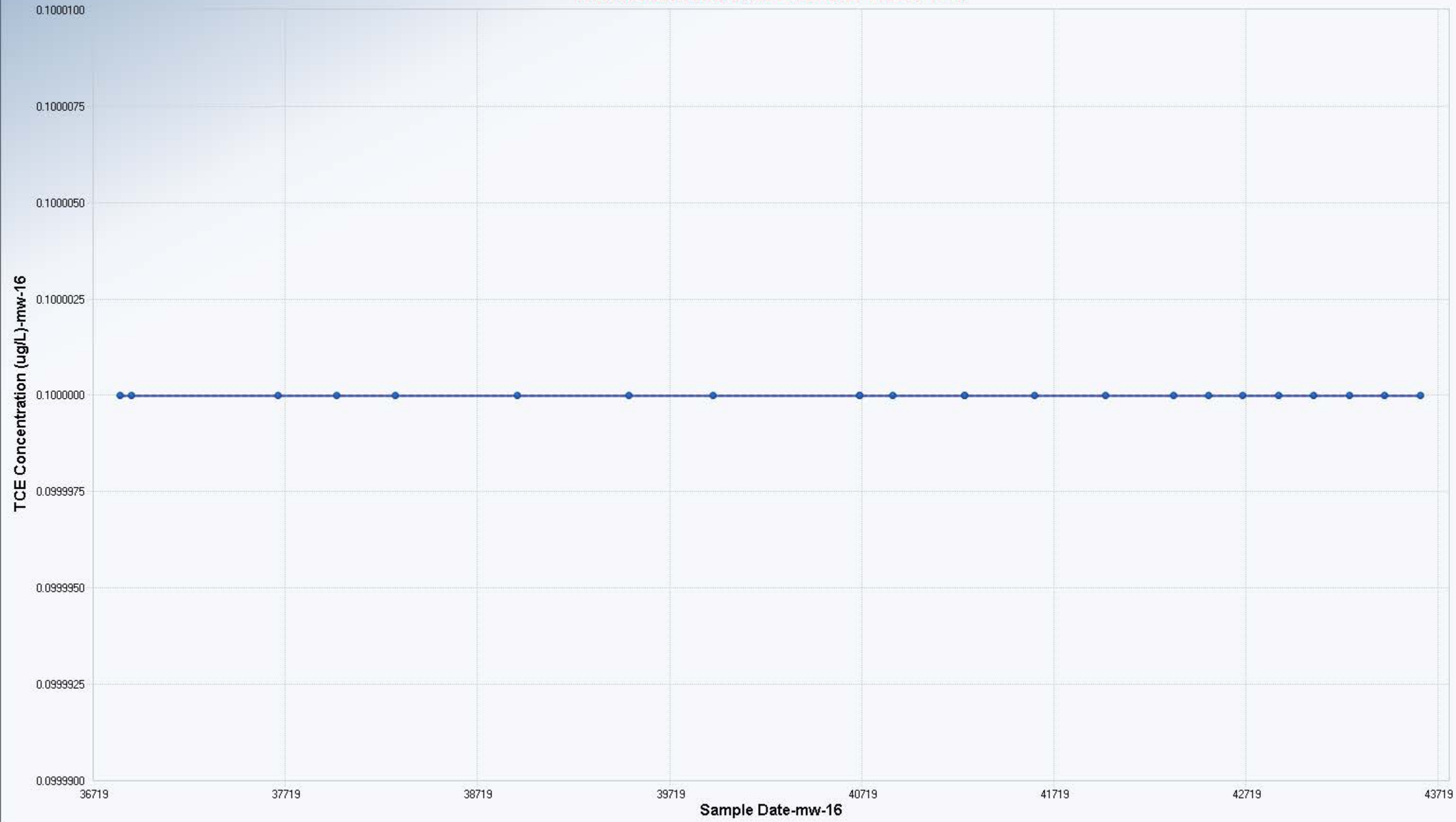
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.2469
Standardized Value of S	5.5038
M-K Test Value (S)	206
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0006
Theil-Sen Intercept	-23.2122

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



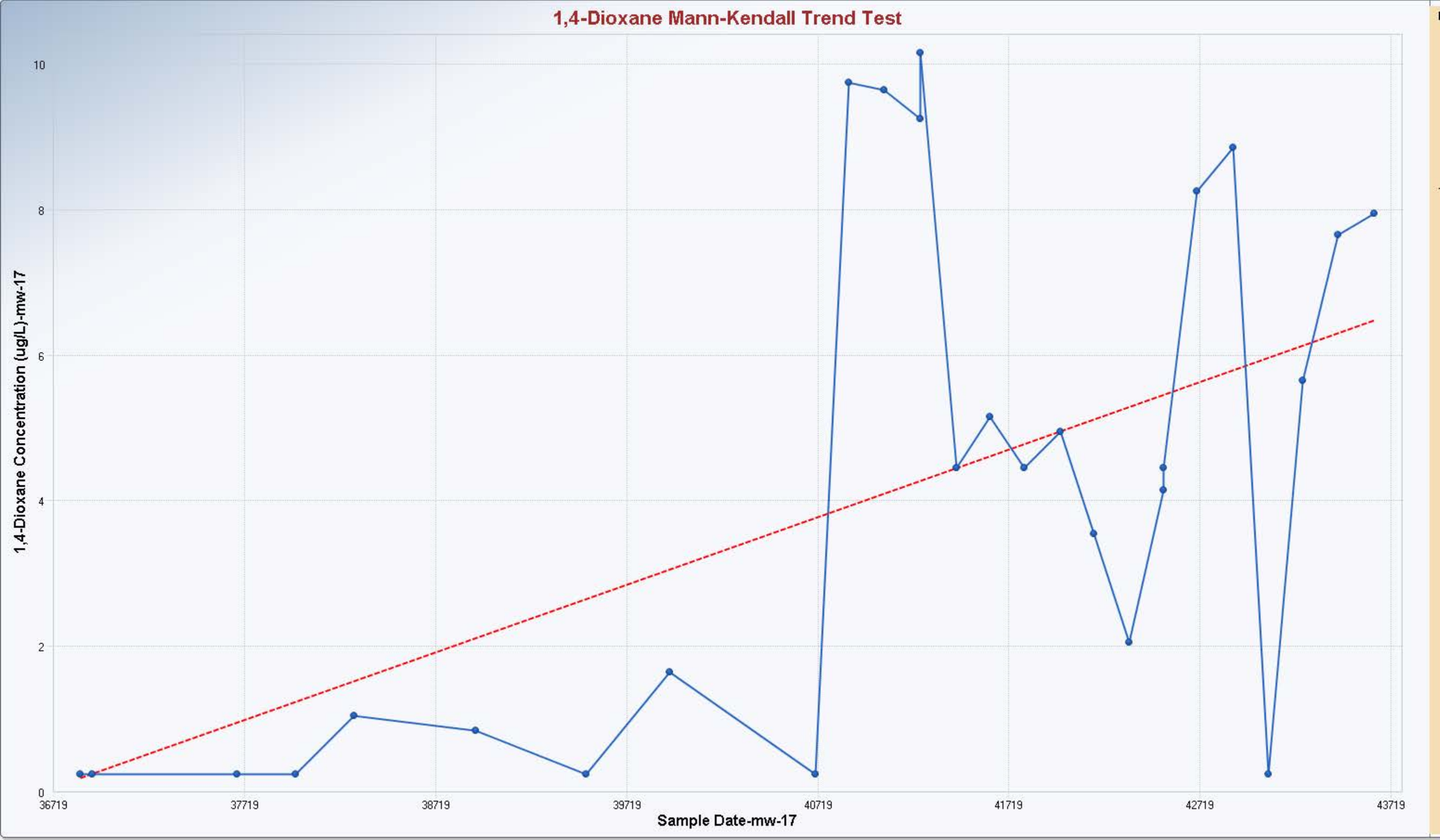
Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Appx. Critical Value (0.05)	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

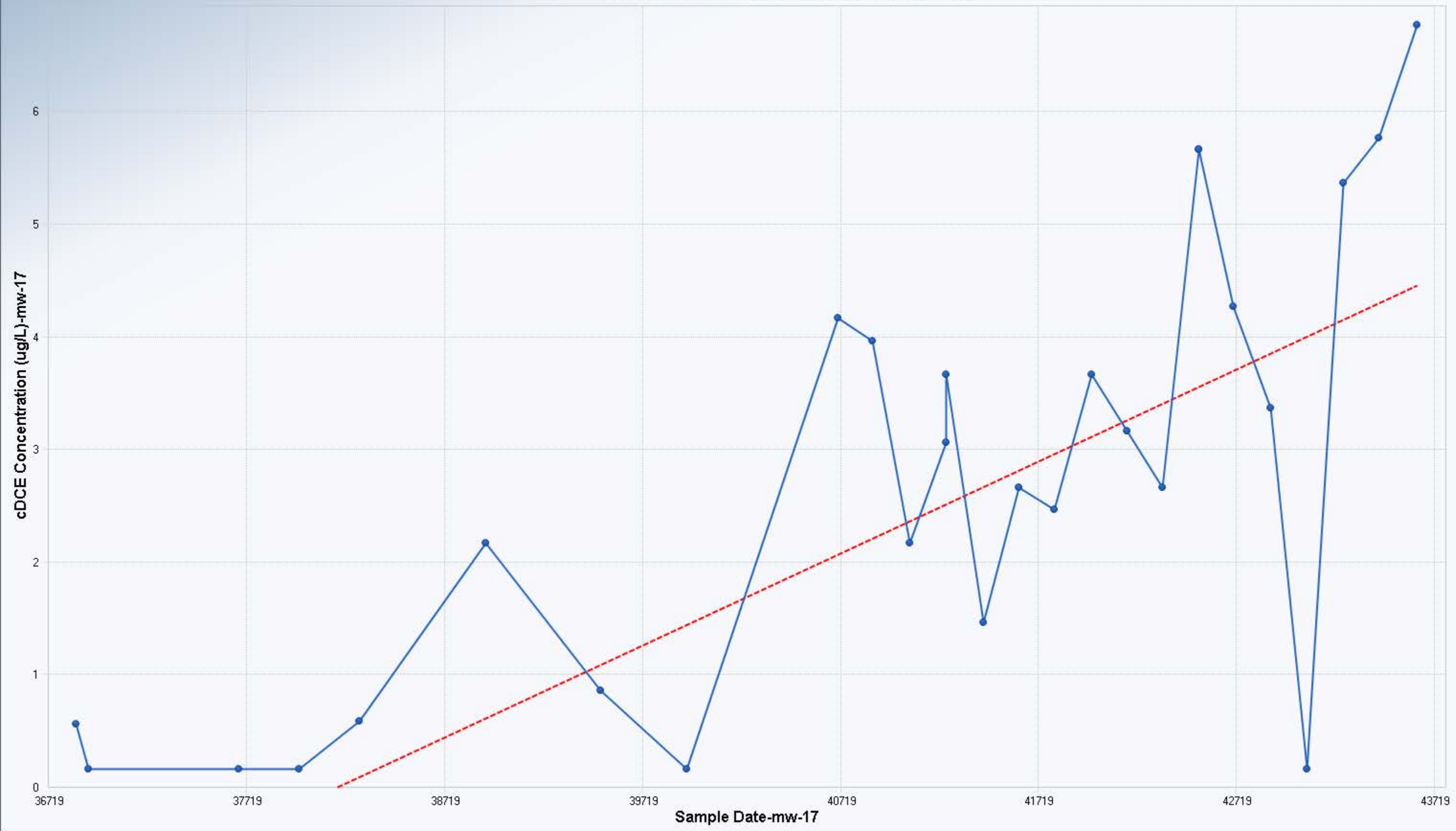
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.4658
Standardized Value of S	2.6124
M-K Test Value (S)	125
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0045

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0009
Theil-Sen Intercept	-34.1489

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

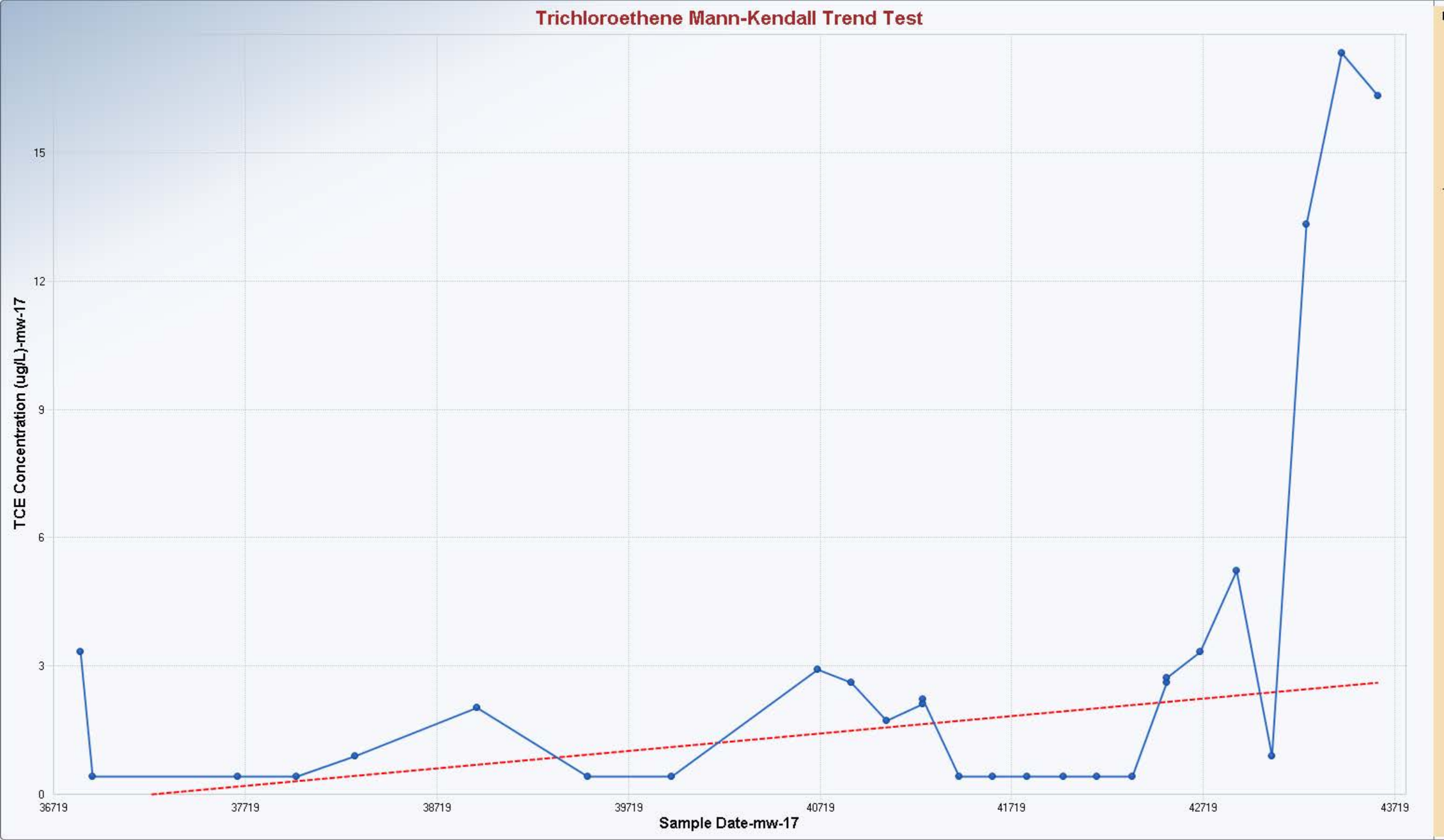
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.7528
Standardized Value of S	4.0207
M-K Test Value (S)	193
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0008
Theil-Sen Intercept	-31.3475

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

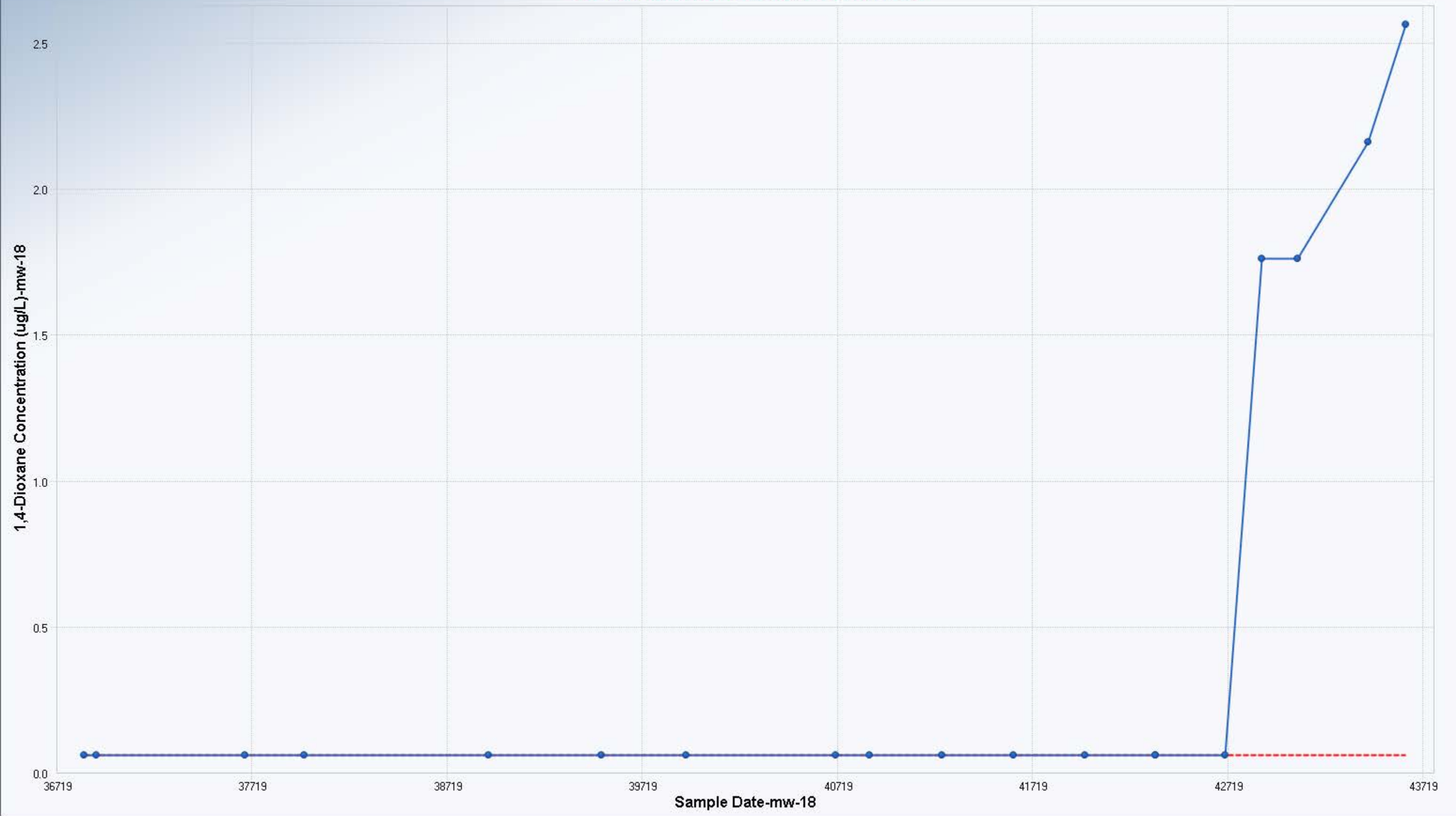
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	46.1952
Standardized Value of S	2.4894
M-K Test Value (S)	116
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0064

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	-15.6639

Statistically significant evidence of an increasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1908
Standardized Value of S	3.1698
M-K Test Value (S)	65
Tabulated p-value	0.0120
Approximate p-value	0.0008

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

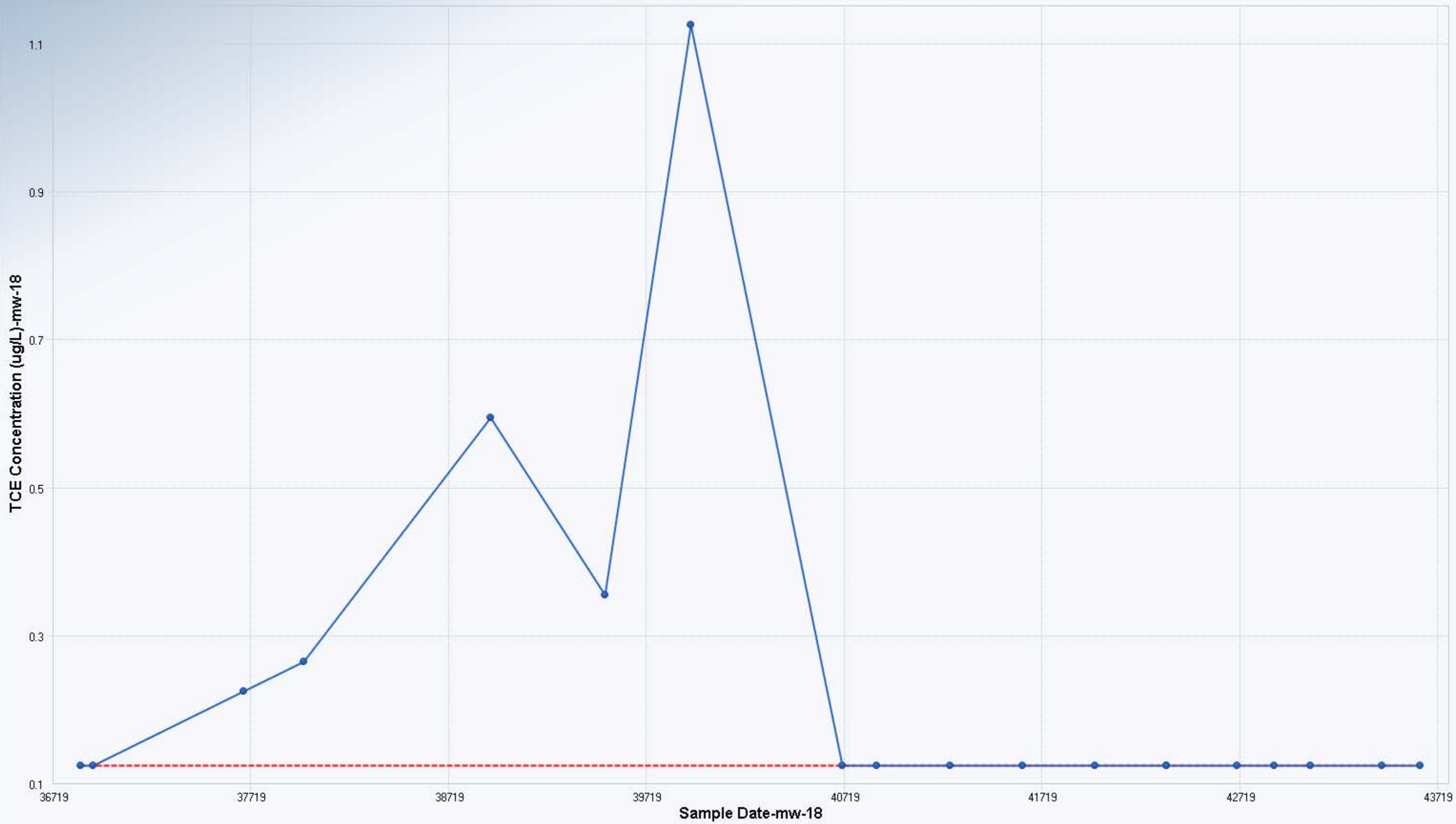
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5482
Standardized Value of S	5.0441
M-K Test Value (S)	145
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0003
Theil-Sen Intercept	-11.0059

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

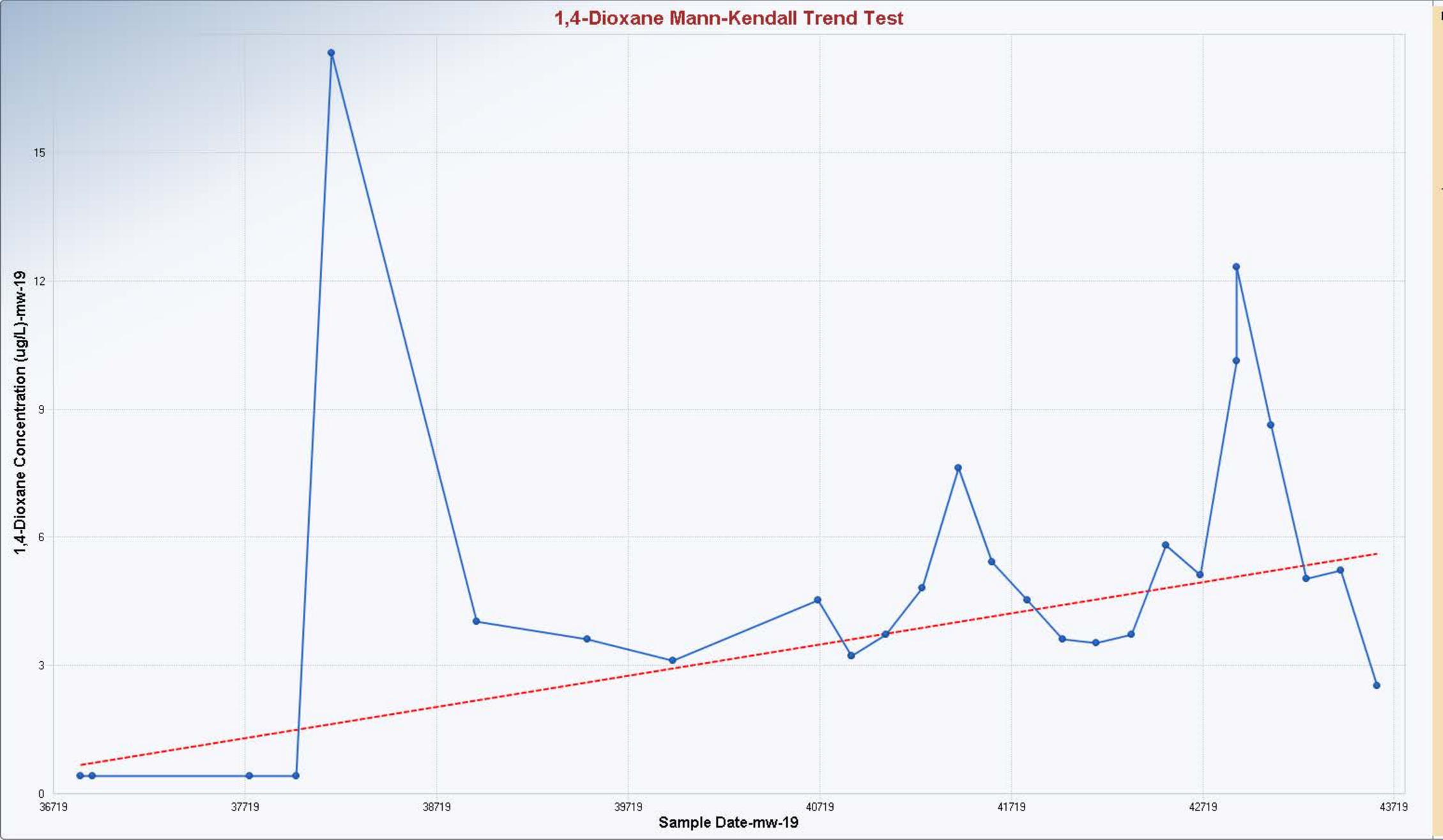
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	21.9848
Standardized Value of S	-1.8649
M-K Test Value (S)	-42
Tabulated p-value	0.0720
Approximate p-value	0.0311

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

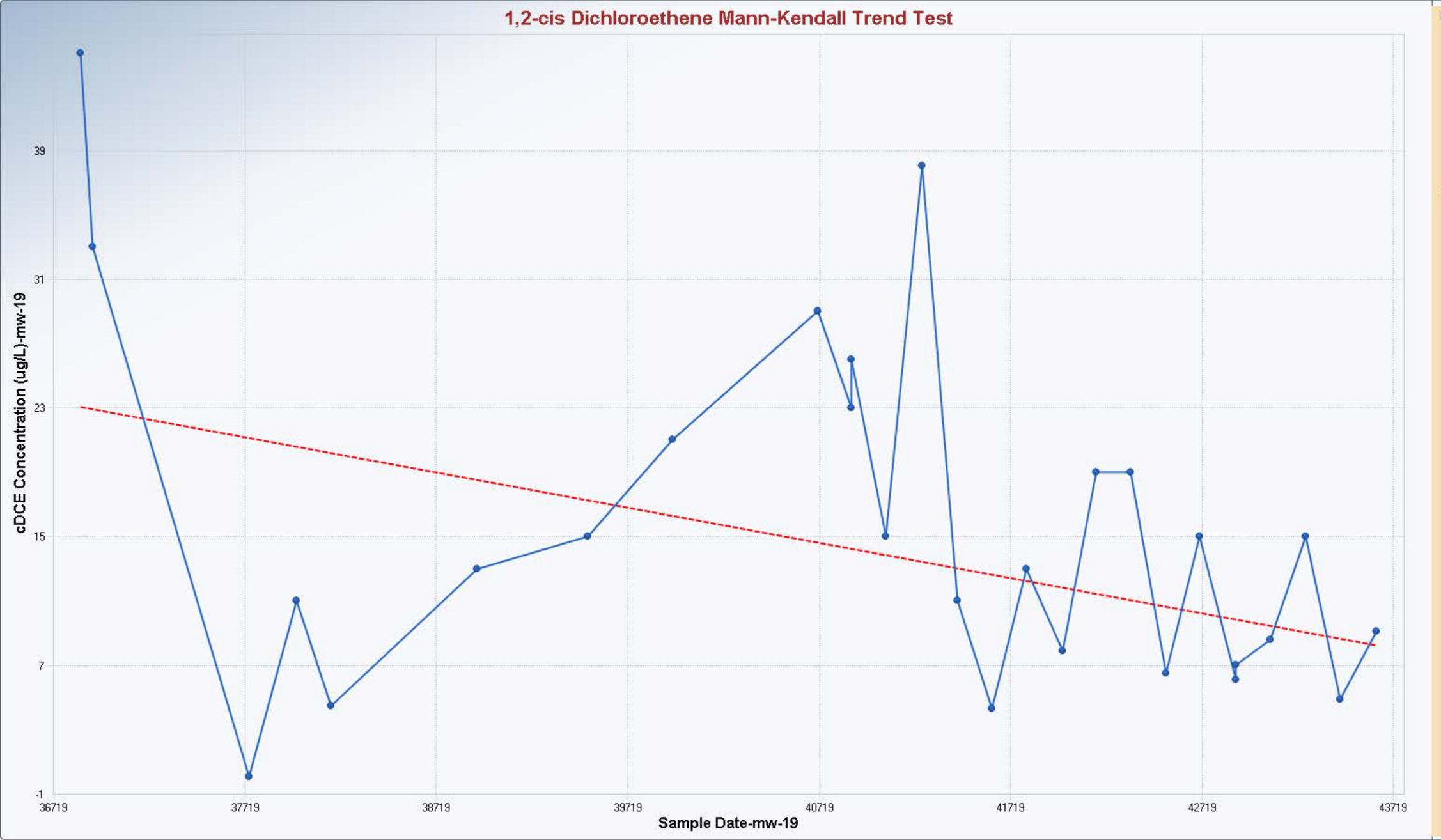
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.8365
Standardized Value of S	2.9684
M-K Test Value (S)	143
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0015

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0007
Theil-Sen Intercept	-26.6758

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

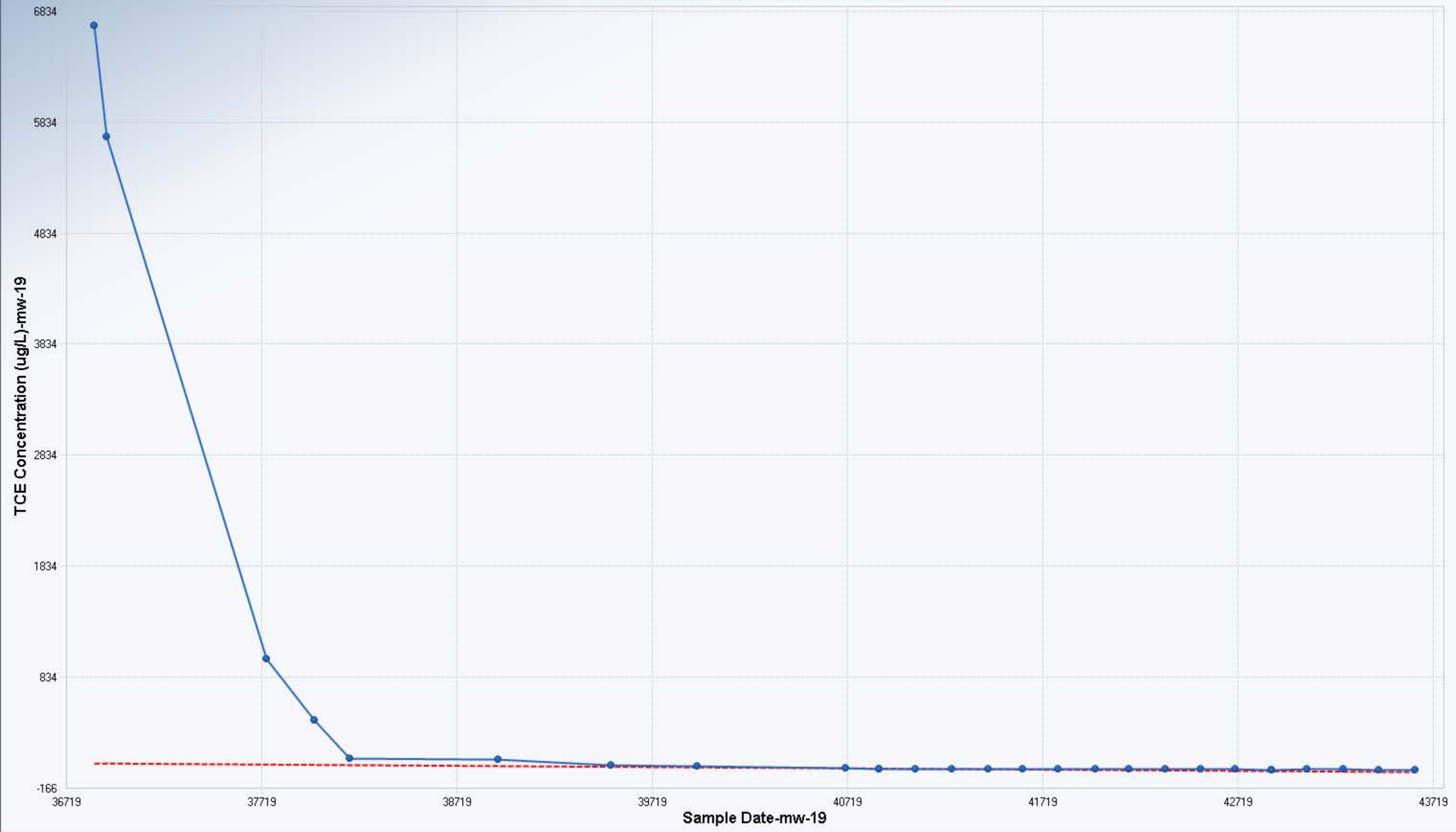
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.8470
Standardized Value of S	-1.6929
M-K Test Value (S)	-82
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0452

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0022
Theil-Sen Intercept	103.9170

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

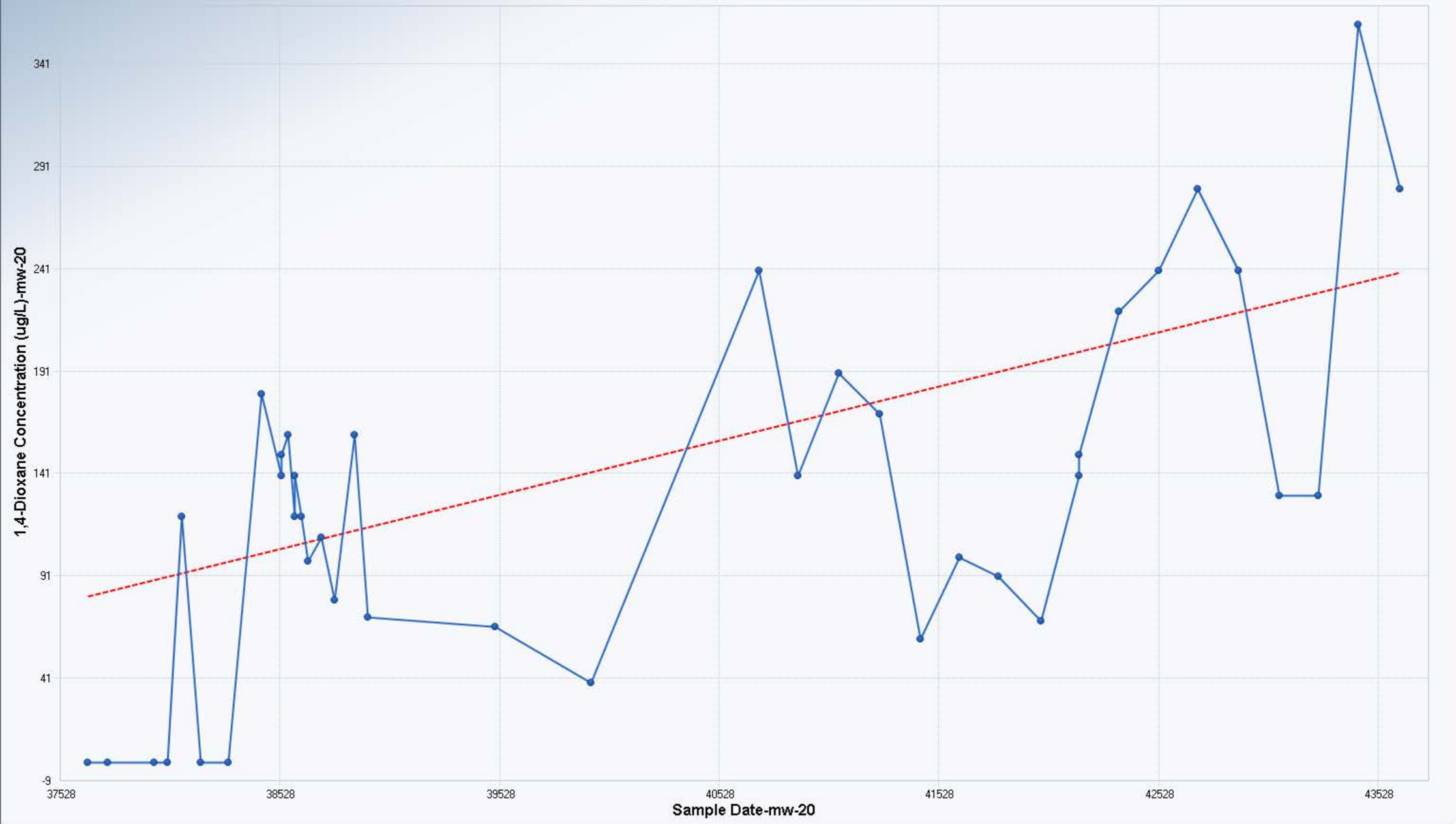
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.9270
Standardized Value of S	-4.9659
M-K Test Value (S)	-239
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0118
Theil-Sen Intercept	495.1327

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

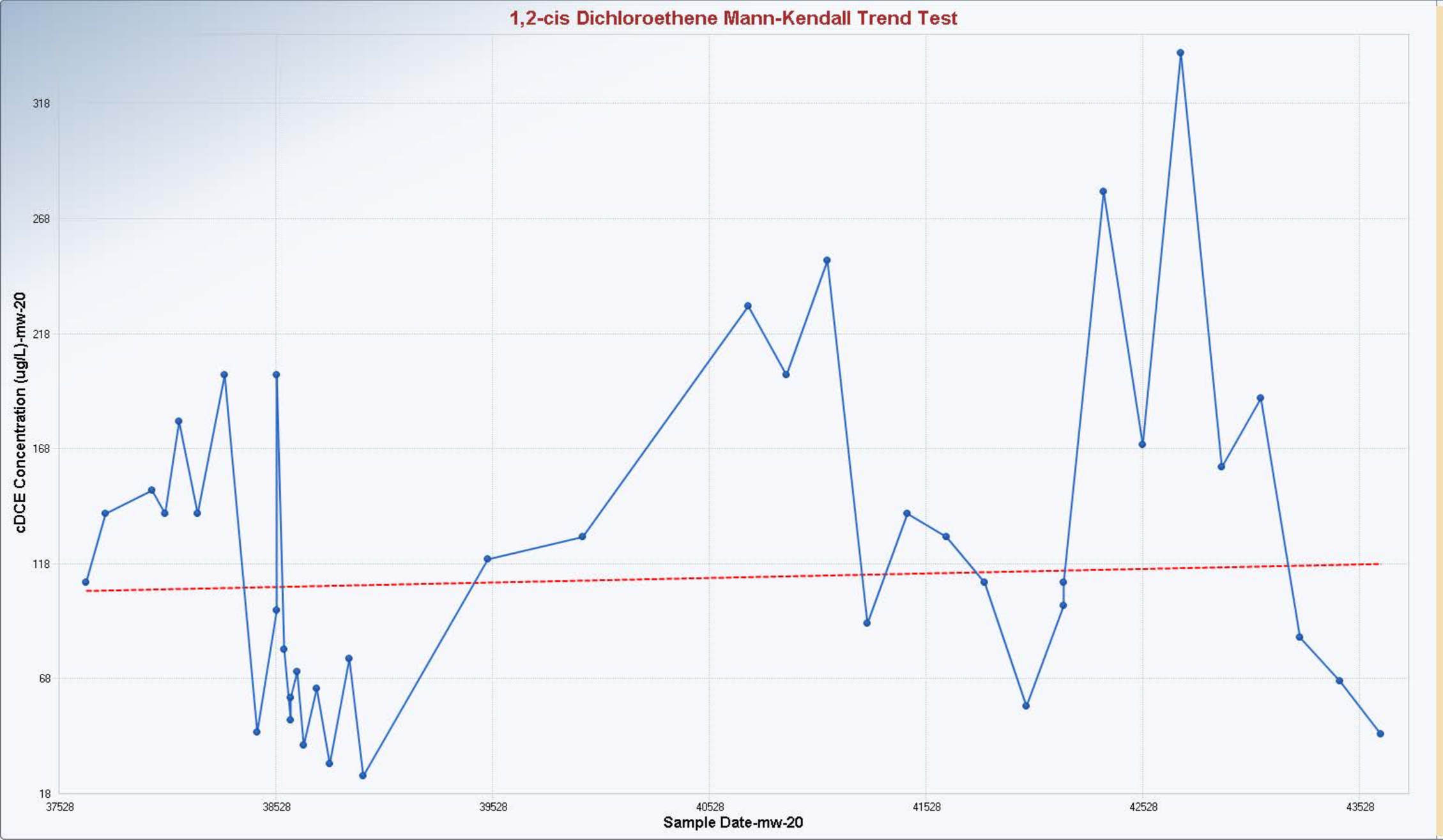
n	39
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	82.3731
Standardized Value of S	3.5813
M-K Test Value (S)	296
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0265
Theil-Sen Intercept	-915.8710

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

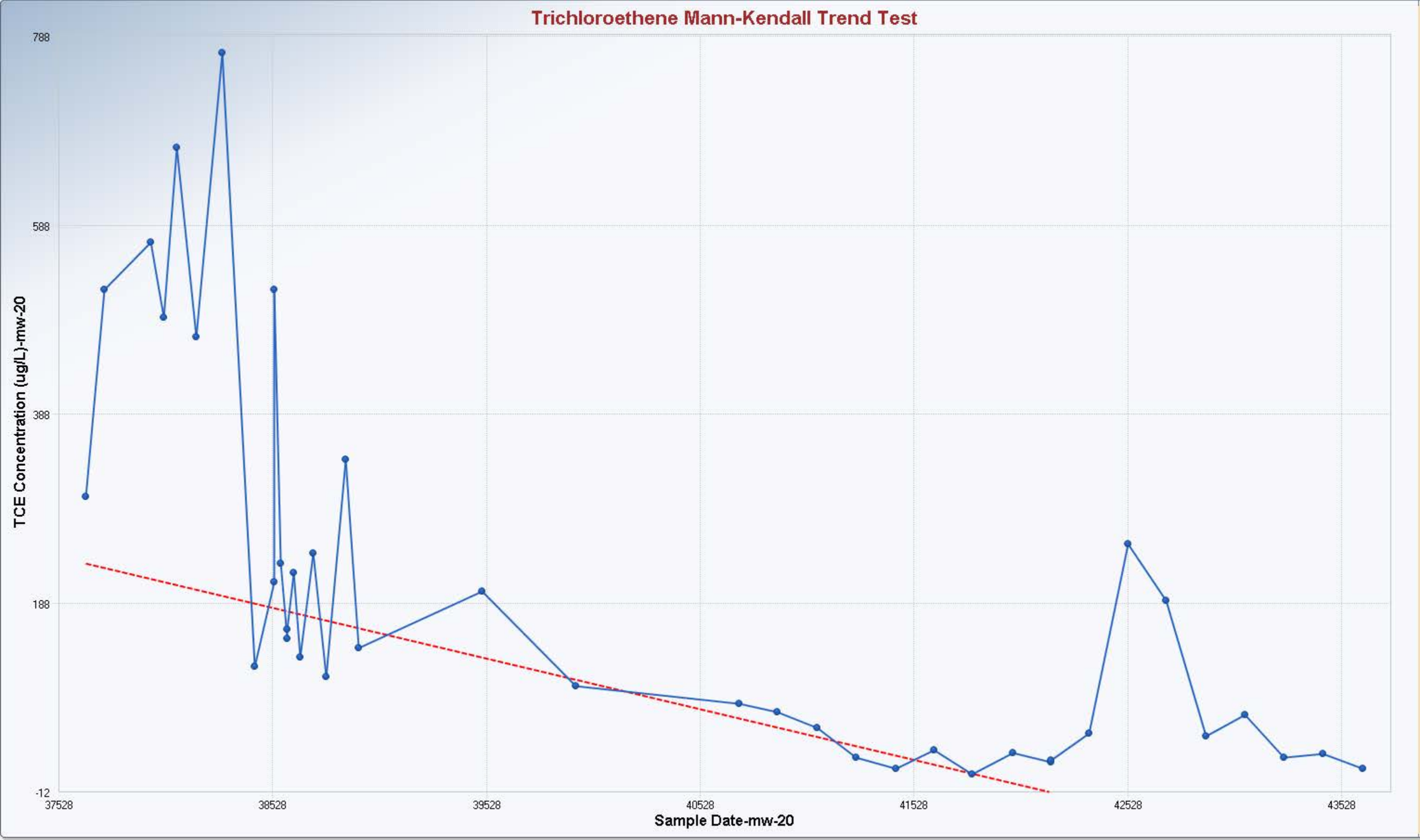
n	39
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	82.5631
Standardized Value of S	0.3028
M-K Test Value (S)	26
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.3810

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0020
Theil-Sen Intercept	30.9049

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



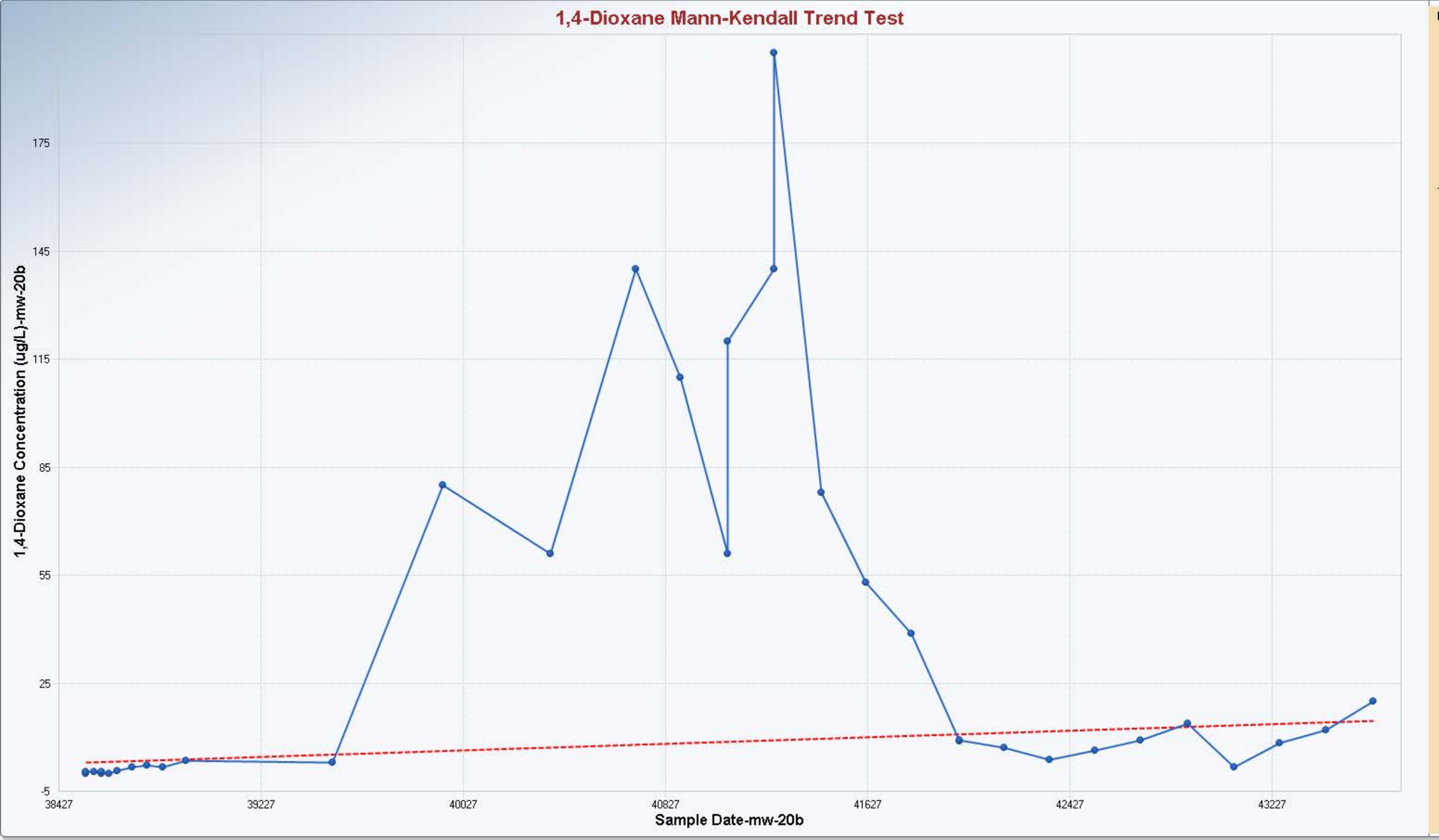
Mann-Kendall Trend Analysis

n	39
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	82.6478
Standardized Value of S	-5.4569
M-K Test Value (S)	-452
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0538
Theil-Sen Intercept	2,255.0187

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	34
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	67.3993
Standardized Value of S	2.7745
M-K Test Value (S)	188
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0028

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0023
Theil-Sen Intercept	-86.2120

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	34
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	67.3300
Standardized Value of S	1.2921
M-K Test Value (S)	88
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0982

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0017
Theil-Sen Intercept	-50.8068

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

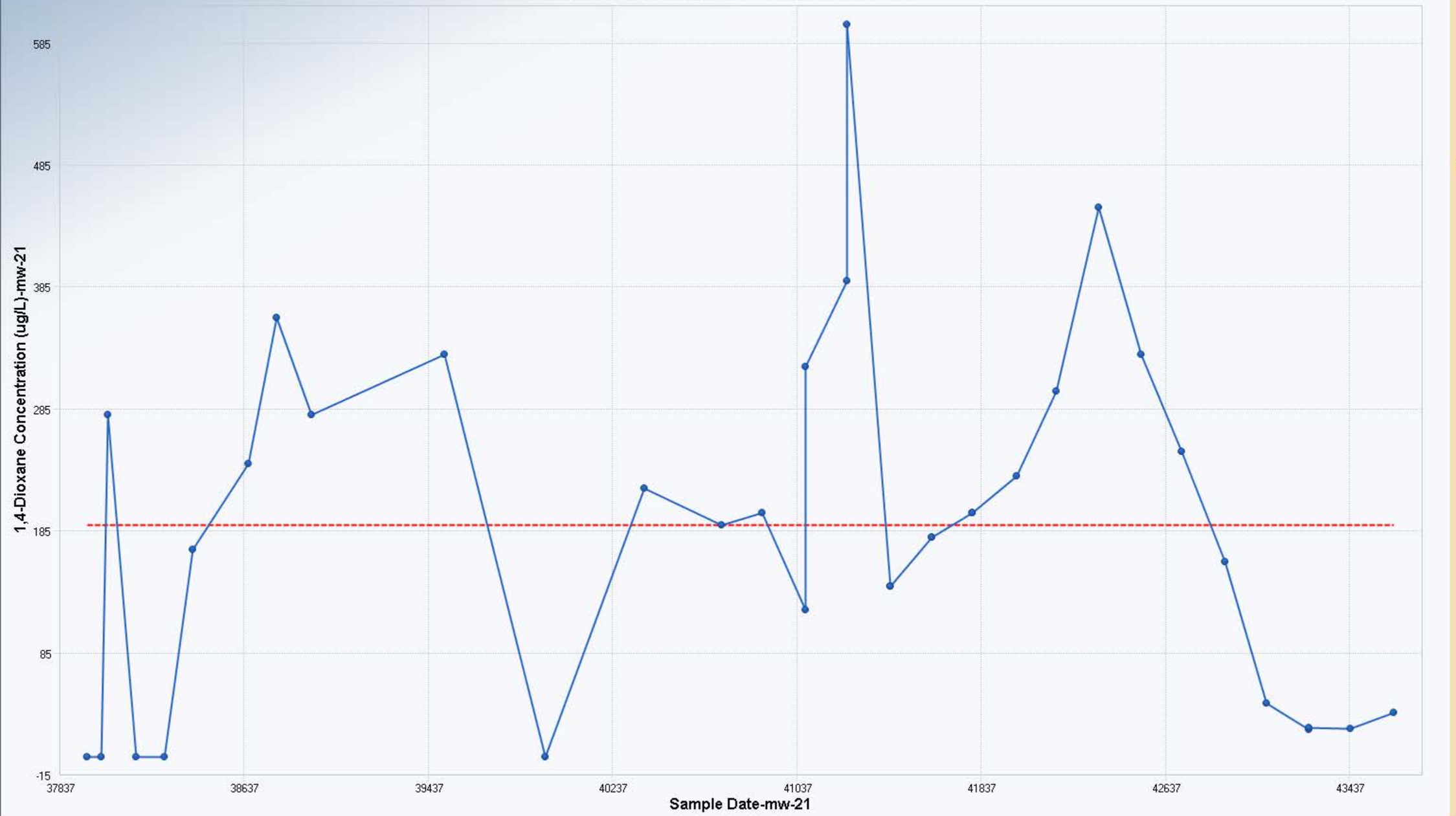
n	34
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	67.3622
Standardized Value of S	-2.5831
M-K Test Value (S)	-175
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0049

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0013
Theil-Sen Intercept	56.2726

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	35
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	70.2424
Standardized Value of S	0.1566
M-K Test Value (S)	12
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.4378

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	190.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

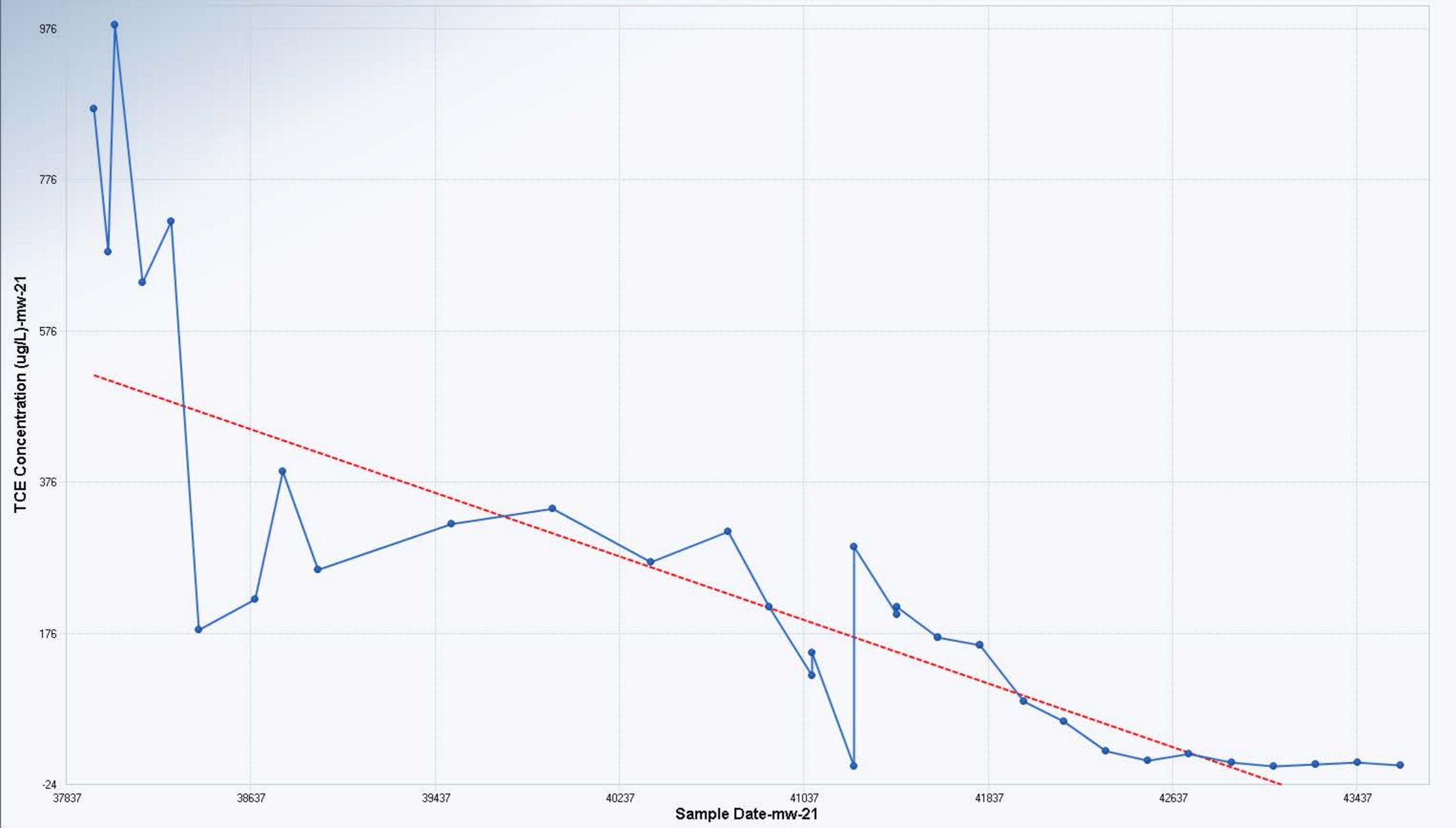
n	35
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	70.3539
Standardized Value of S	1.3077
M-K Test Value (S)	93
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0955

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0341
Theil-Sen Intercept	-974.7696

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



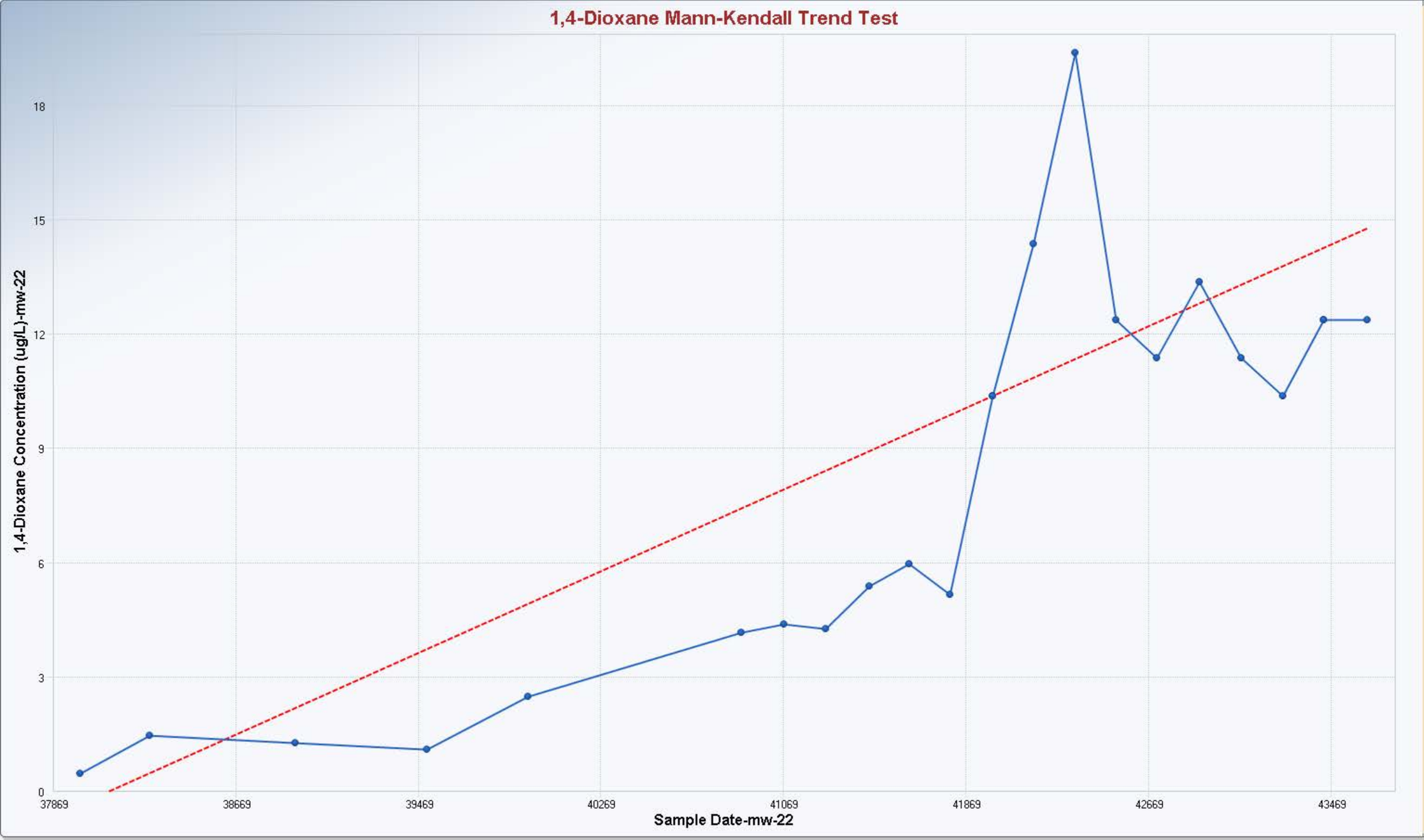
Mann-Kendall Trend Analysis

n	35
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	70.3870
Standardized Value of S	-6.3364
M-K Test Value (S)	-447
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.1052
Theil-Sen Intercept	4,508.3234

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.6873
Standardized Value of S	4.7231
M-K Test Value (S)	179
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0027
Theil-Sen Intercept	-102.7883

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Analysis

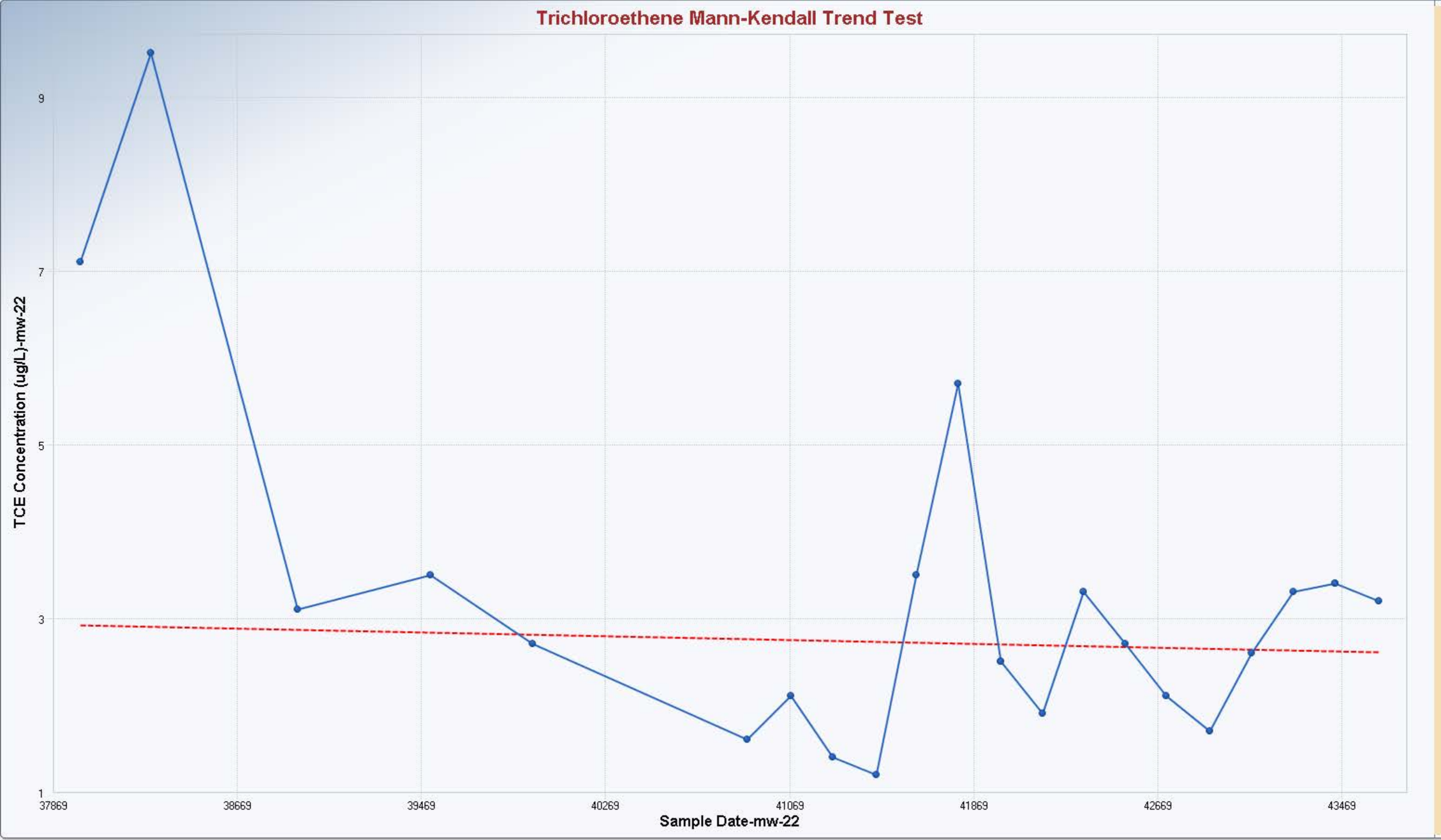
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.5633
Standardized Value of S	3.5673
M-K Test Value (S)	135
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0023
Theil-Sen Intercept	-85.5080

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

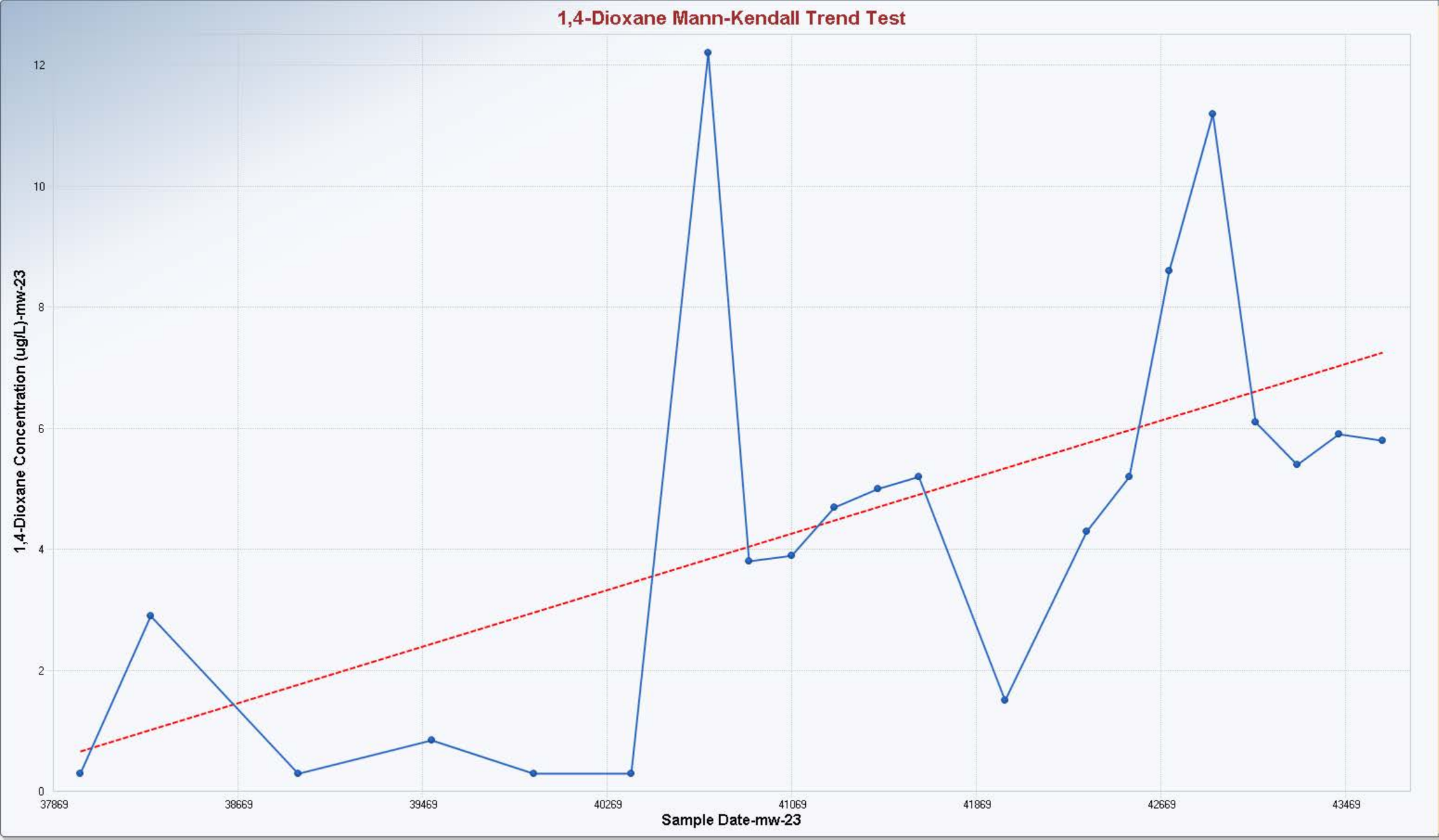
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.7845
Standardized Value of S	-0.3705
M-K Test Value (S)	-15
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.3555

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0001
Theil-Sen Intercept	5.1070

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.9697
Standardized Value of S	3.6397
M-K Test Value (S)	121
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0012
Theil-Sen Intercept	-43.9761

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

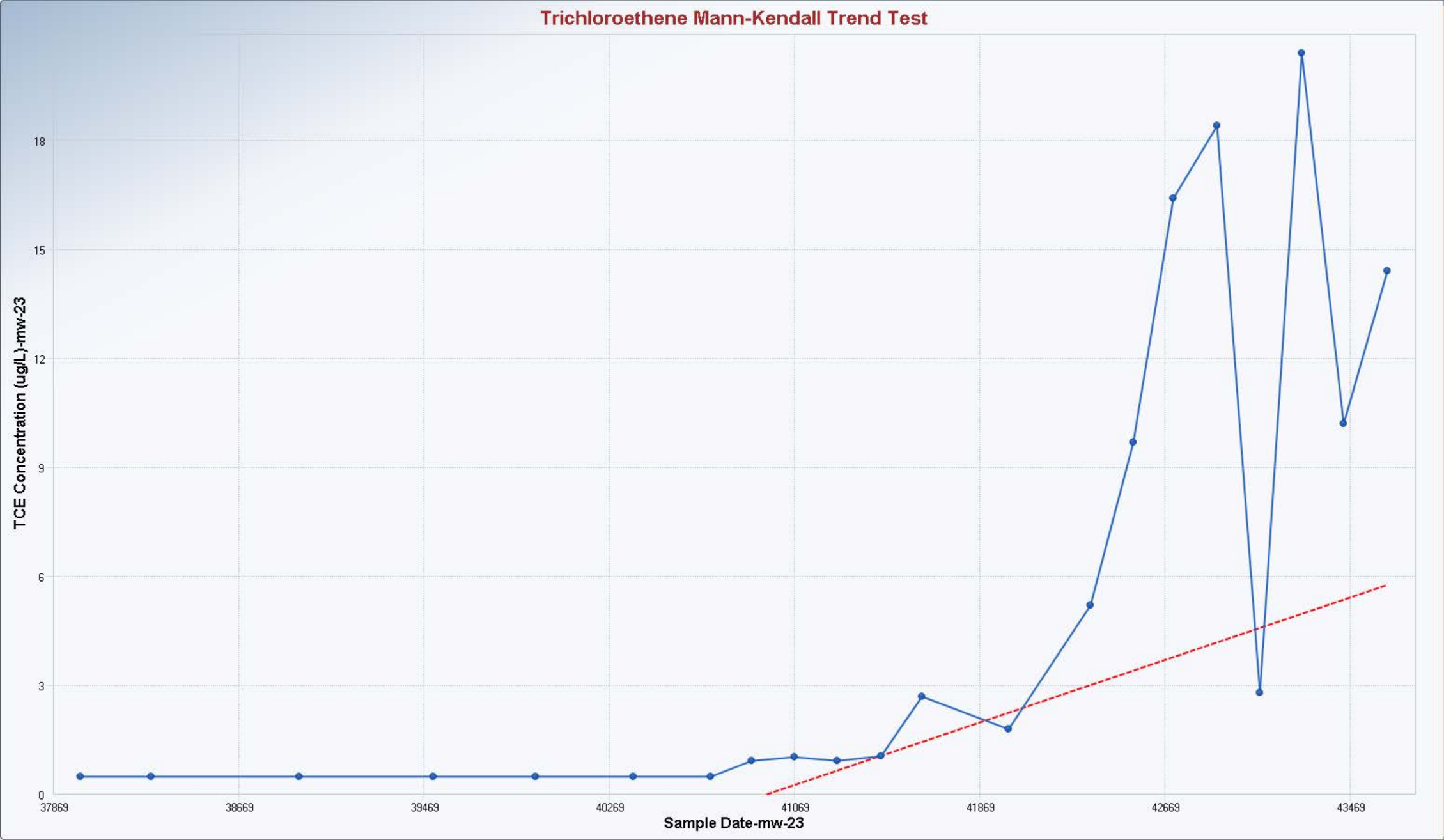
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0857
Standardized Value of S	5.1079
M-K Test Value (S)	170
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0013
Theil-Sen Intercept	-50.7553

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

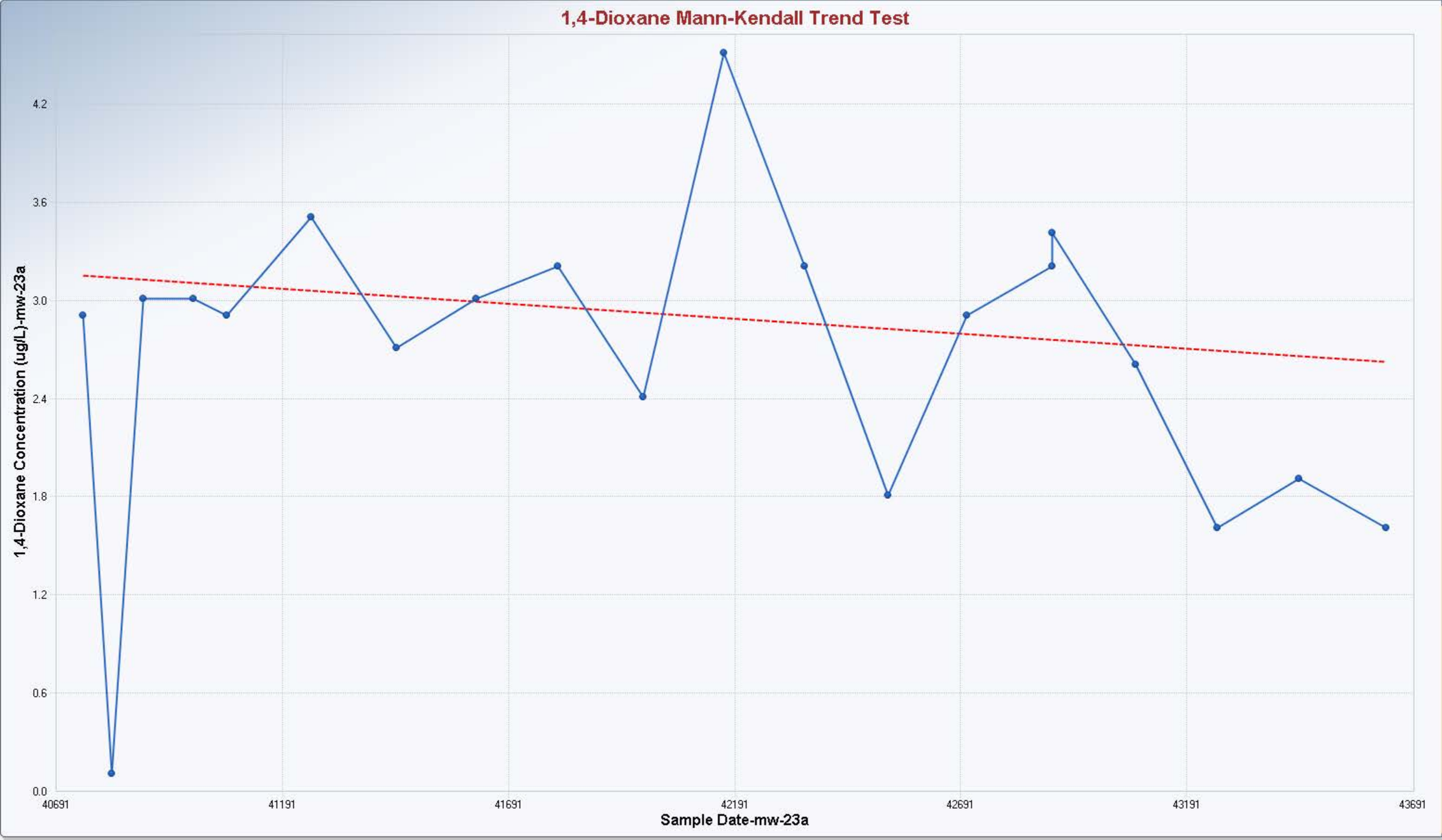
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.4397
Standardized Value of S	5.0555
M-K Test Value (S)	165
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0022
Theil-Sen Intercept	-88.9102

Statistically significant evidence of an increasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

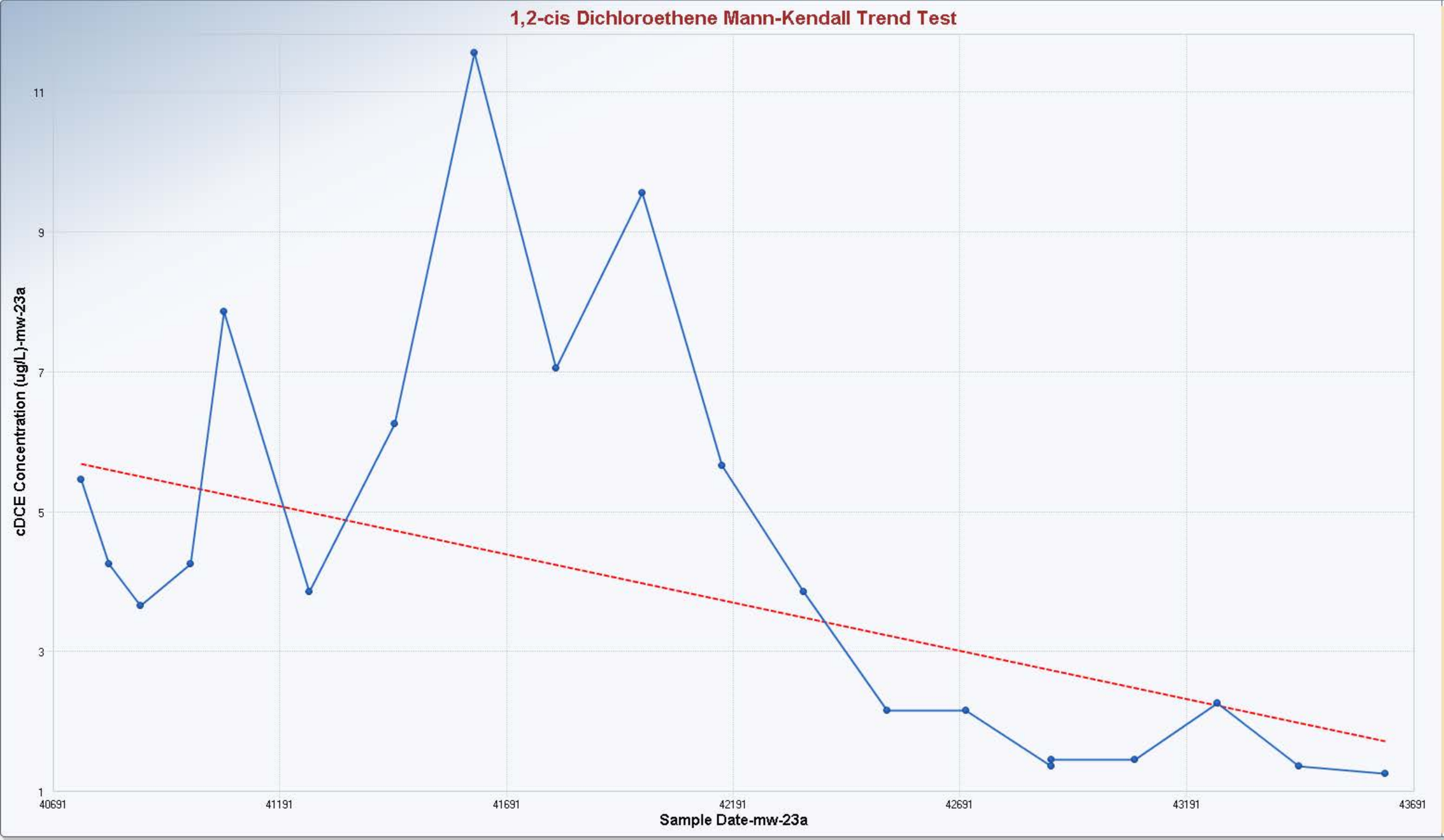
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6268
Standardized Value of S	-0.8163
M-K Test Value (S)	-26
Tabulated p-value	0.2110
Approximate p-value	0.2072

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	10.5609

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7409
Standardized Value of S	-3.0578
M-K Test Value (S)	-95
Tabulated p-value	0.0010
Approximate p-value	0.0011

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0014
Theil-Sen Intercept	62.4109

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

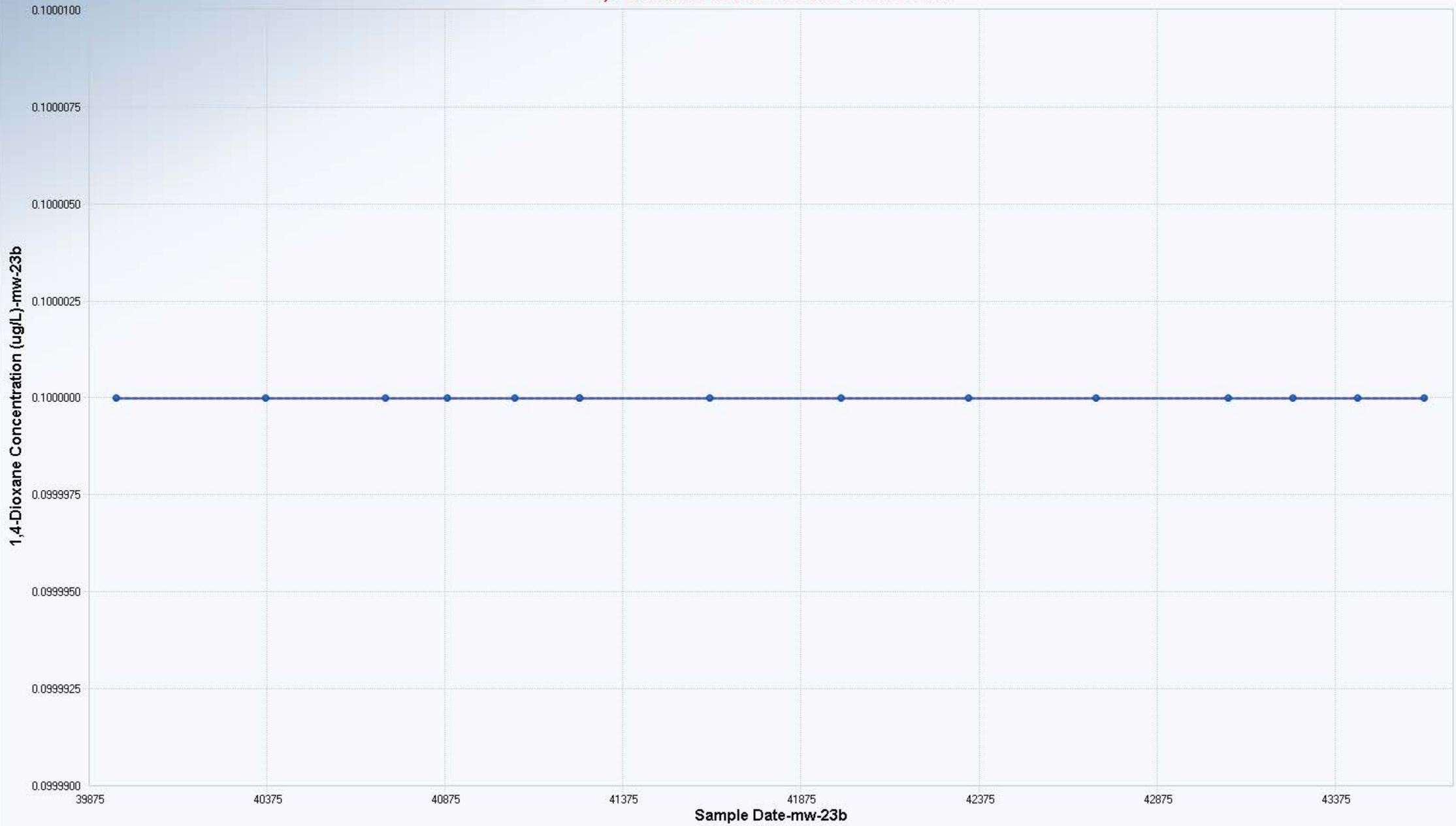
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	-4.1248
M-K Test Value (S)	-128
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0044
Theil-Sen Intercept	190.2481

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

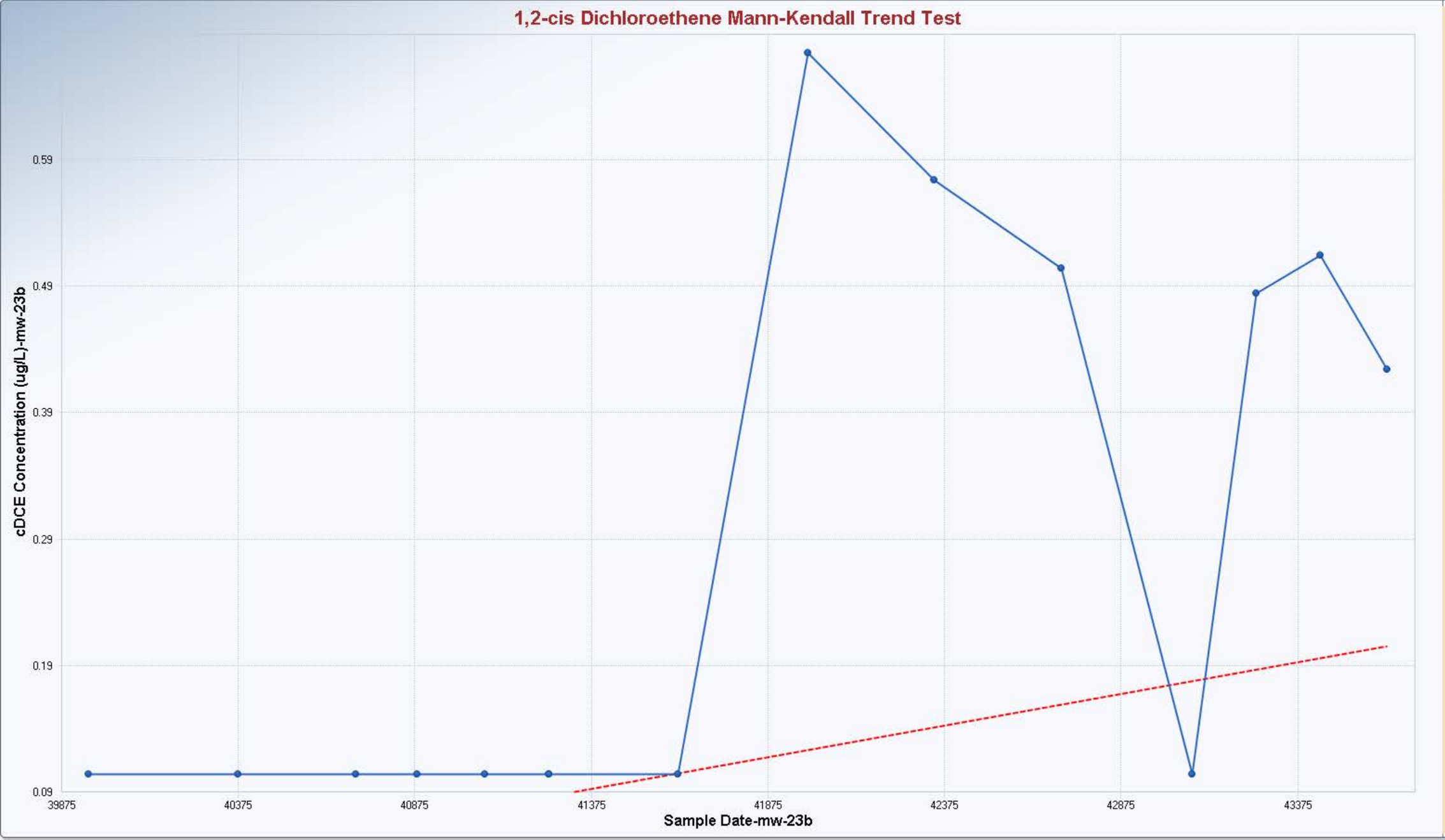
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	17.7858
Standardized Value of S	2.0241
M-K Test Value (S)	37
Tabulated p-value	0.0370
Approximate p-value	0.0215

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0001
Theil-Sen Intercept	-1.9955

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

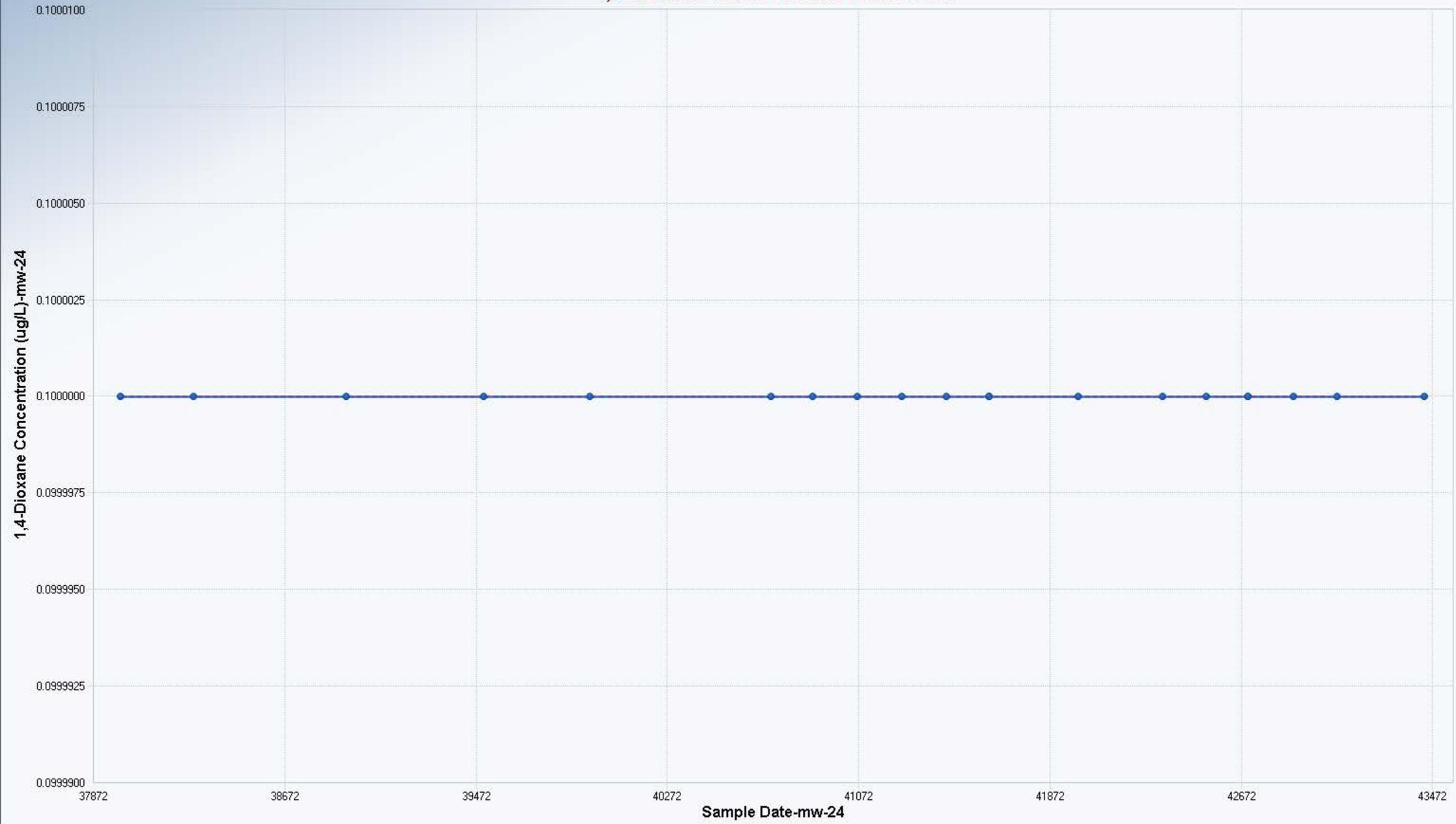
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.5203
Standardized Value of S	3.3477
M-K Test Value (S)	63
Tabulated p-value	0.0010
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0001
Theil-Sen Intercept	-4.3782

Statistically significant evidence of an increasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

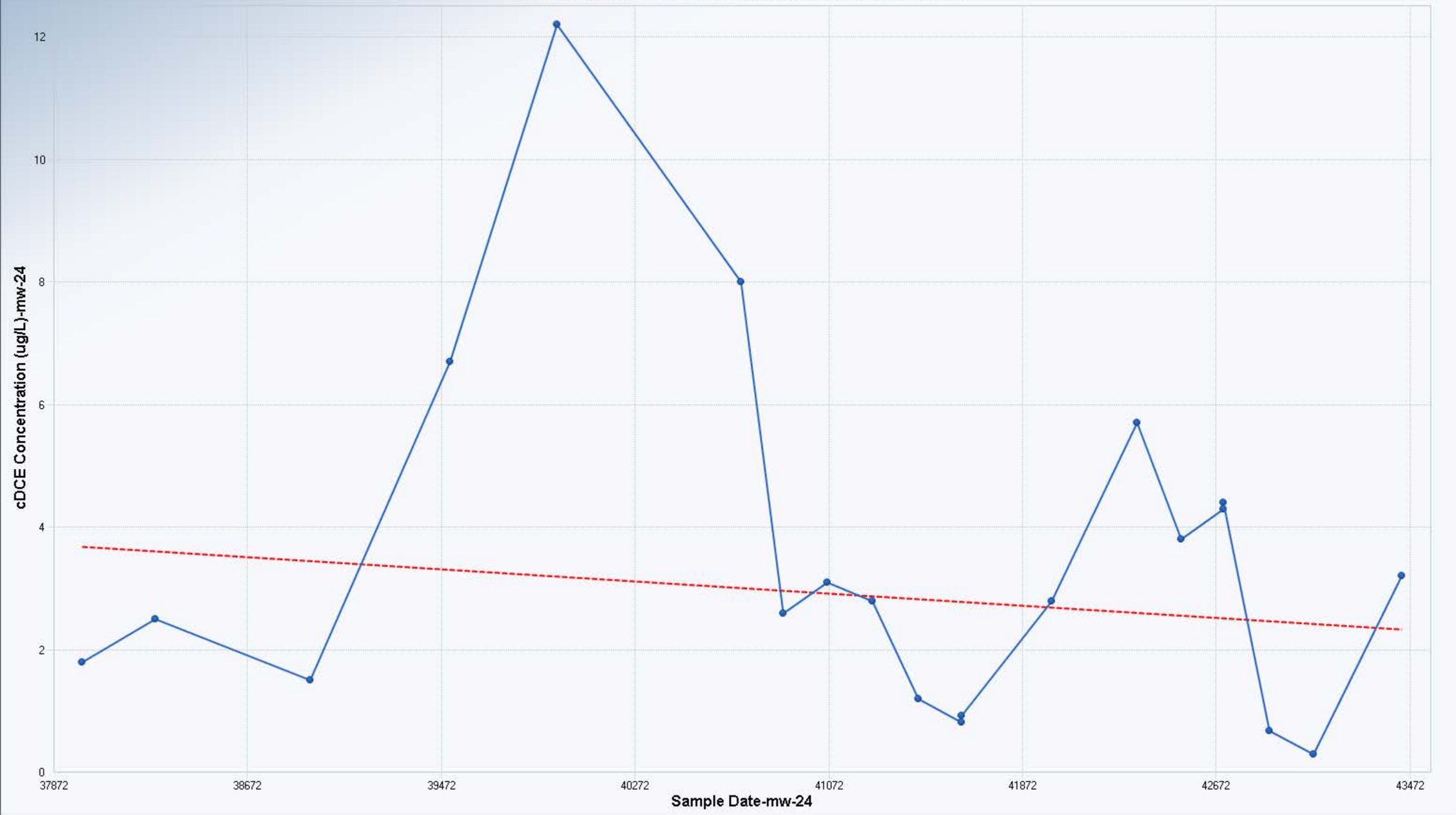
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5130
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

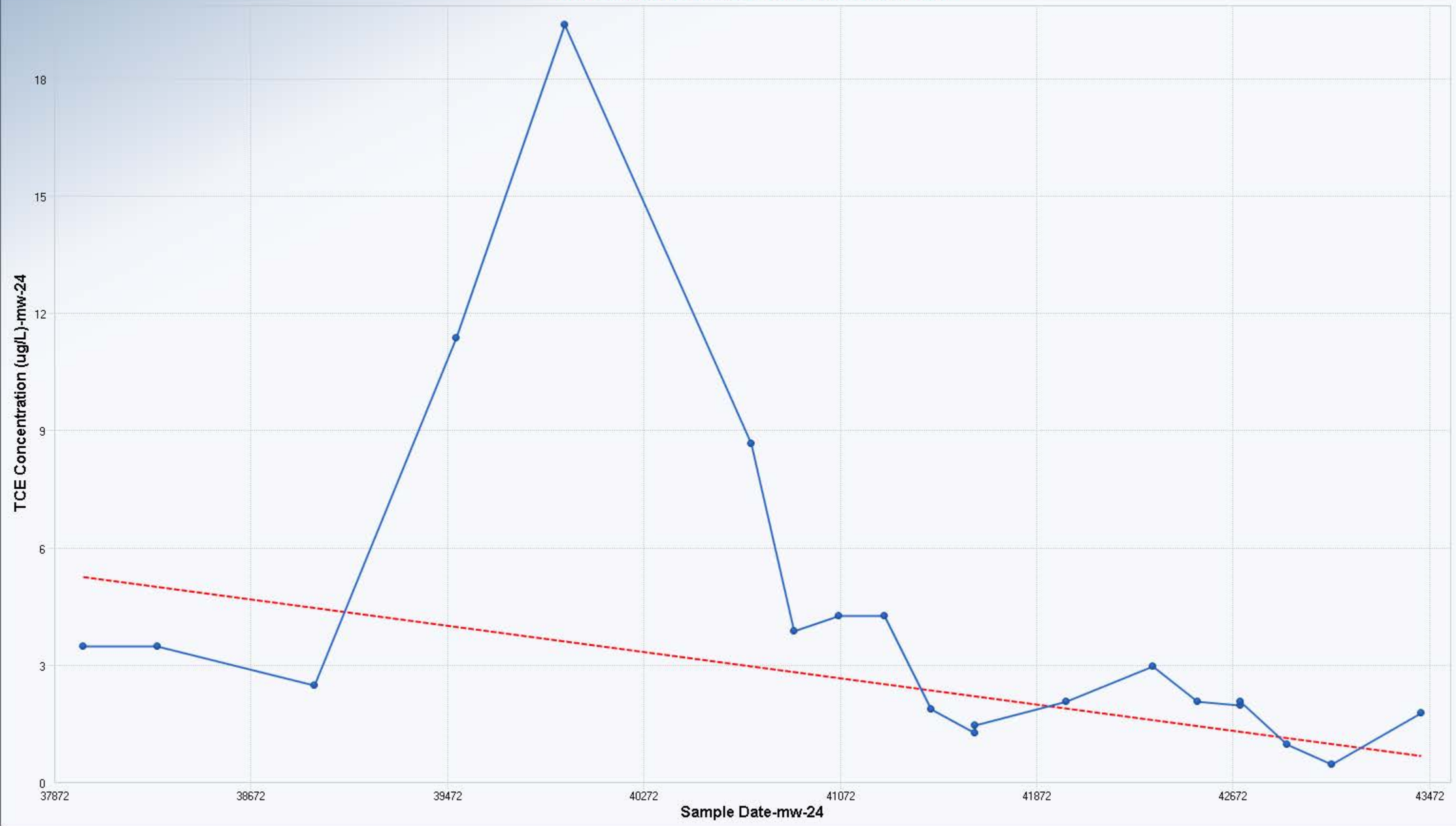
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8058
Standardized Value of S	-0.5194
M-K Test Value (S)	-17
Tabulated p-value	0.3150
Approximate p-value	0.3017

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	12.8993

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7300
Standardized Value of S	-3.1240
M-K Test Value (S)	-97
Tabulated p-value	0.0010
Approximate p-value	0.0009

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0008
Theil-Sen Intercept	36.7791

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

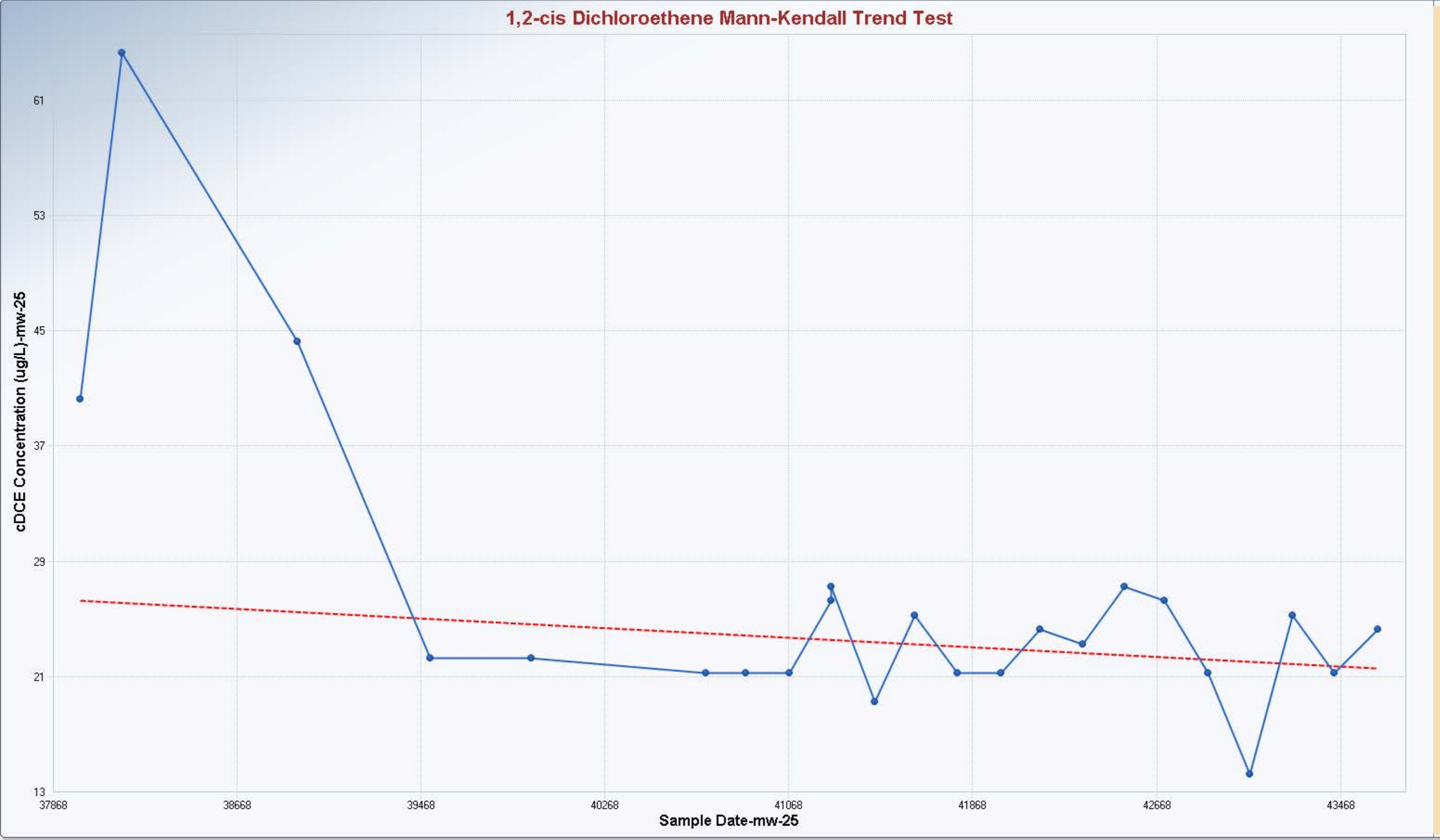
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.5189
Standardized Value of S	-0.0533
M-K Test Value (S)	-3
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.4787

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	1.7000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

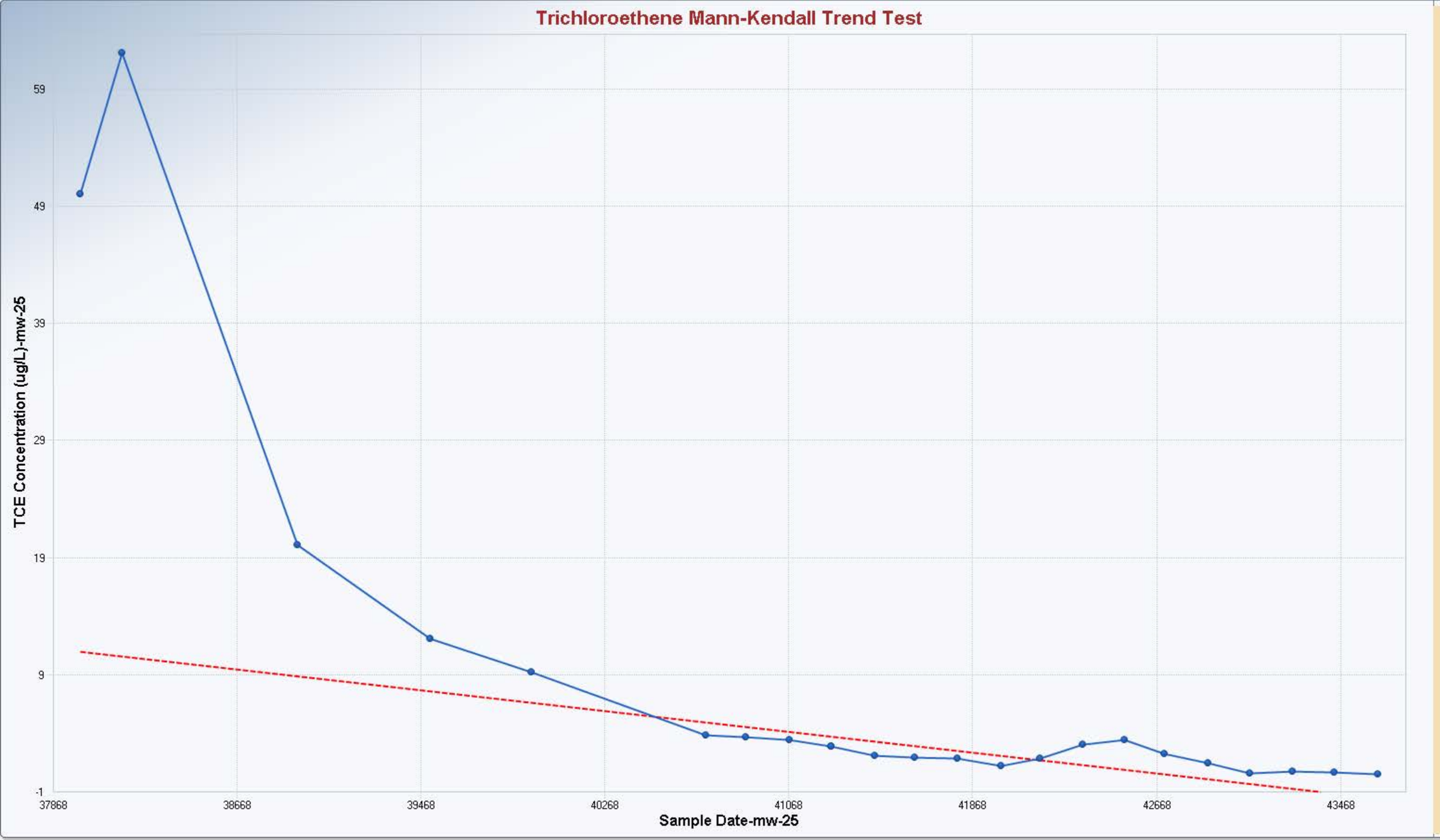
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.2066
Standardized Value of S	-1.3976
M-K Test Value (S)	-53
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0811

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0008
Theil-Sen Intercept	57.6520

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8242
Standardized Value of S	-5.2612
M-K Test Value (S)	-200
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0022
Theil-Sen Intercept	95.7110

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.4243
Standardized Value of S	-2.9299
M-K Test Value (S)	-96
Tabulated p-value	0.0020
Approximate p-value	0.0017

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0009
Theil-Sen Intercept	38.2000

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

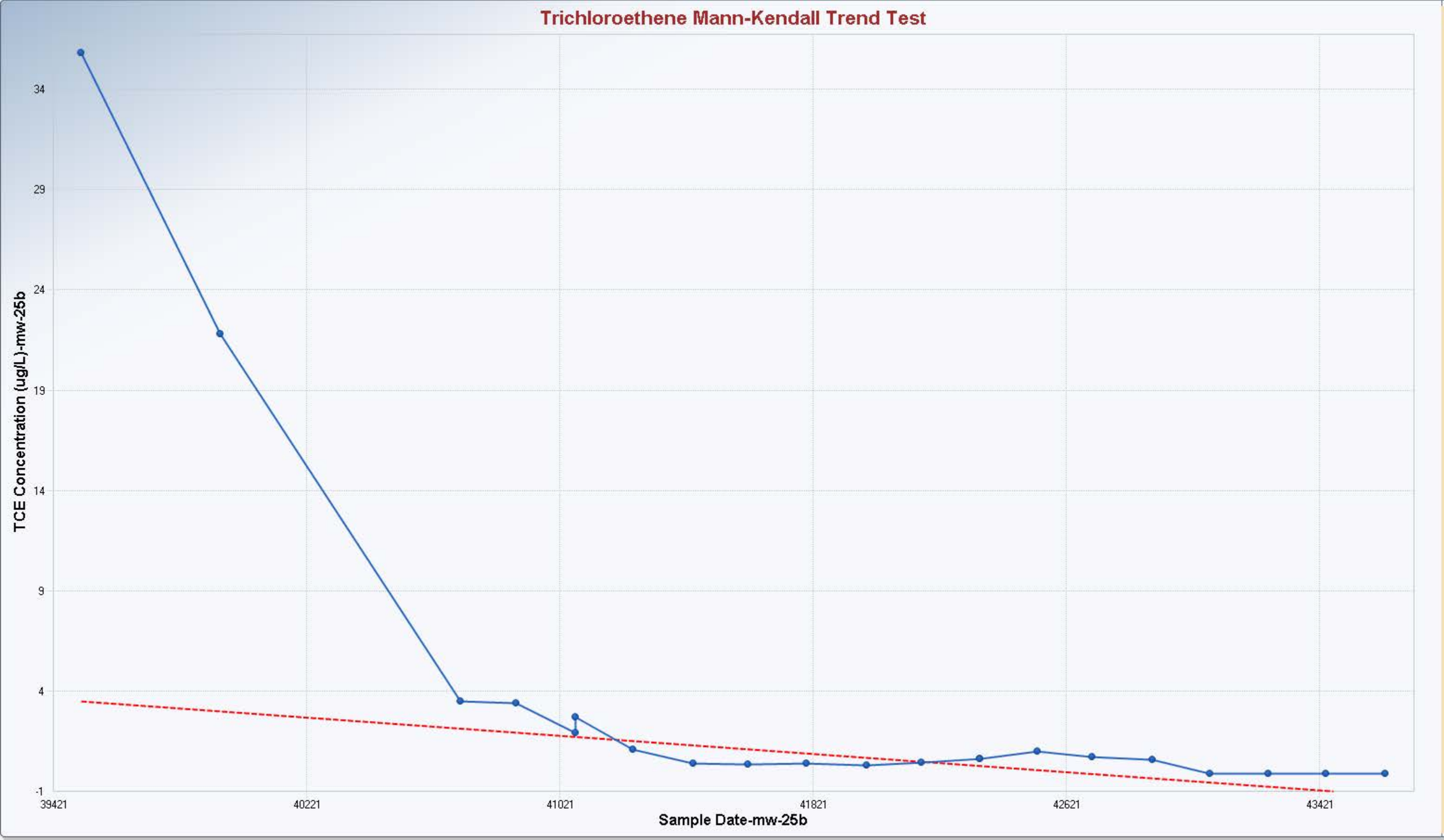
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0303
Standardized Value of S	-3.3303
M-K Test Value (S)	-111
Tabulated p-value	0.0000
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0105
Theil-Sen Intercept	472.5857

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

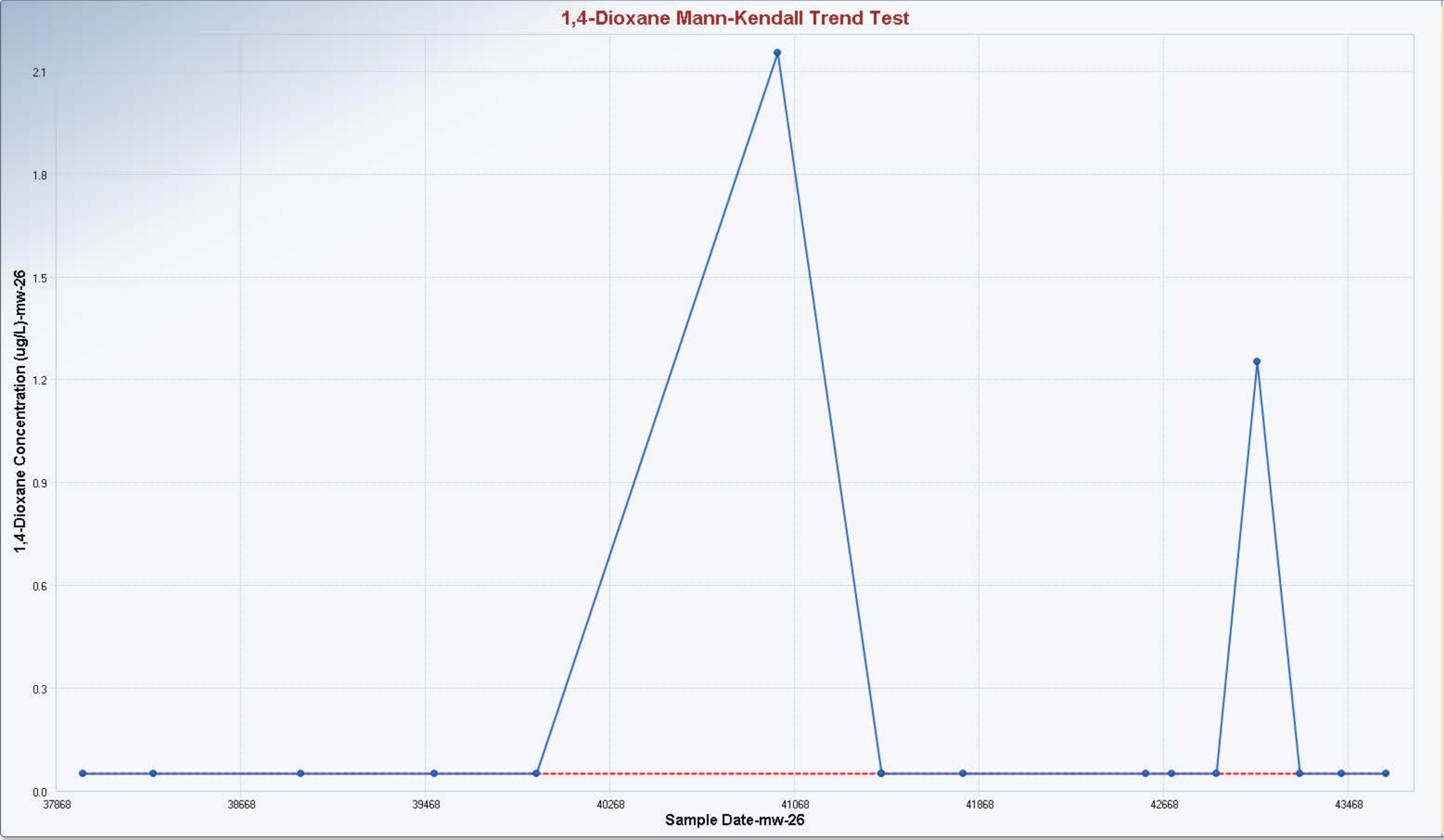
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.9848
Standardized Value of S	-3.9715
M-K Test Value (S)	-132
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0011
Theil-Sen Intercept	48.8075

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

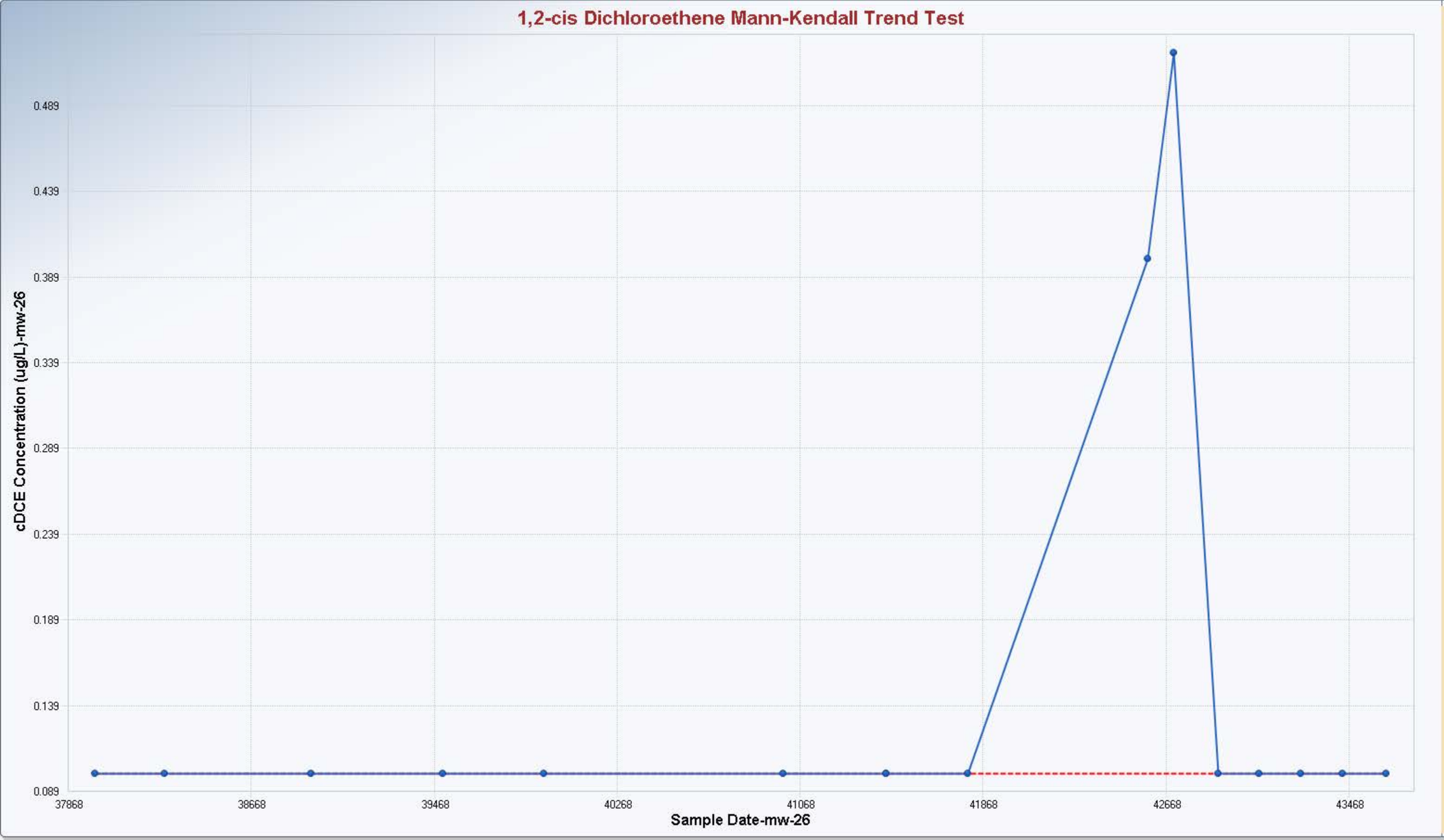
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6359
Standardized Value of S	0.1583
M-K Test Value (S)	3
Tabulated p-value	0.4820
Approximate p-value	0.4371

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

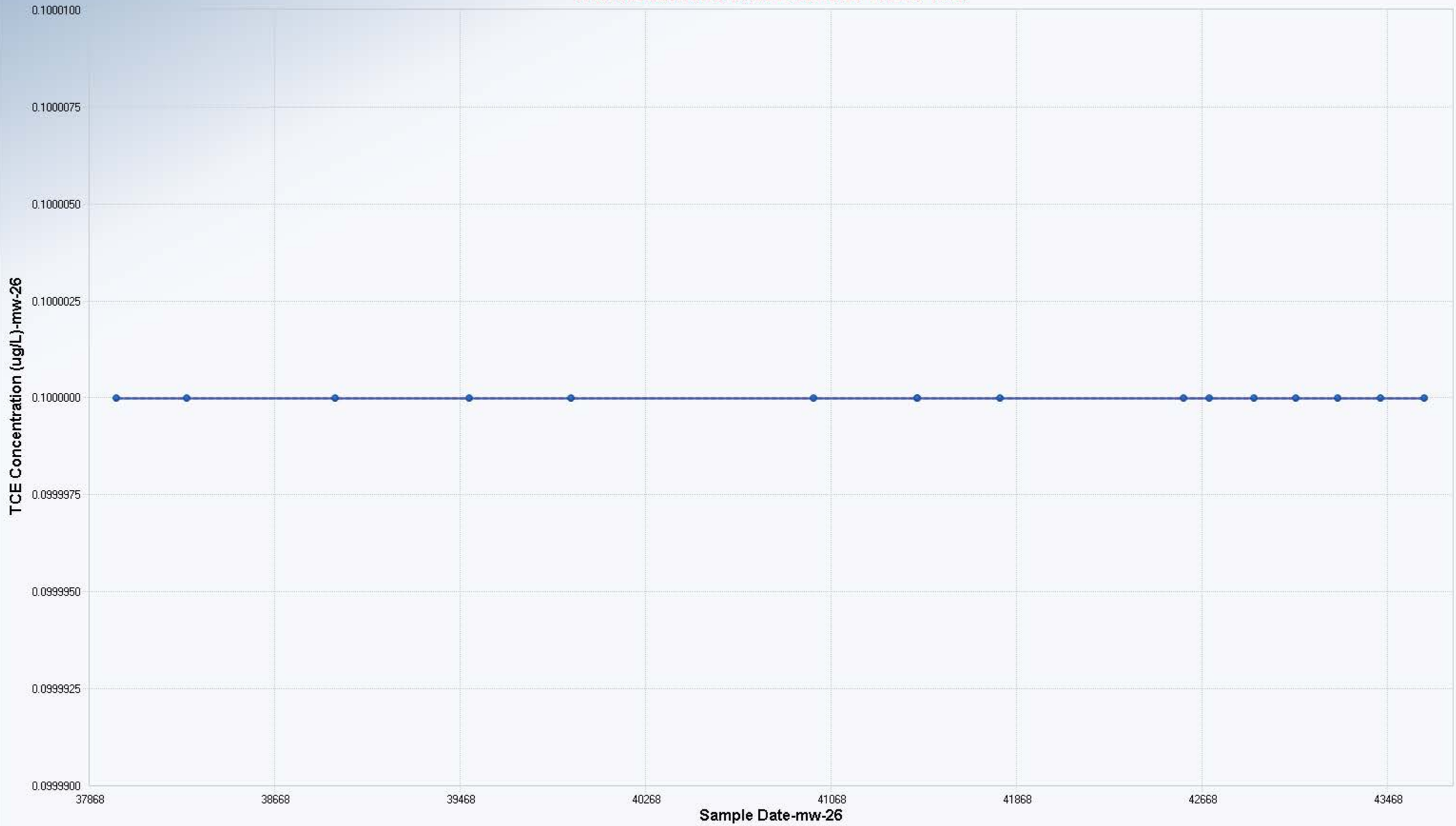
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6359
Standardized Value of S	0.6331
M-K Test Value (S)	9
Tabulated p-value	0.3780
Approximate p-value	0.2633

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

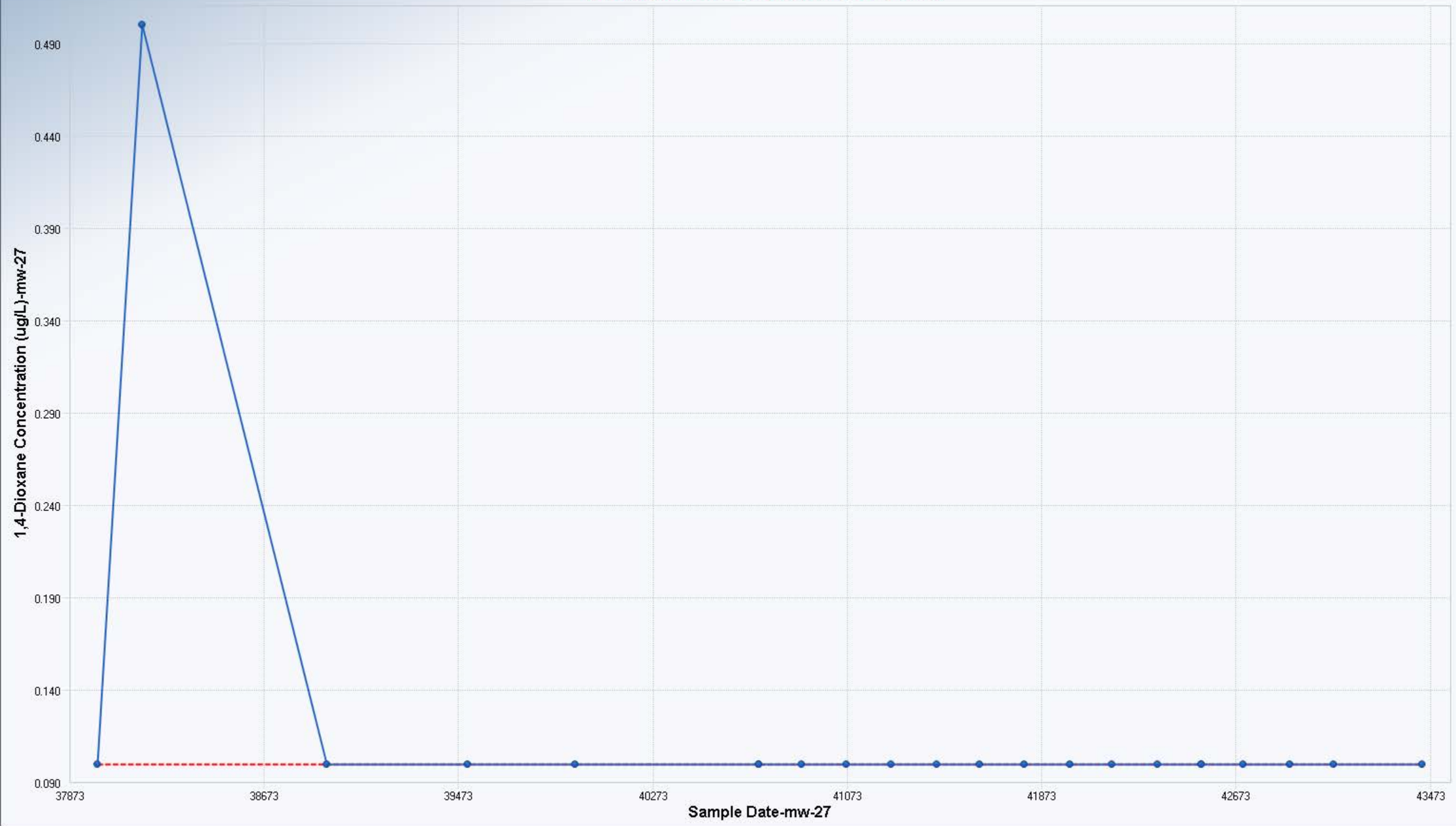
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5180
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

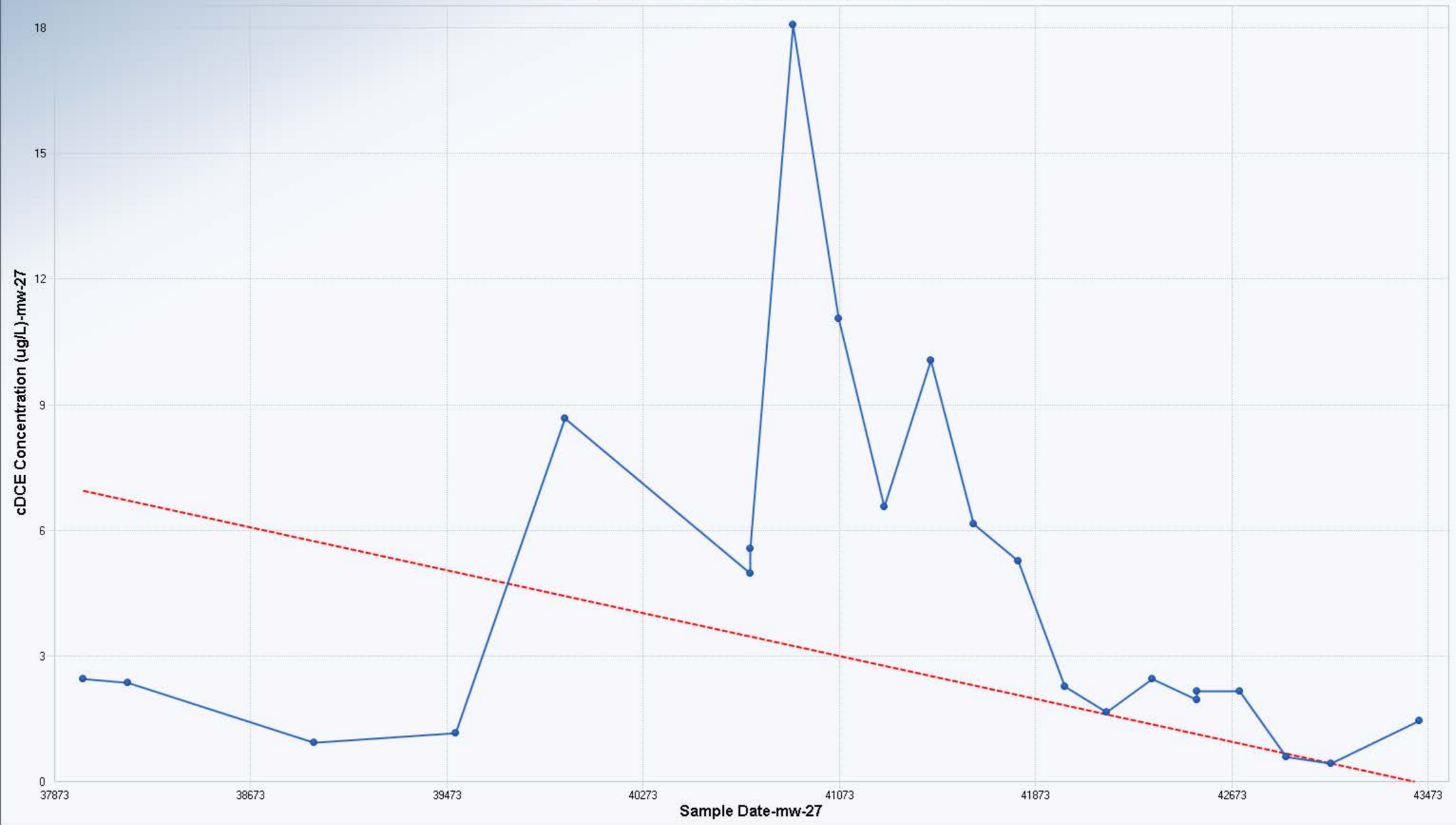
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6886
Standardized Value of S	-1.4186
M-K Test Value (S)	-19
Tabulated p-value	0.3080
Approximate p-value	0.0780

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

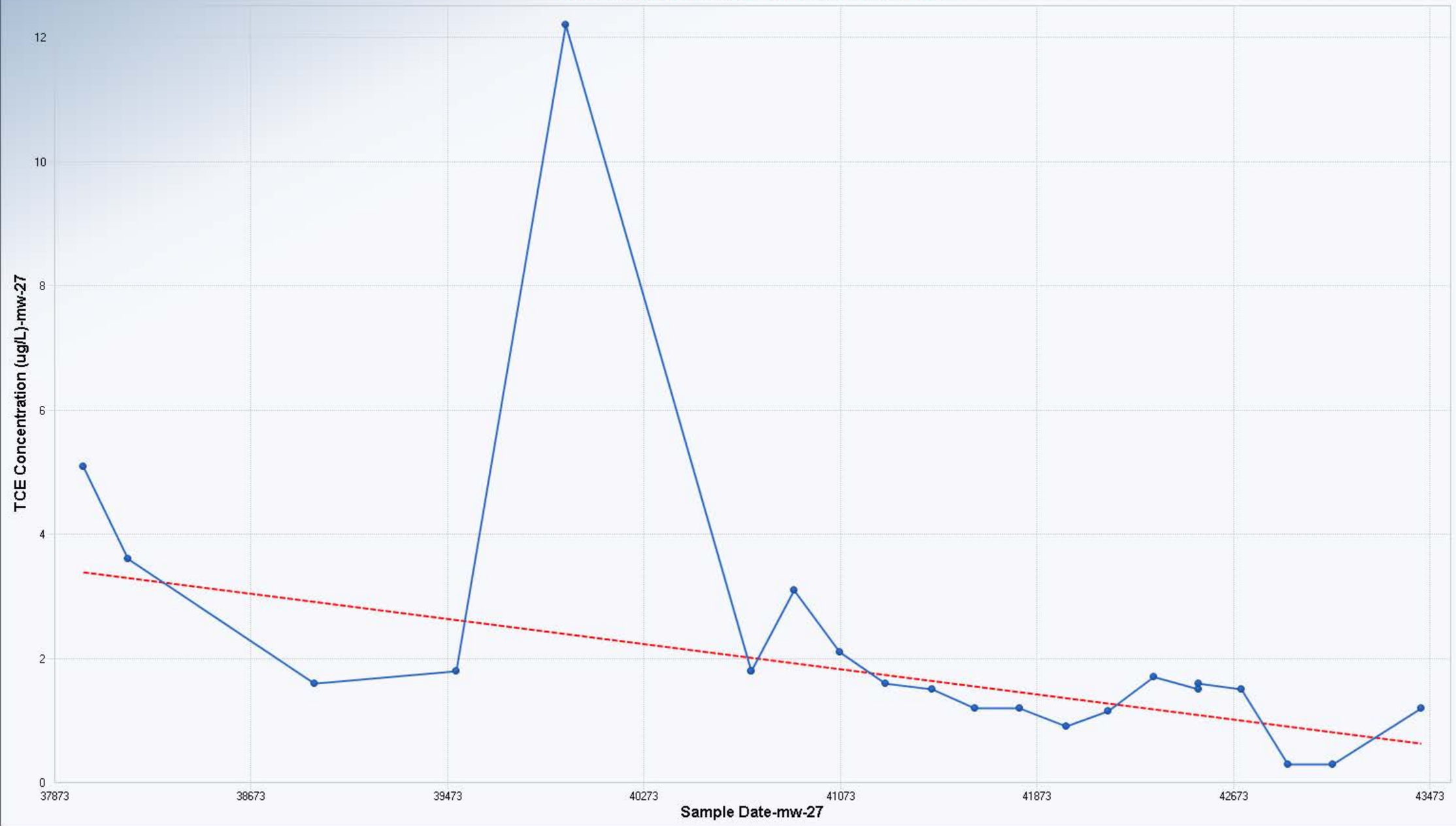
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.4354
Standardized Value of S	-2.0883
M-K Test Value (S)	-75
Tabulated p-value	0.0180
Approximate p-value	0.0184

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0013
Theil-Sen Intercept	55.6137

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



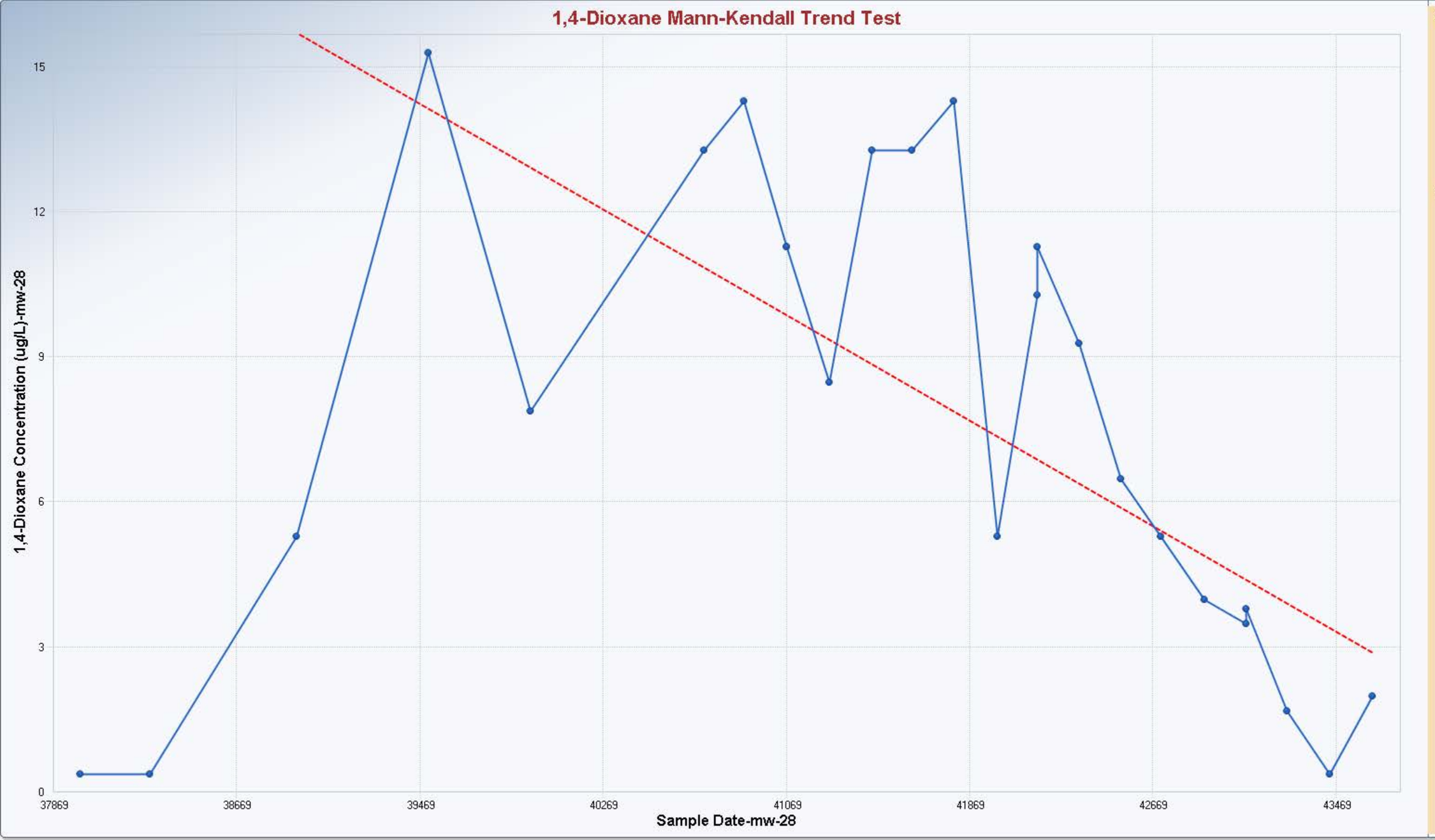
Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.2420
Standardized Value of S	-3.8307
M-K Test Value (S)	-136
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	22.4242

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.6341
Standardized Value of S	-2.3455
M-K Test Value (S)	-101
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0095

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0027
Theil-Sen Intercept	121.6518

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.7941
Standardized Value of S	0.2570
M-K Test Value (S)	12
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.3986

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0007
Theil-Sen Intercept	-0.6538

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	25
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	42.8058
Standardized Value of S	-3.7845
M-K Test Value (S)	-163
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0026
Theil-Sen Intercept	112.0107

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.5677
Standardized Value of S	-1.9964
M-K Test Value (S)	-76
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0229

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0023
Theil-Sen Intercept	98.4880

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

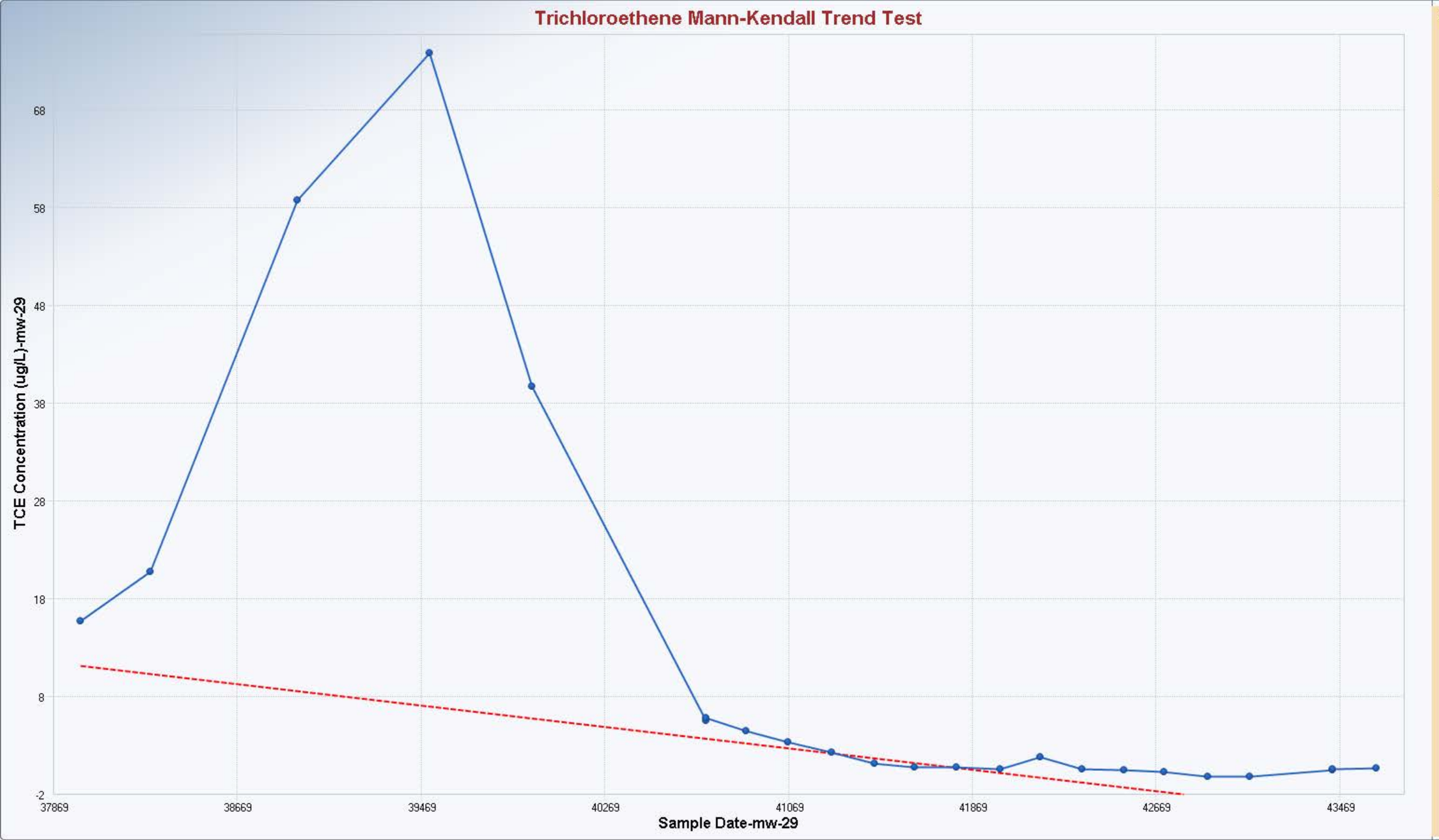
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8021
Standardized Value of S	-2.3279
M-K Test Value (S)	-89
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0100

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0081
Theil-Sen Intercept	381.8743

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

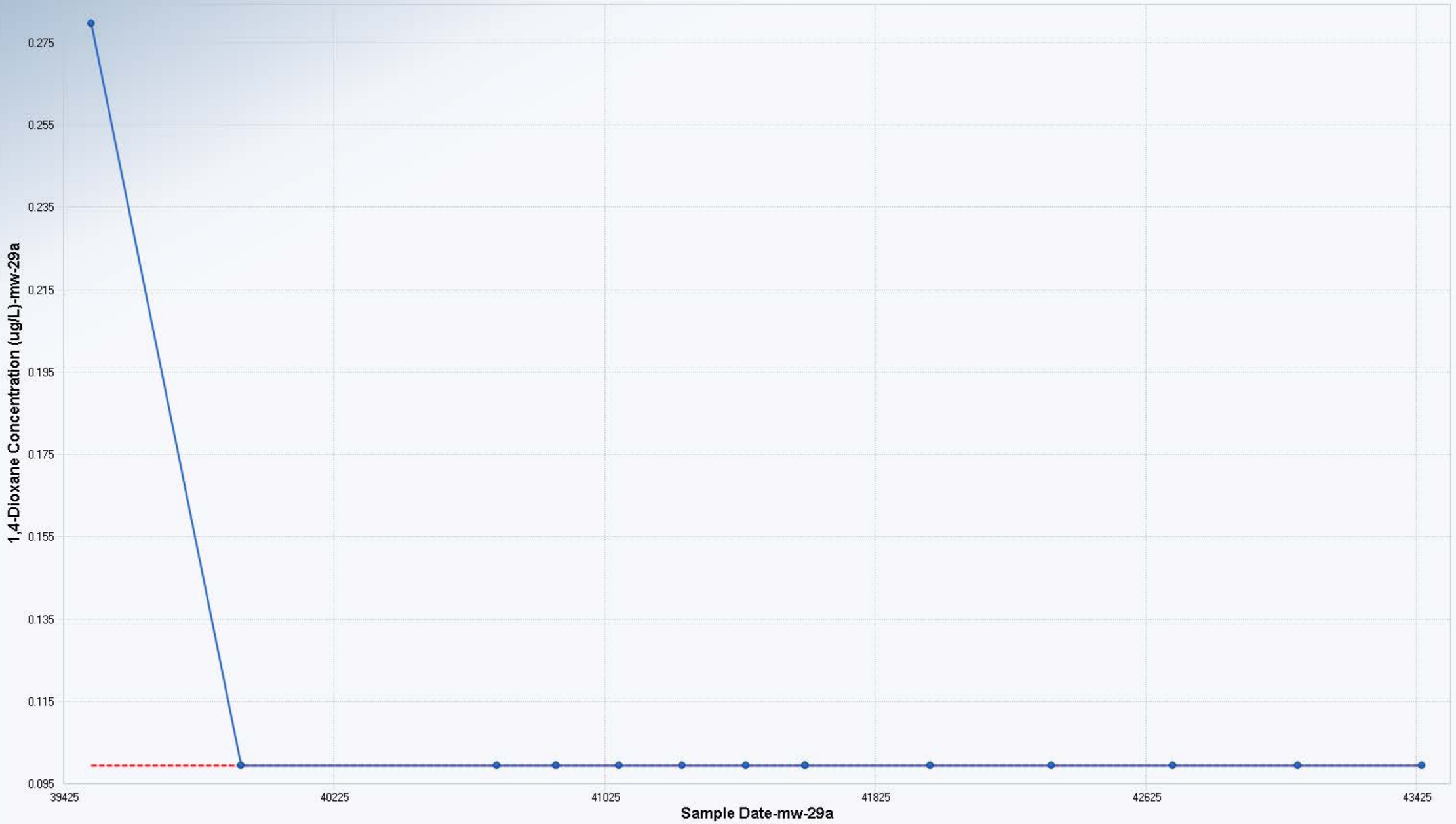
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8374
Standardized Value of S	-4.8629
M-K Test Value (S)	-185
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0028
Theil-Sen Intercept	116.1555

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

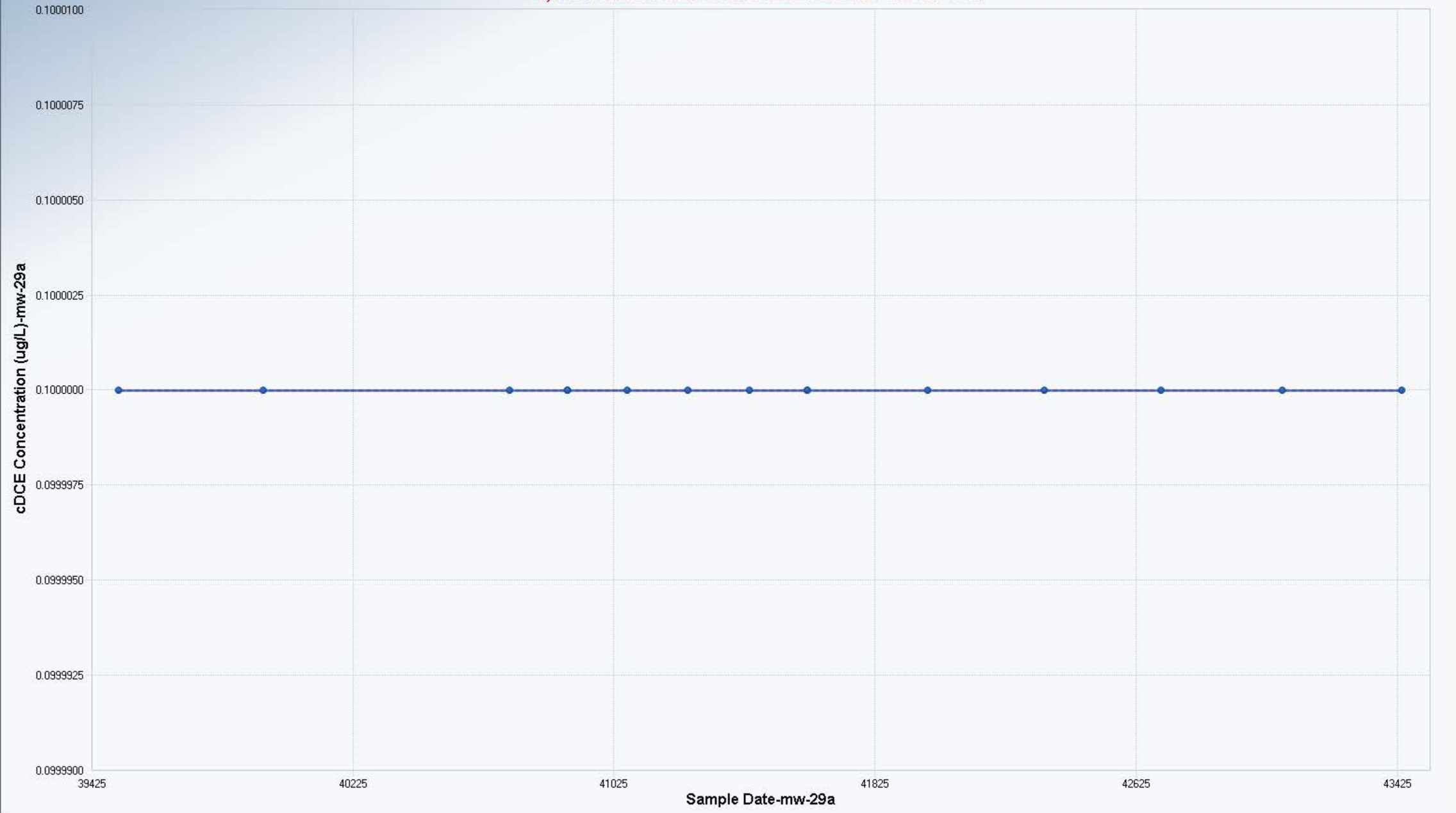
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.6410
Standardized Value of S	-1.5045
M-K Test Value (S)	-14
Tabulated p-value	0.2480
Approximate p-value	0.0662

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

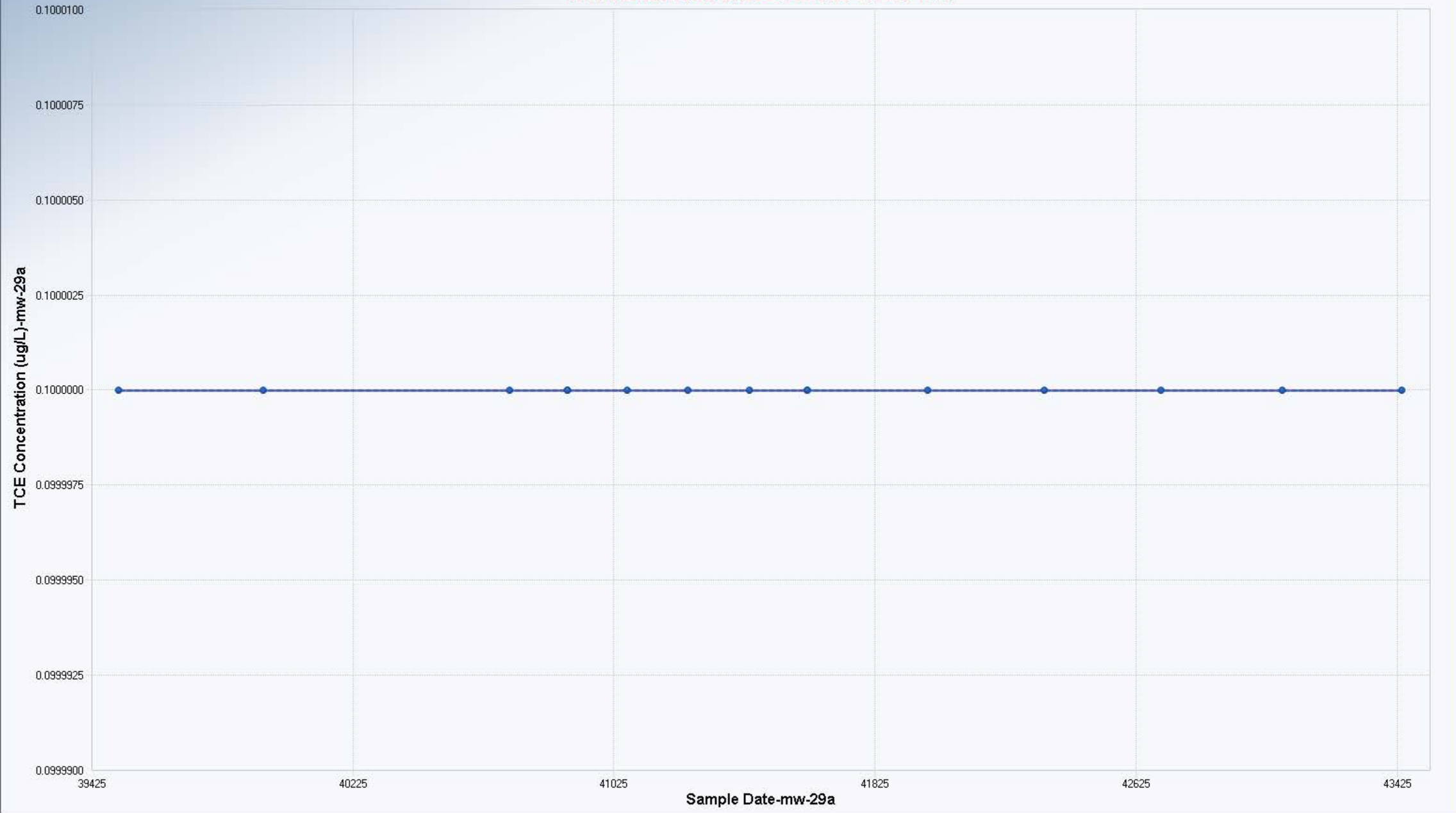
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

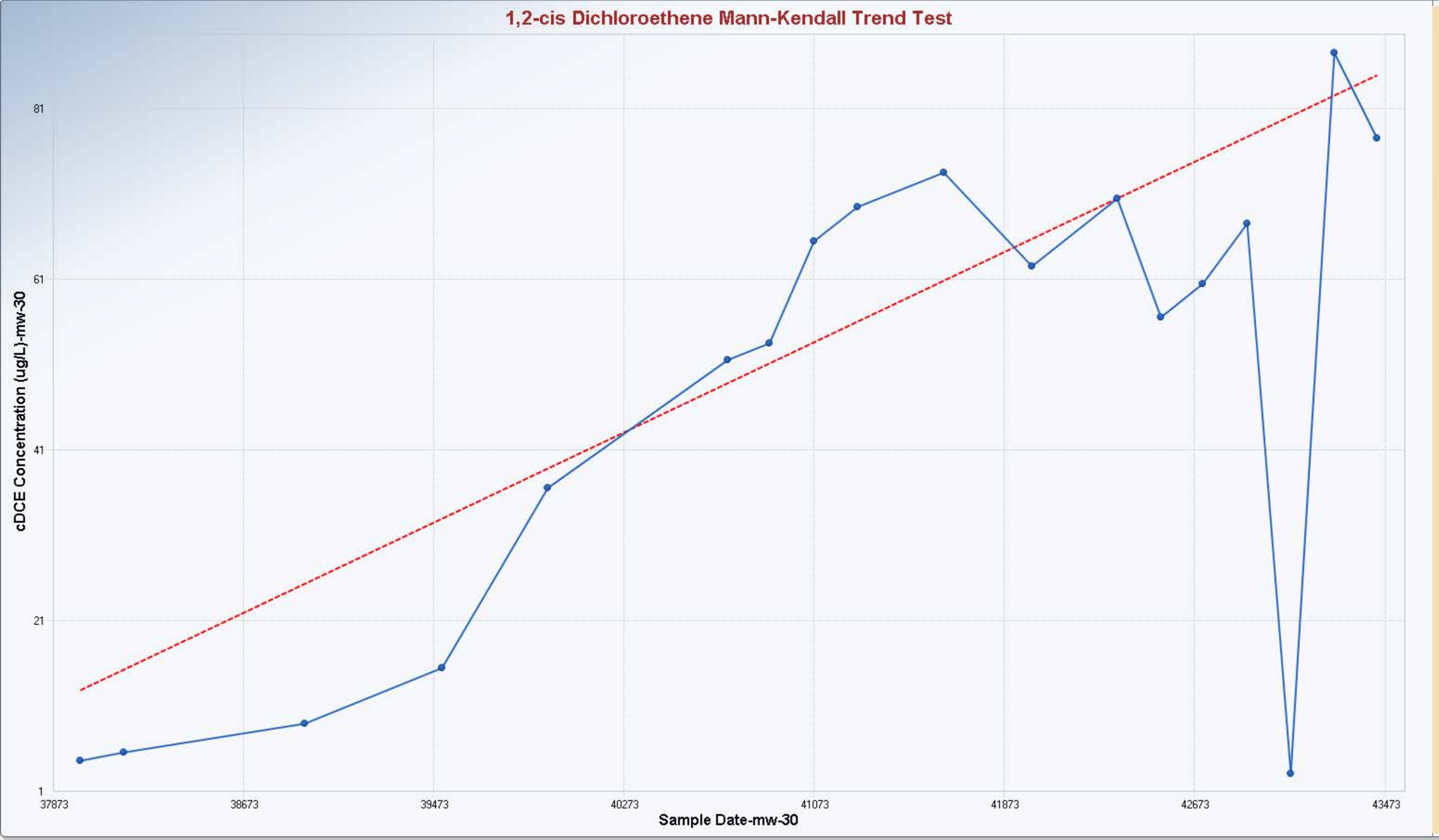
Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.2234
Standardized Value of S	1.3728
M-K Test Value (S)	37
Tabulated p-value	0.0080
Approximate p-value	0.0849

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0005
Theil-Sen Intercept	-11.7608

Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

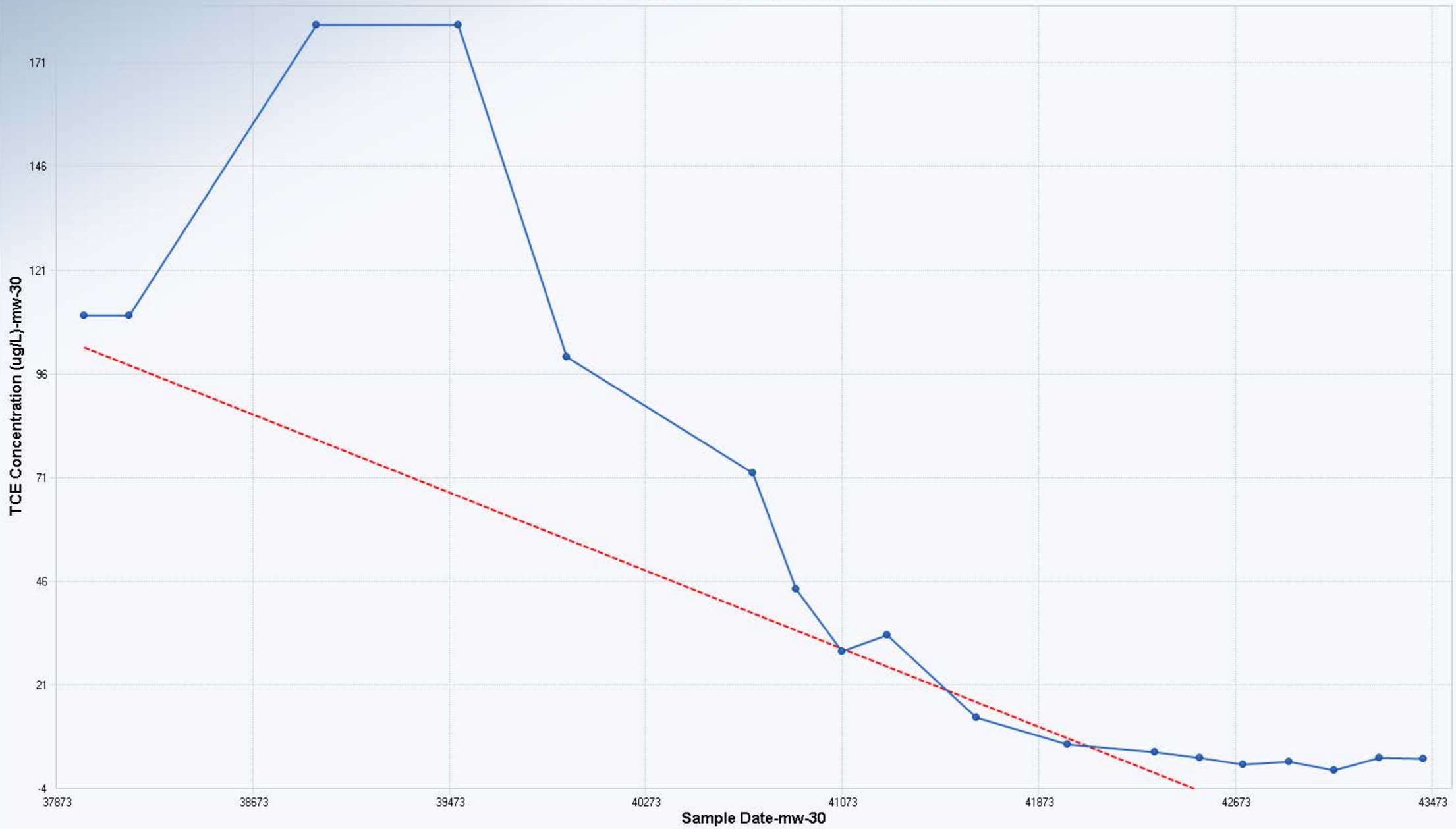
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.4008
Standardized Value of S	3.2575
M-K Test Value (S)	87
Tabulated p-value	0.0000
Approximate p-value	0.0006

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0132
Theil-Sen Intercept	-489.0415

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

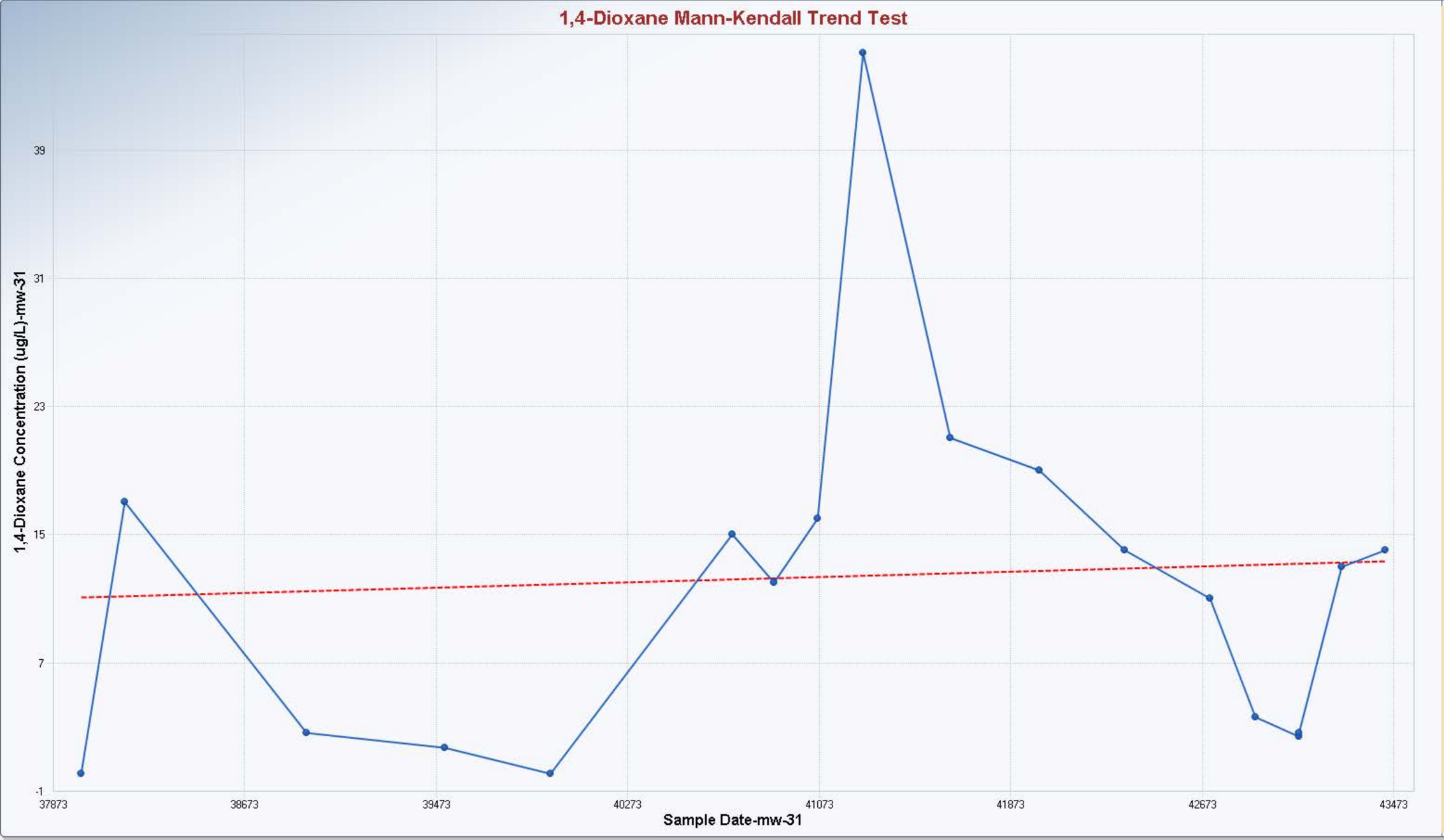
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3629
Standardized Value of S	-4.7795
M-K Test Value (S)	-127
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0236
Theil-Sen Intercept	997.0321

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

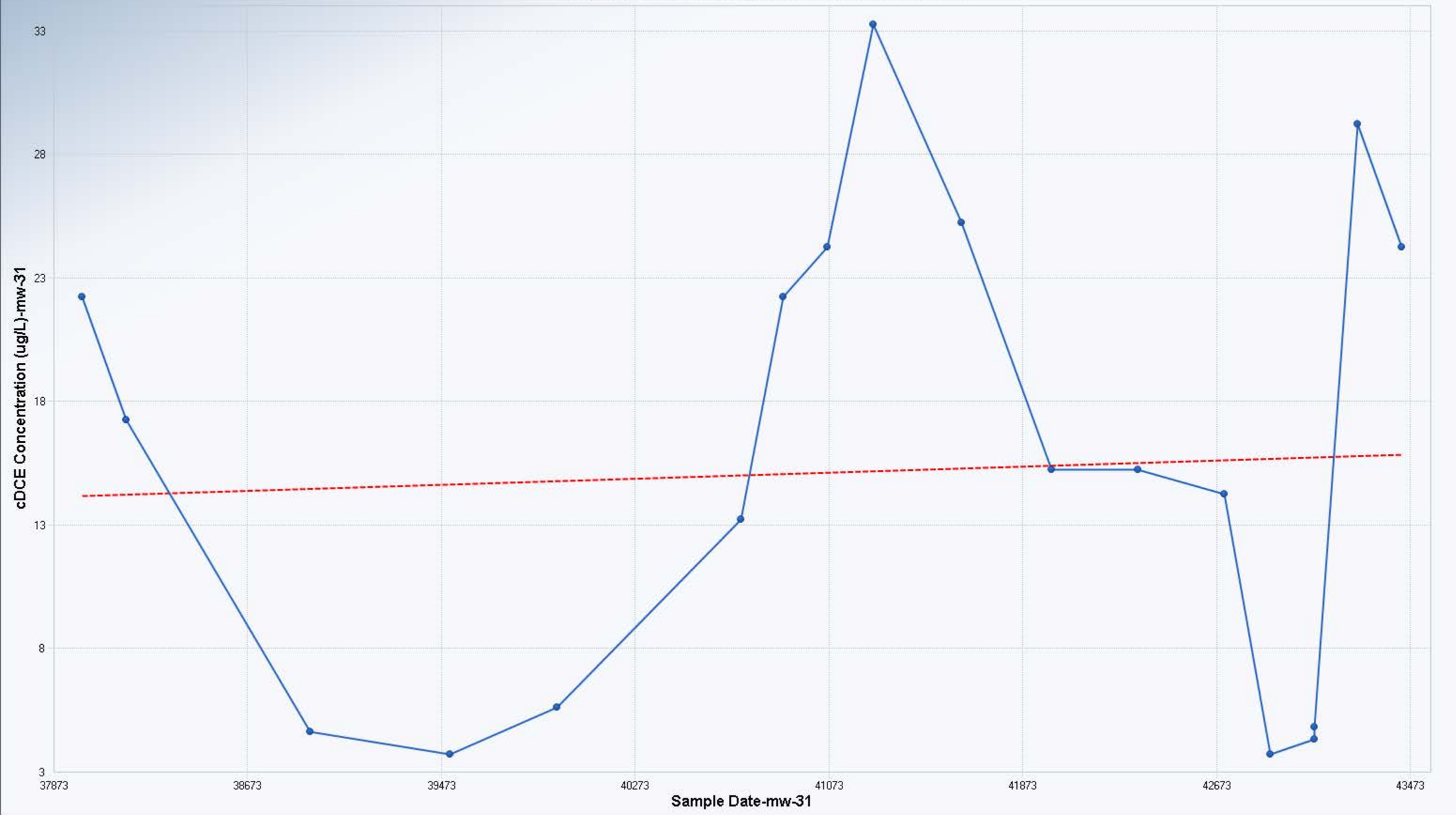
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3439
Standardized Value of S	0.3416
M-K Test Value (S)	10
Tabulated p-value	0.3540
Approximate p-value	0.3663

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	-4.9690

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3249
Standardized Value of S	0.3039
M-K Test Value (S)	9
Tabulated p-value	0.3830
Approximate p-value	0.3806

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0003
Theil-Sen Intercept	2.2181

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

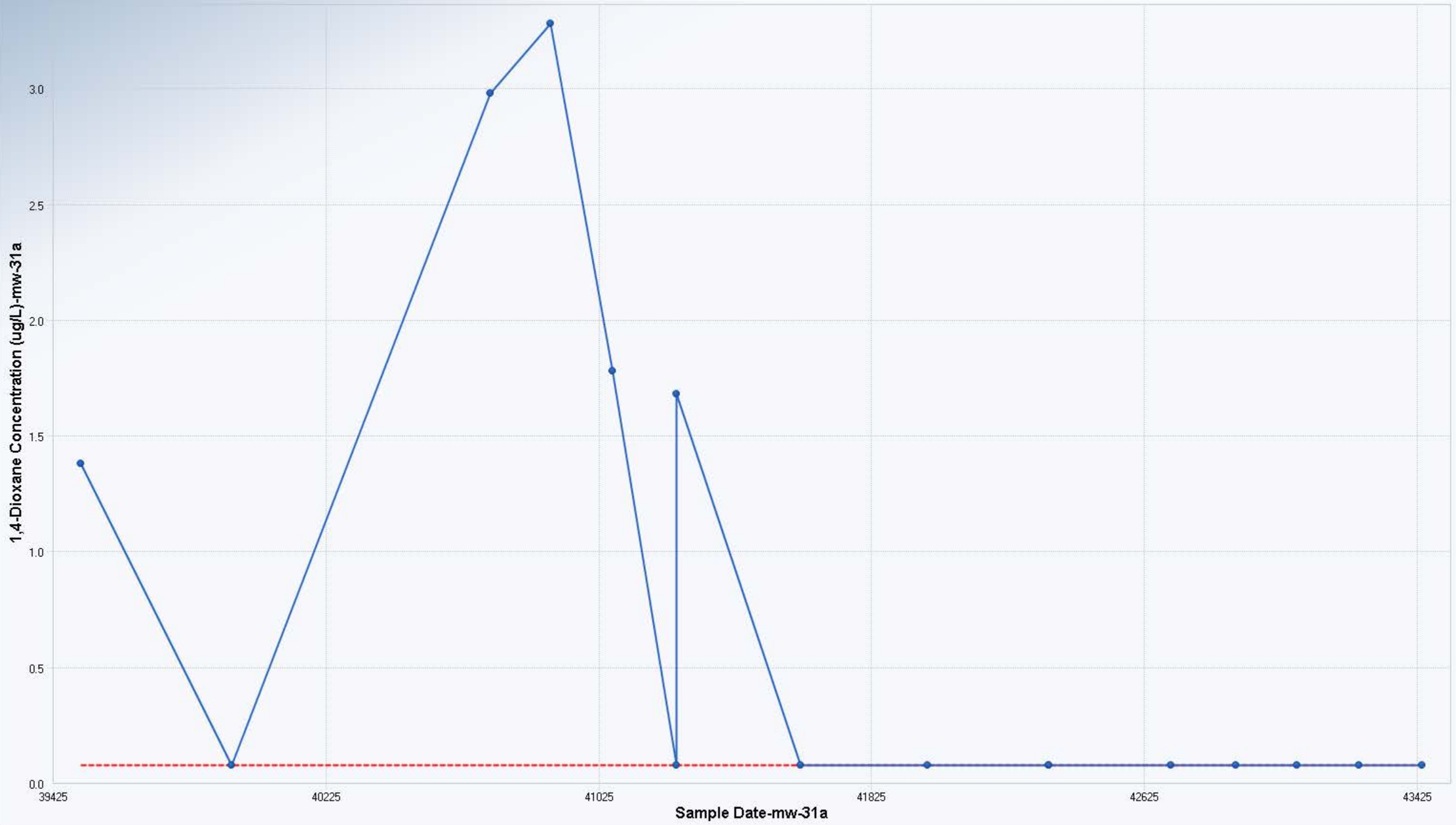
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3818
Standardized Value of S	-2.6154
M-K Test Value (S)	-70
Tabulated p-value	0.0030
Approximate p-value	0.0045

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0097
Theil-Sen Intercept	413.8527

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1200
Standardized Value of S	-2.4283
M-K Test Value (S)	-45
Tabulated p-value	0.0260
Approximate p-value	0.0076

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Analysis

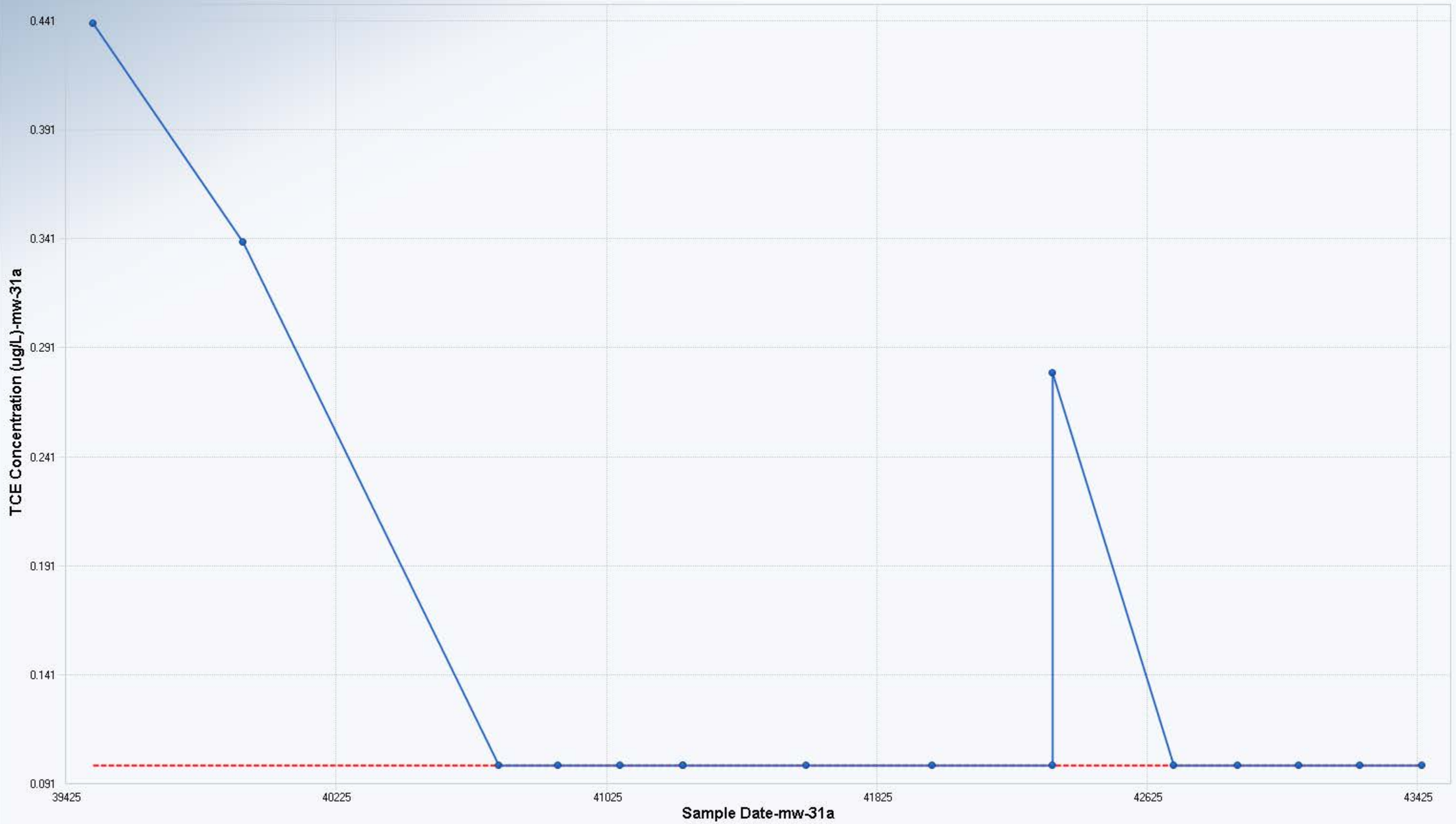
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	21.9089
Standardized Value of S	-2.3278
M-K Test Value (S)	-52
Tabulated p-value	0.0100
Approximate p-value	0.0100

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0032
Theil-Sen Intercept	146.1081

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.9889
Standardized Value of S	-1.6679
M-K Test Value (S)	-26
Tabulated p-value	0.1330
Approximate p-value	0.0477

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

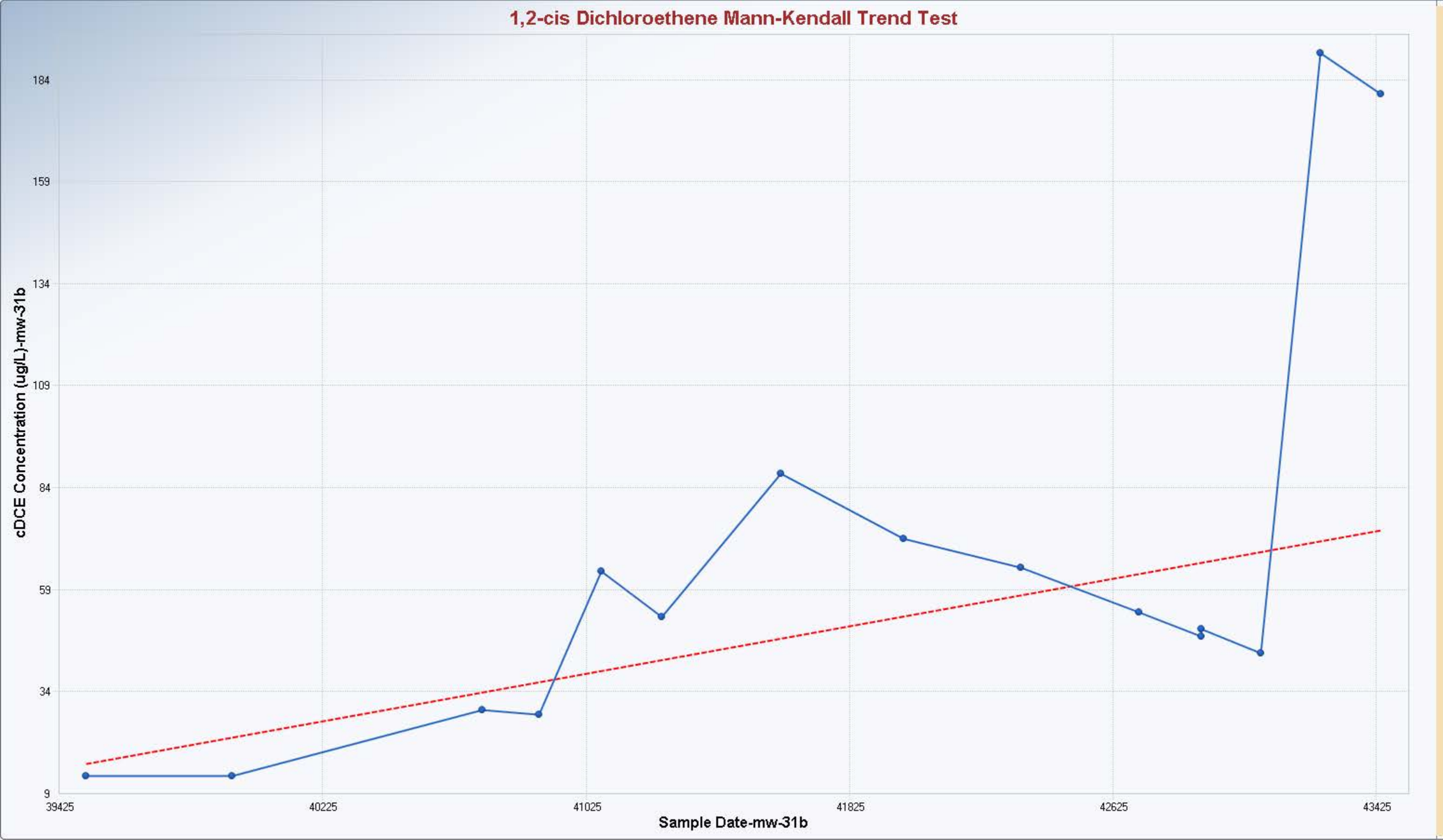
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1825
Standardized Value of S	2.4278
M-K Test Value (S)	50
Tabulated p-value	0.0060
Approximate p-value	0.0076

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0019
Theil-Sen Intercept	-74.9500

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1825
Standardized Value of S	2.1306
M-K Test Value (S)	44
Tabulated p-value	0.0140
Approximate p-value	0.0166

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0145
Theil-Sen Intercept	-558.0981

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

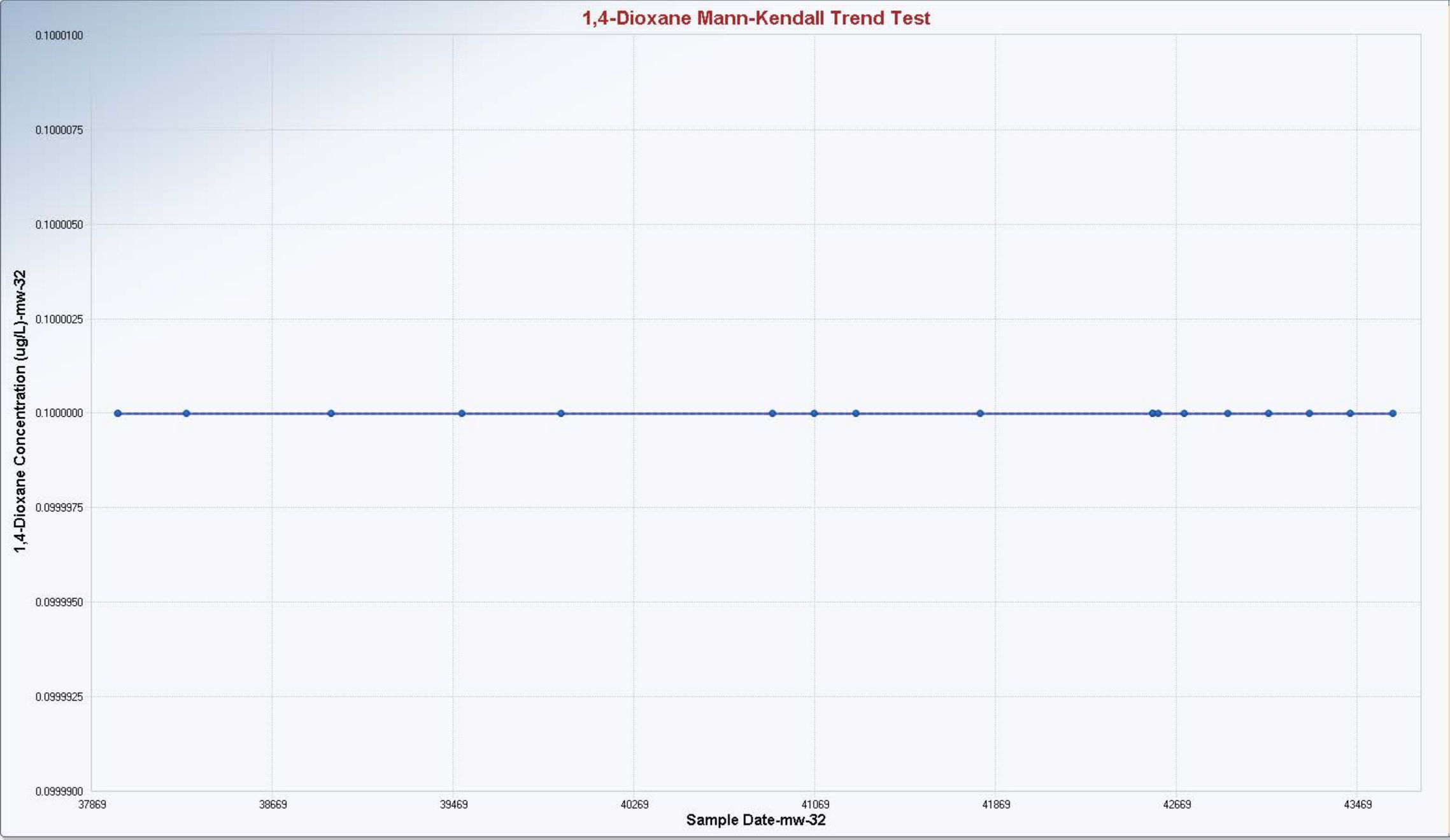
Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.2073
Standardized Value of S	-4.1569
M-K Test Value (S)	-85
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0101
Theil-Sen Intercept	426.7523

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

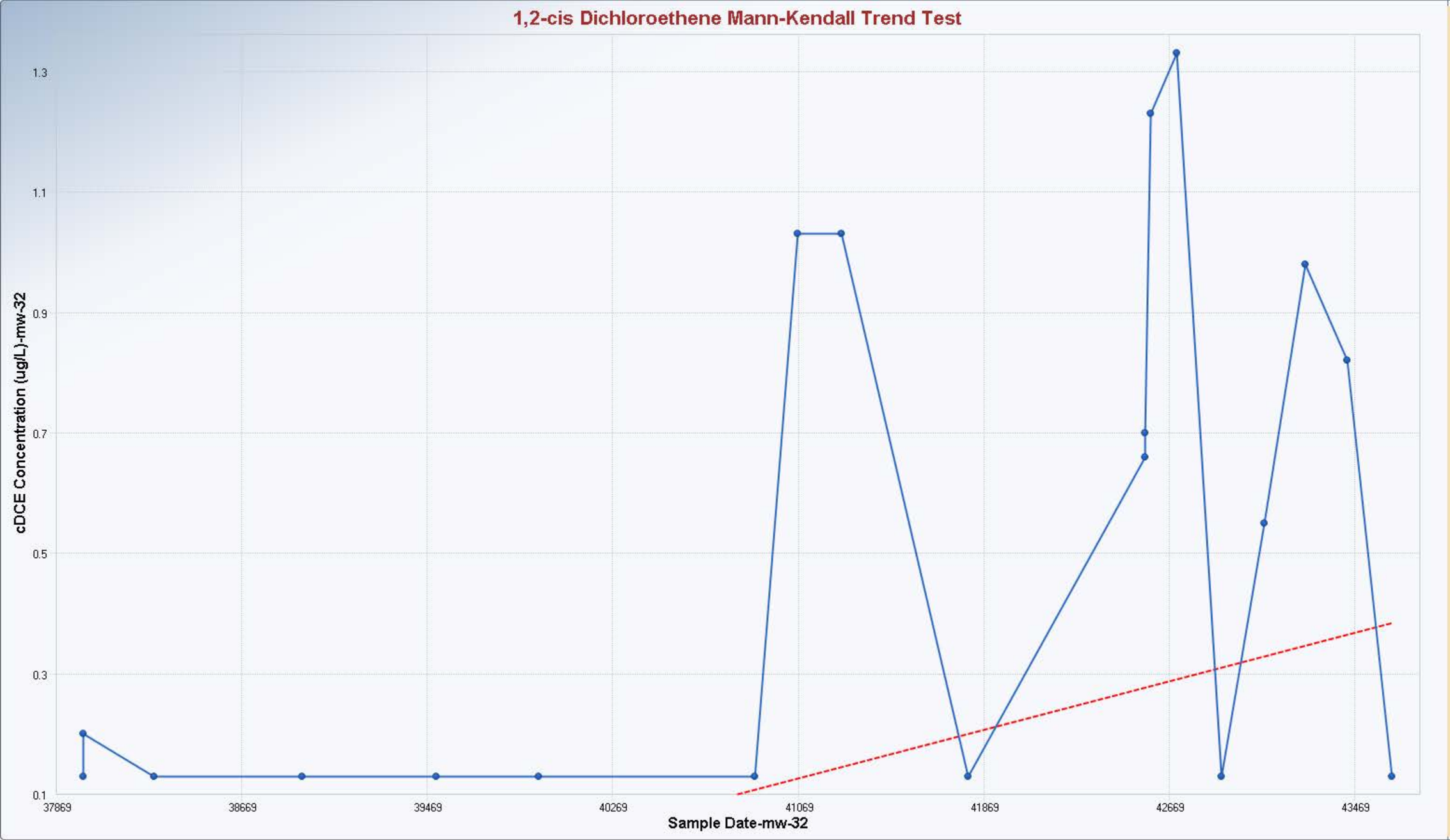
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

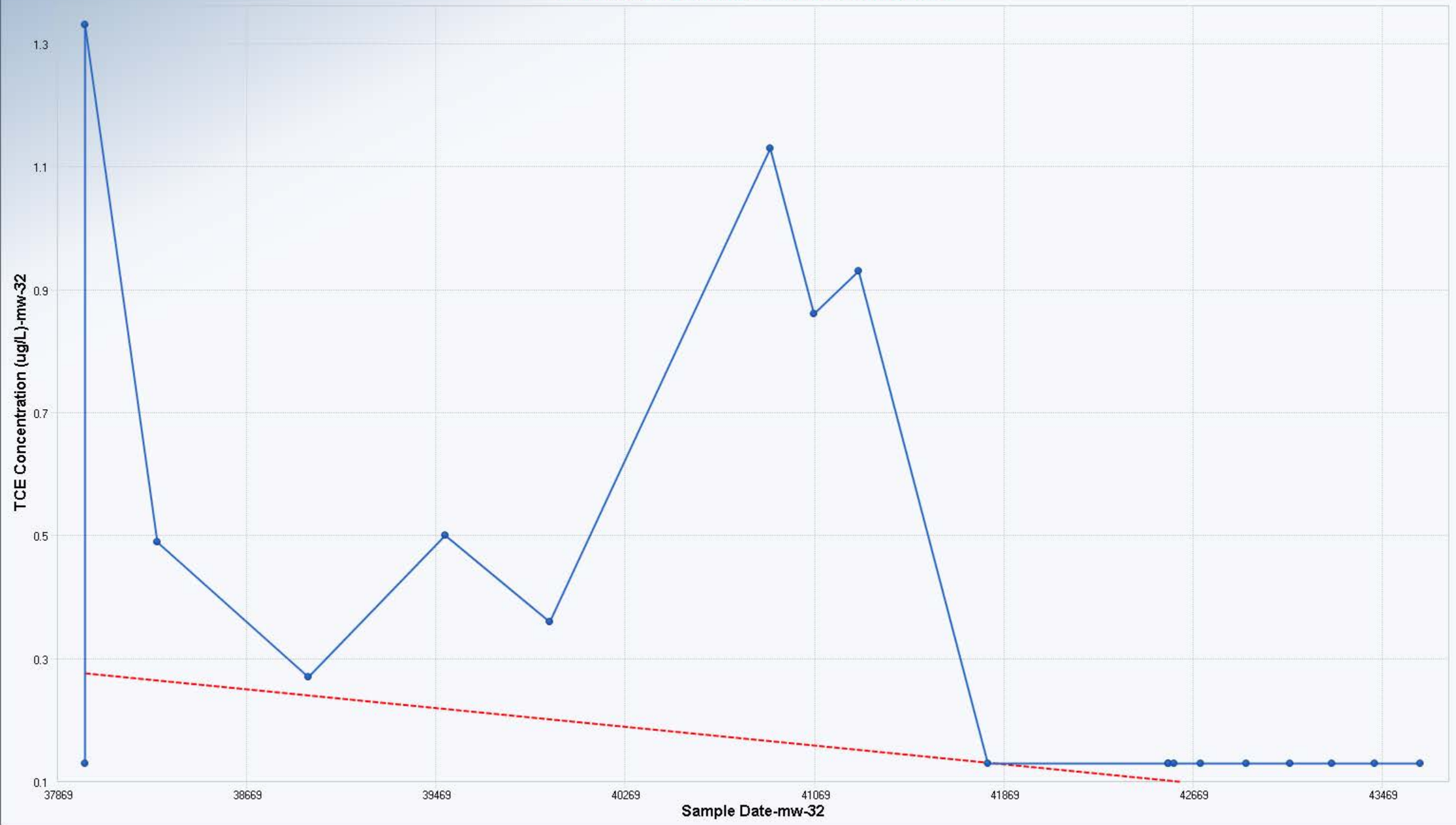
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.9072
Standardized Value of S	1.6724
M-K Test Value (S)	46
Tabulated p-value	0.0540
Approximate p-value	0.0472

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0001
Theil-Sen Intercept	-4.0635

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	25.5343
Standardized Value of S	-2.6239
M-K Test Value (S)	-68
Tabulated p-value	0.0080
Approximate p-value	0.0043

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	1.7047

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

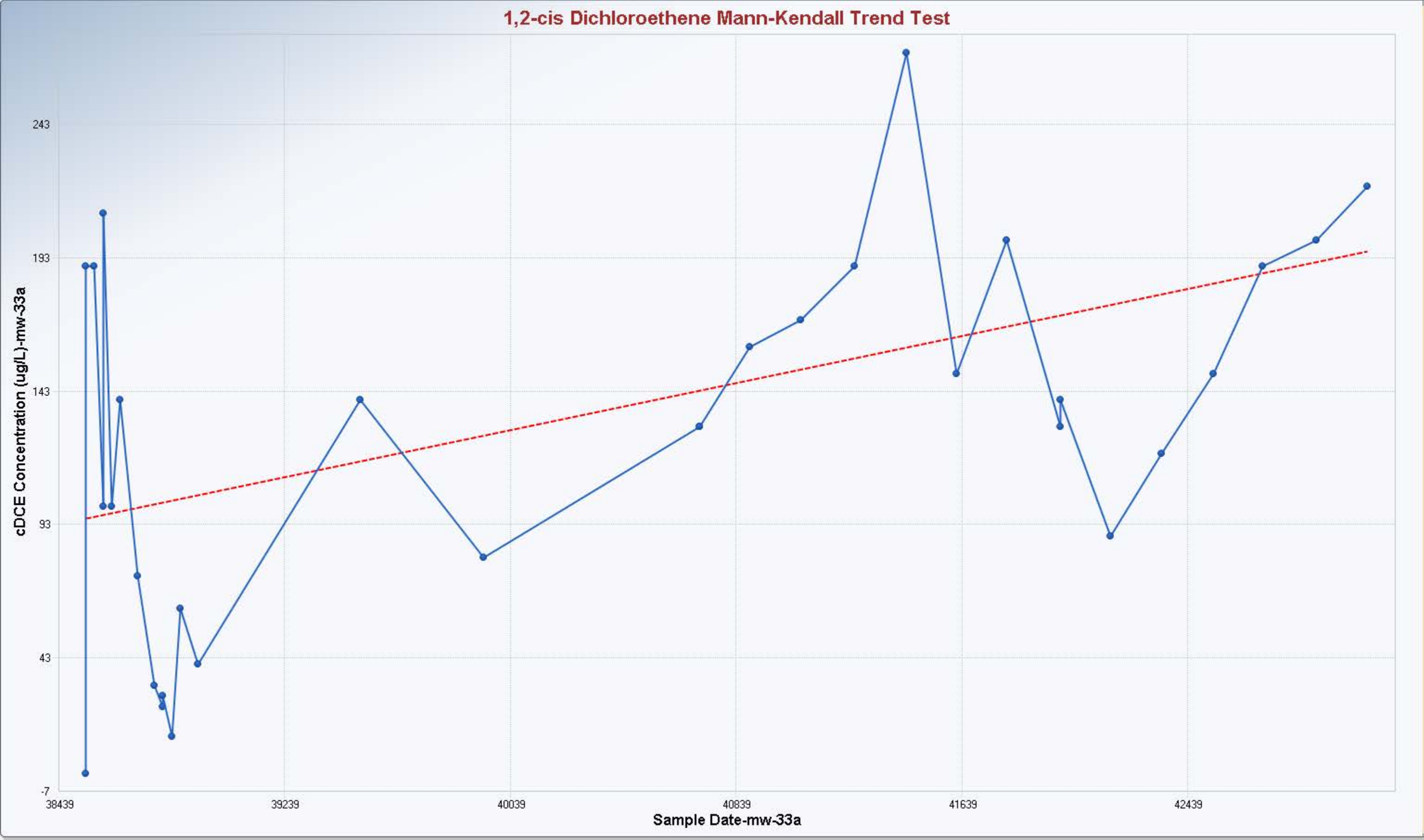
Mann-Kendall Trend Analysis

n	32
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	61.5440
Standardized Value of S	-2.4698
M-K Test Value (S)	-153
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0068

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0388
Theil-Sen Intercept	1,789.2598

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	32
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	61.5115
Standardized Value of S	2.4711
M-K Test Value (S)	153
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0067

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0221
Theil-Sen Intercept	-754.7953

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

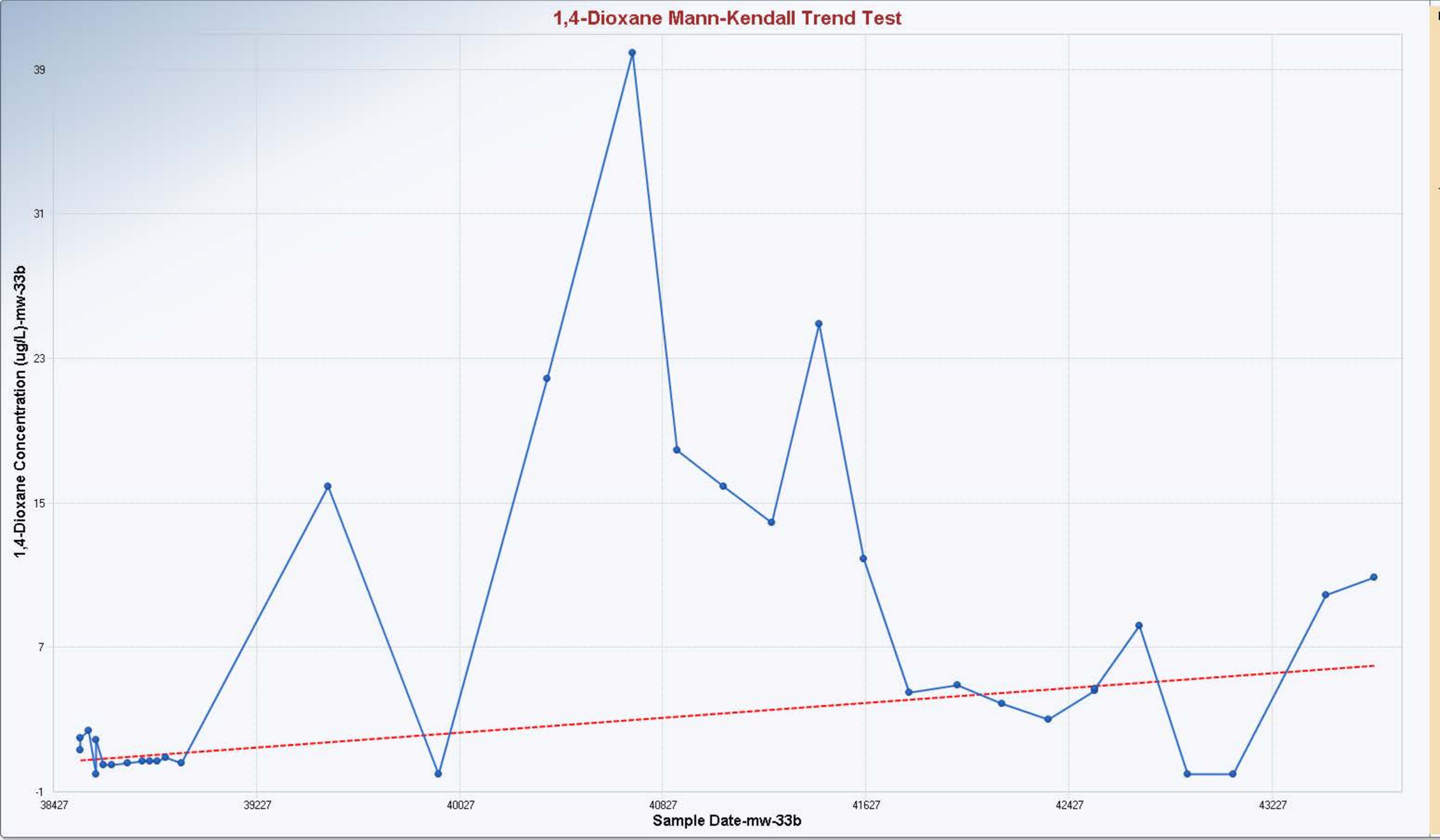
Mann-Kendall Trend Analysis

n	32
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	61.5711
Standardized Value of S	-3.8330
M-K Test Value (S)	-237
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0711
Theil-Sen Intercept	3,000.3377

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.4205
Standardized Value of S	1.6299
M-K Test Value (S)	106
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0516

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0010
Theil-Sen Intercept	-38.7861

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.4257
Standardized Value of S	-0.7295
M-K Test Value (S)	-48
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.2328

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0012
Theil-Sen Intercept	83.7134

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

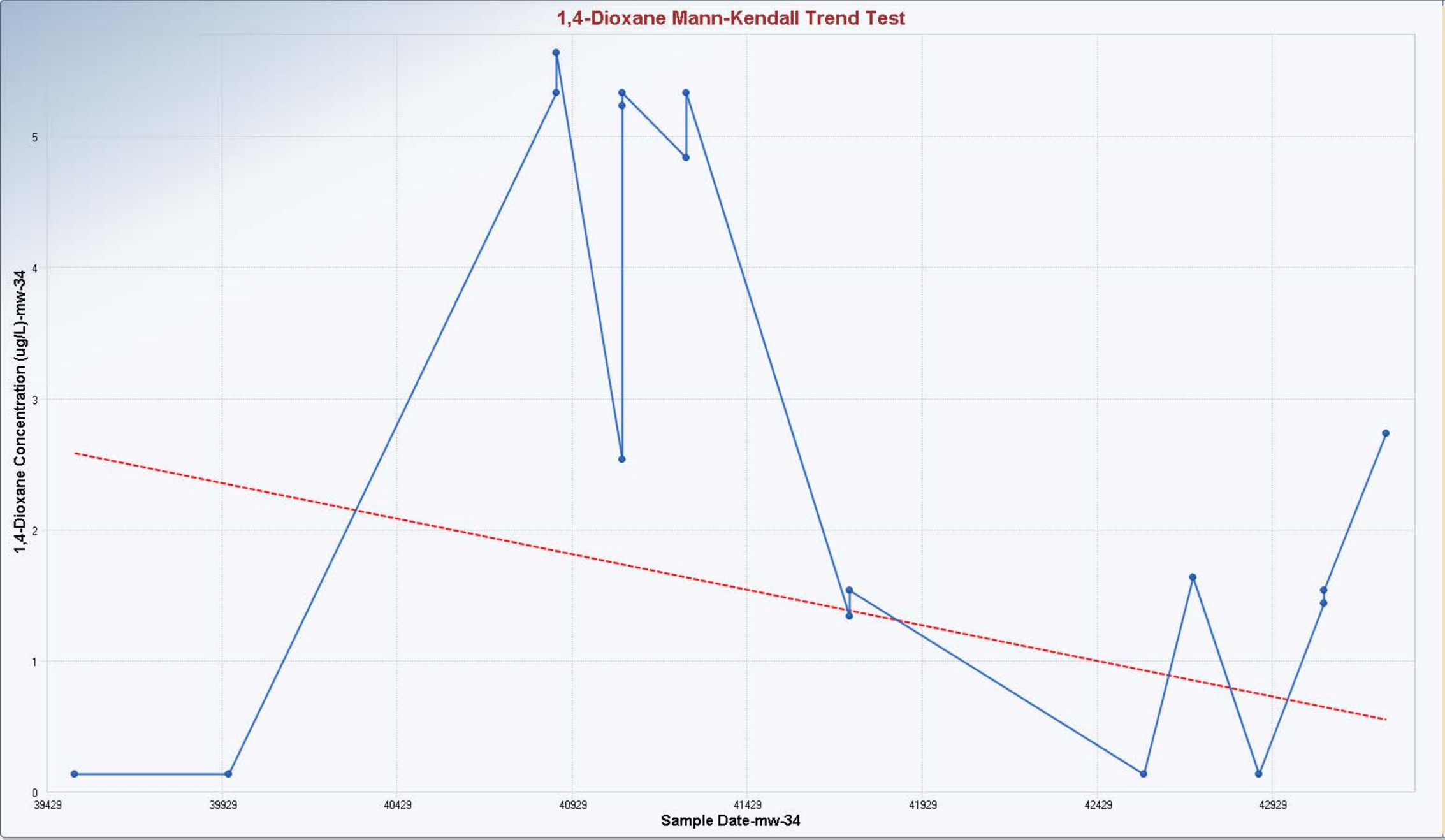
n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.5006
Standardized Value of S	-6.4806
M-K Test Value (S)	-419
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0072
Theil-Sen Intercept	304.7309

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.0000
Standardized Value of S	-0.7917
M-K Test Value (S)	-20
Tabulated p-value	0.2200
Approximate p-value	0.2143

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	24.0069

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

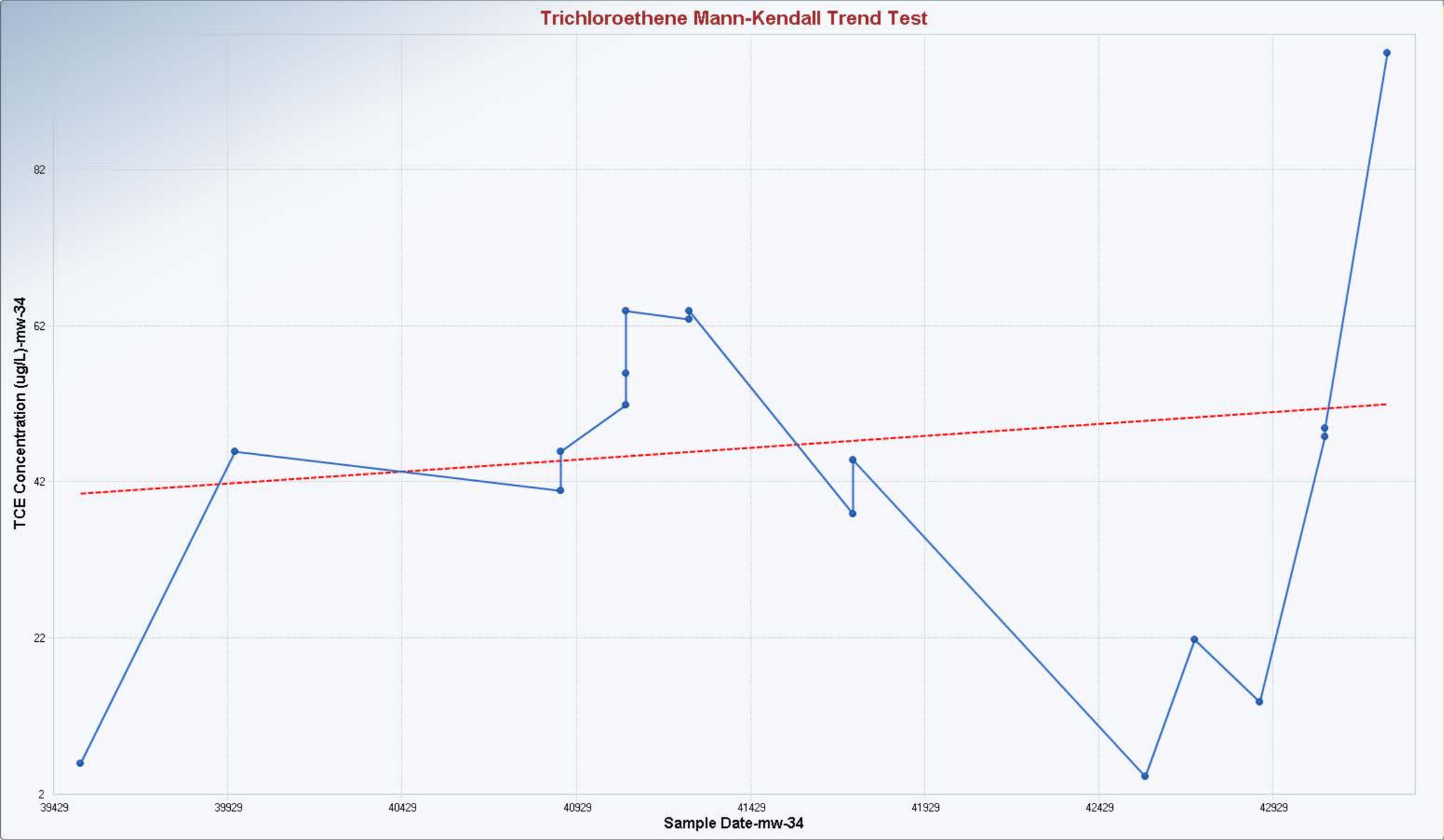
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.2350
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5160
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	500.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.2350
Standardized Value of S	0.6189
M-K Test Value (S)	16
Tabulated p-value	0.2710
Approximate p-value	0.2680

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0031
Theil-Sen Intercept	-80.8856

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

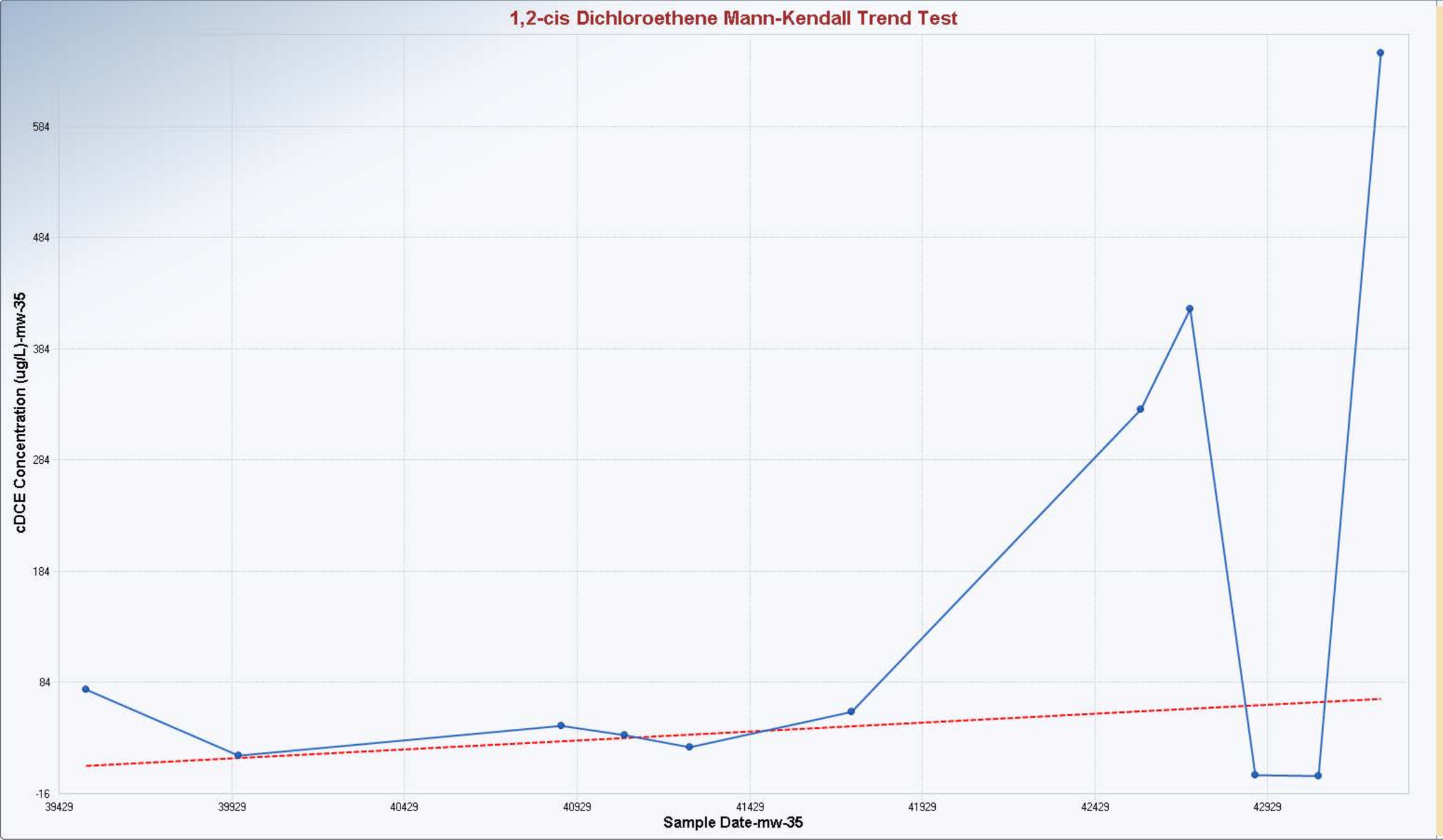
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6623
Standardized Value of S	0.1579
M-K Test Value (S)	3
Tabulated p-value	0.4400
Approximate p-value	0.4372

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	7.4000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

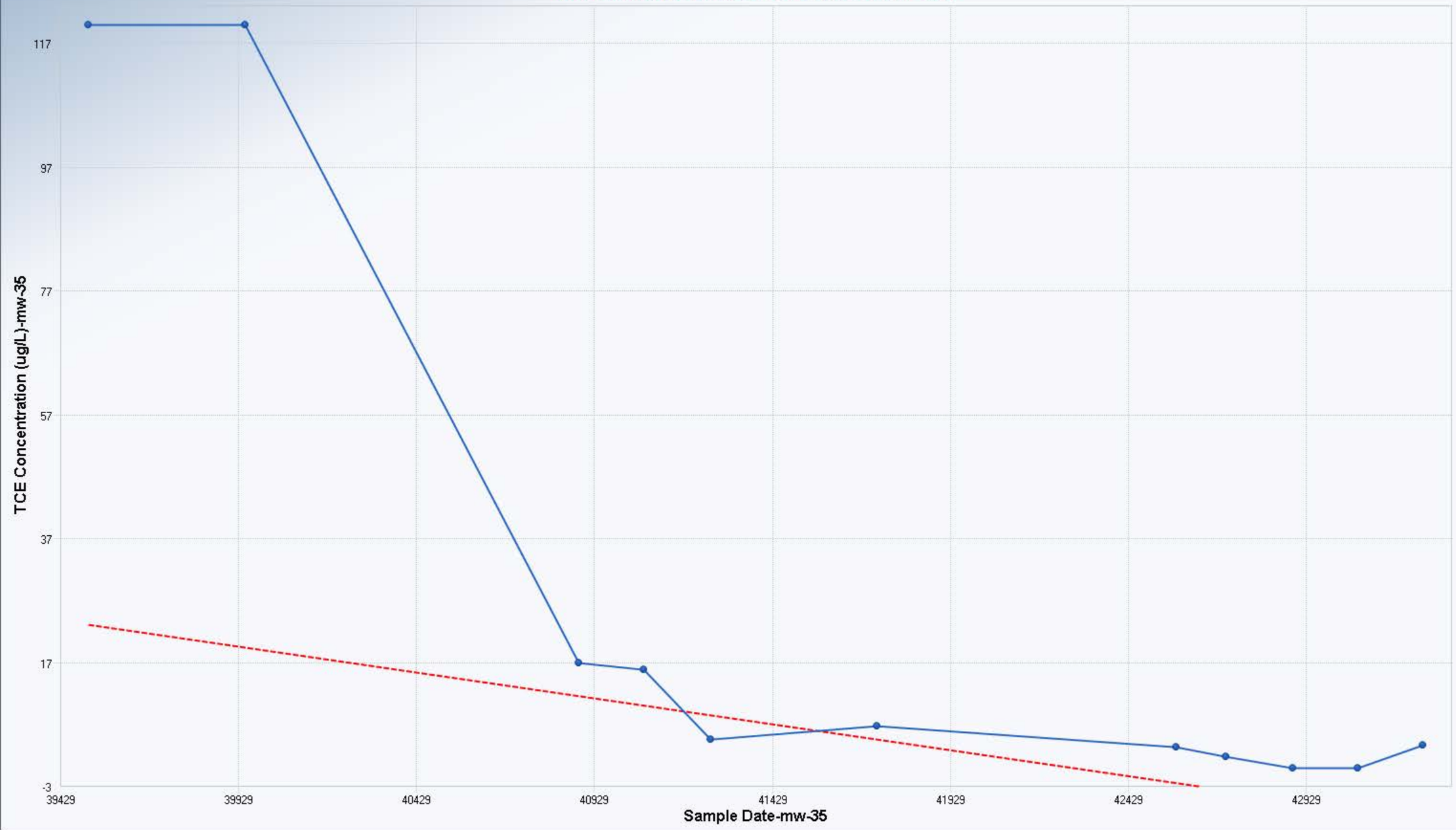
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.8452
Standardized Value of S	0.3114
M-K Test Value (S)	5
Tabulated p-value	0.3810
Approximate p-value	0.3777

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0161
Theil-Sen Intercept	-625.5643

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

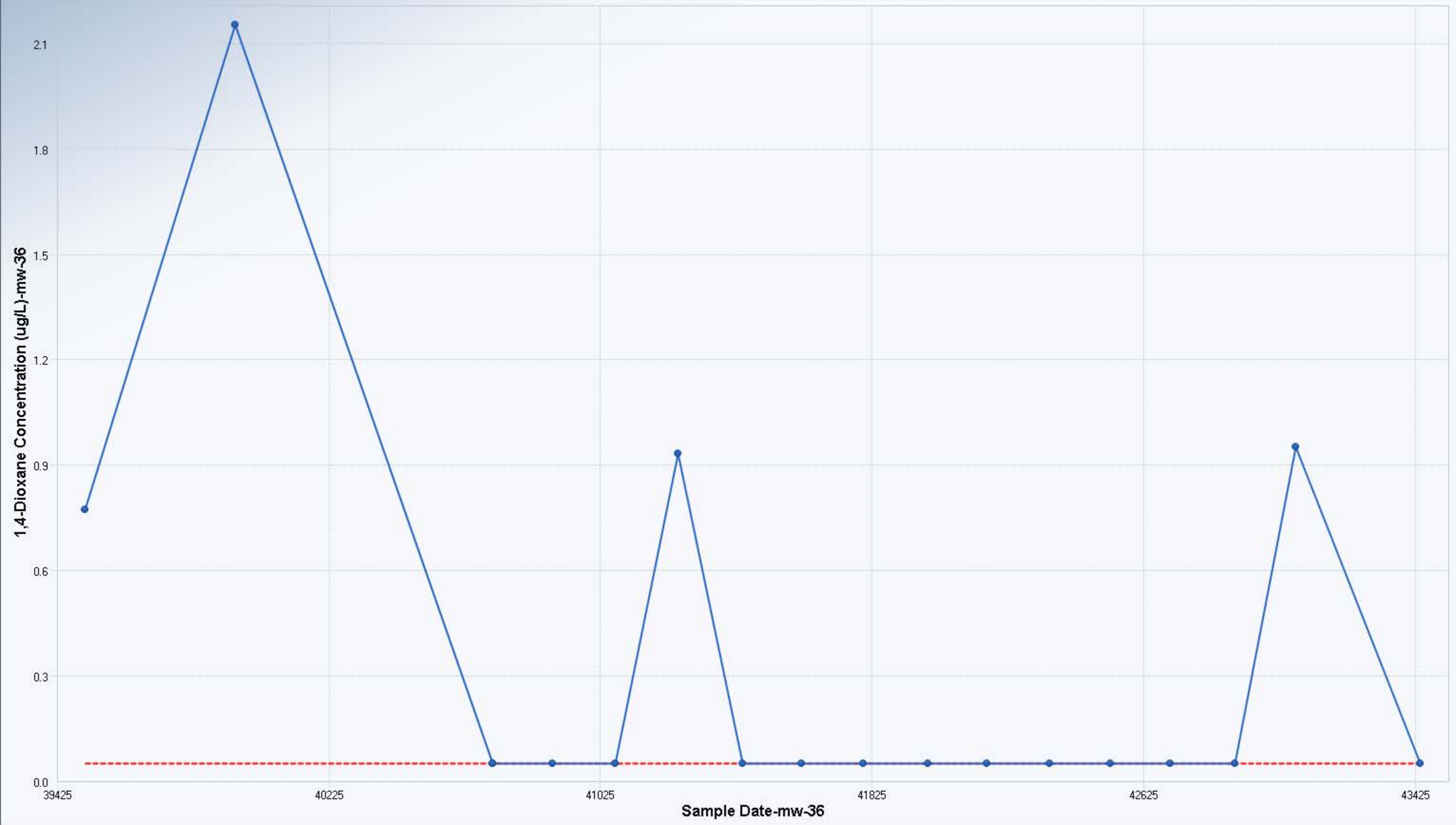
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.7671
Standardized Value of S	-3.2897
M-K Test Value (S)	-43
Tabulated p-value	0.0000
Approximate p-value	0.0005

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0084
Theil-Sen Intercept	355.7631

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



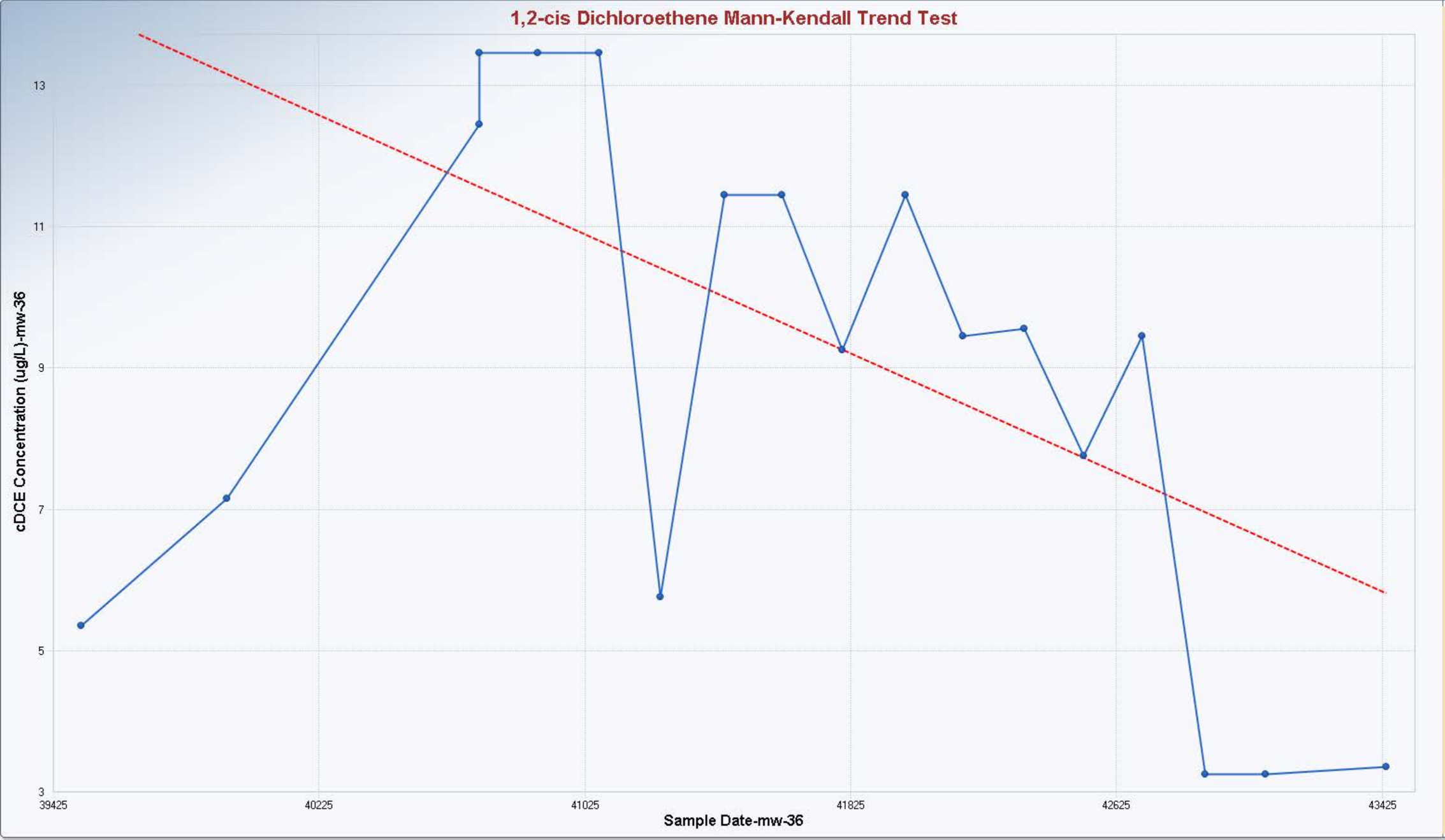
Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.0613
Standardized Value of S	-0.9968
M-K Test Value (S)	-20
Tabulated p-value	0.2270
Approximate p-value	0.1594

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.



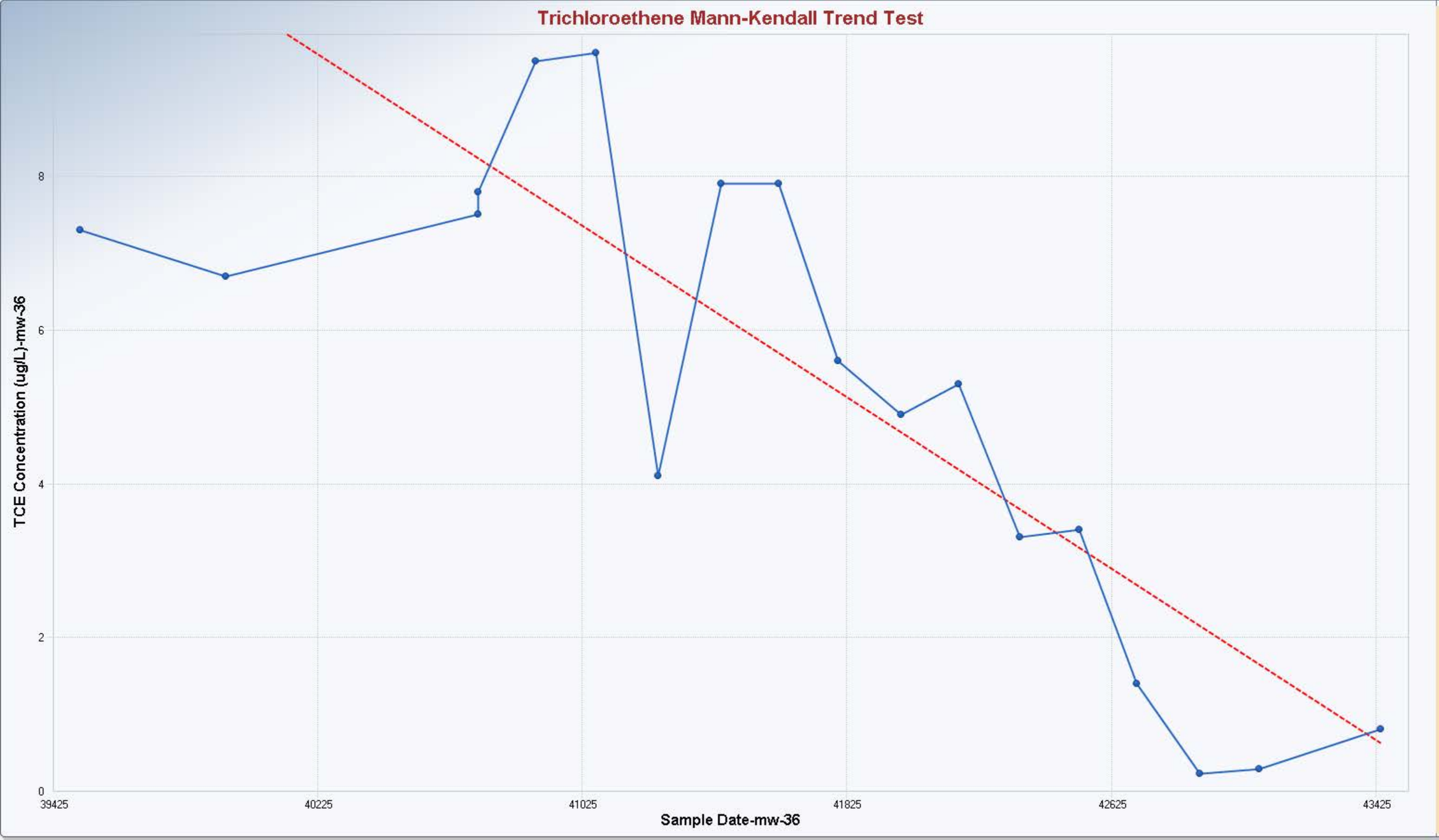
Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.2234
Standardized Value of S	-2.0592
M-K Test Value (S)	-55
Tabulated p-value	0.0200
Approximate p-value	0.0197

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0021
Theil-Sen Intercept	96.7598

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3818
Standardized Value of S	-3.2977
M-K Test Value (S)	-88
Tabulated p-value	0.0000
Approximate p-value	0.0005

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0028
Theil-Sen Intercept	122.2556

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

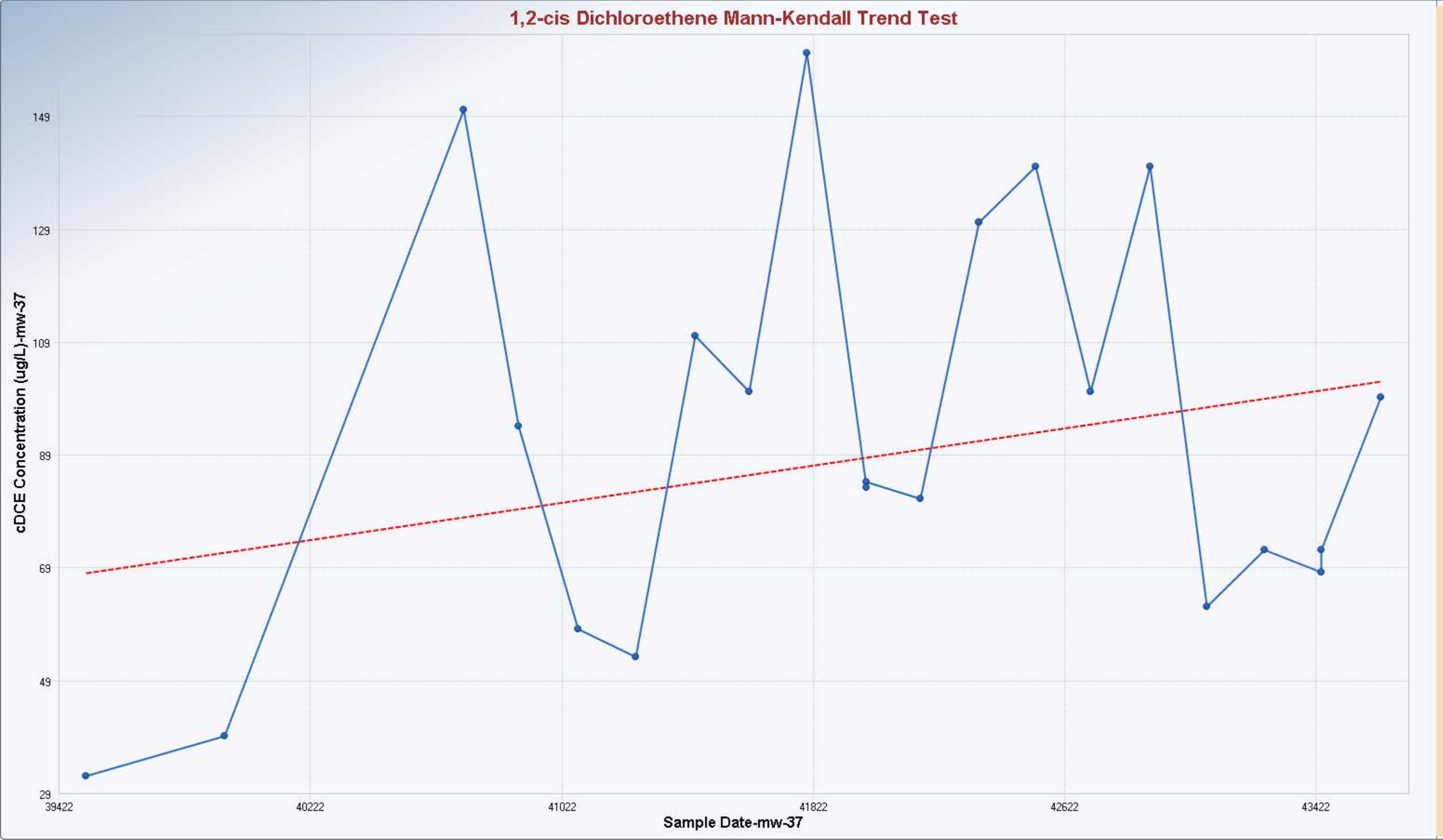
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.1141
Standardized Value of S	1.1391
M-K Test Value (S)	41
Tabulated p-value	0.1310
Approximate p-value	0.1273

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0007
Theil-Sen Intercept	-21.5570

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

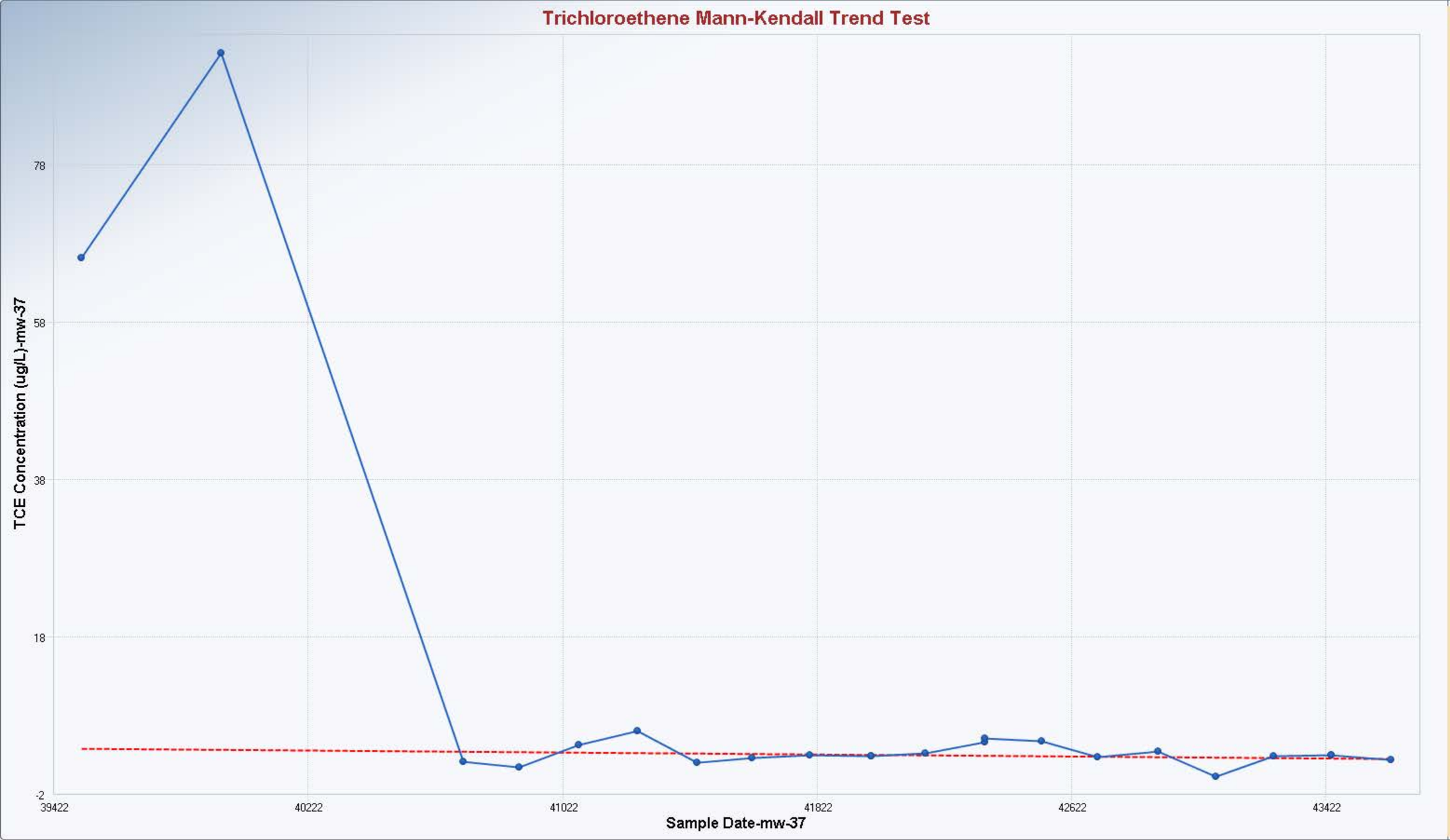
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.4072
Standardized Value of S	0.6213
M-K Test Value (S)	23
Tabulated p-value	0.2700
Approximate p-value	0.2672

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0082
Theil-Sen Intercept	-257.9799

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

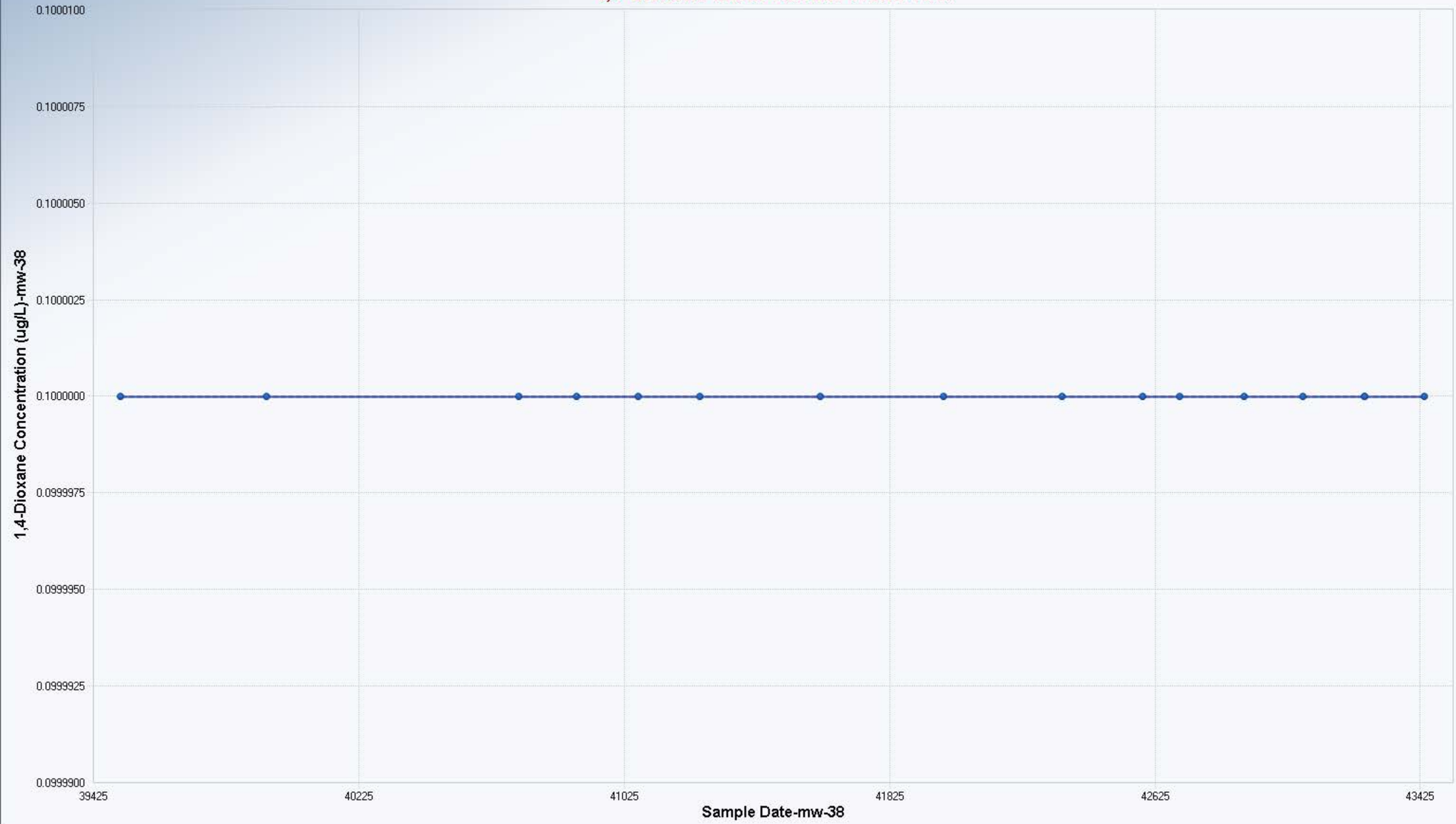
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.3601
Standardized Value of S	-0.7353
M-K Test Value (S)	-27
Tabulated p-value	0.2340
Approximate p-value	0.2311

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0003
Theil-Sen Intercept	16.7791

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

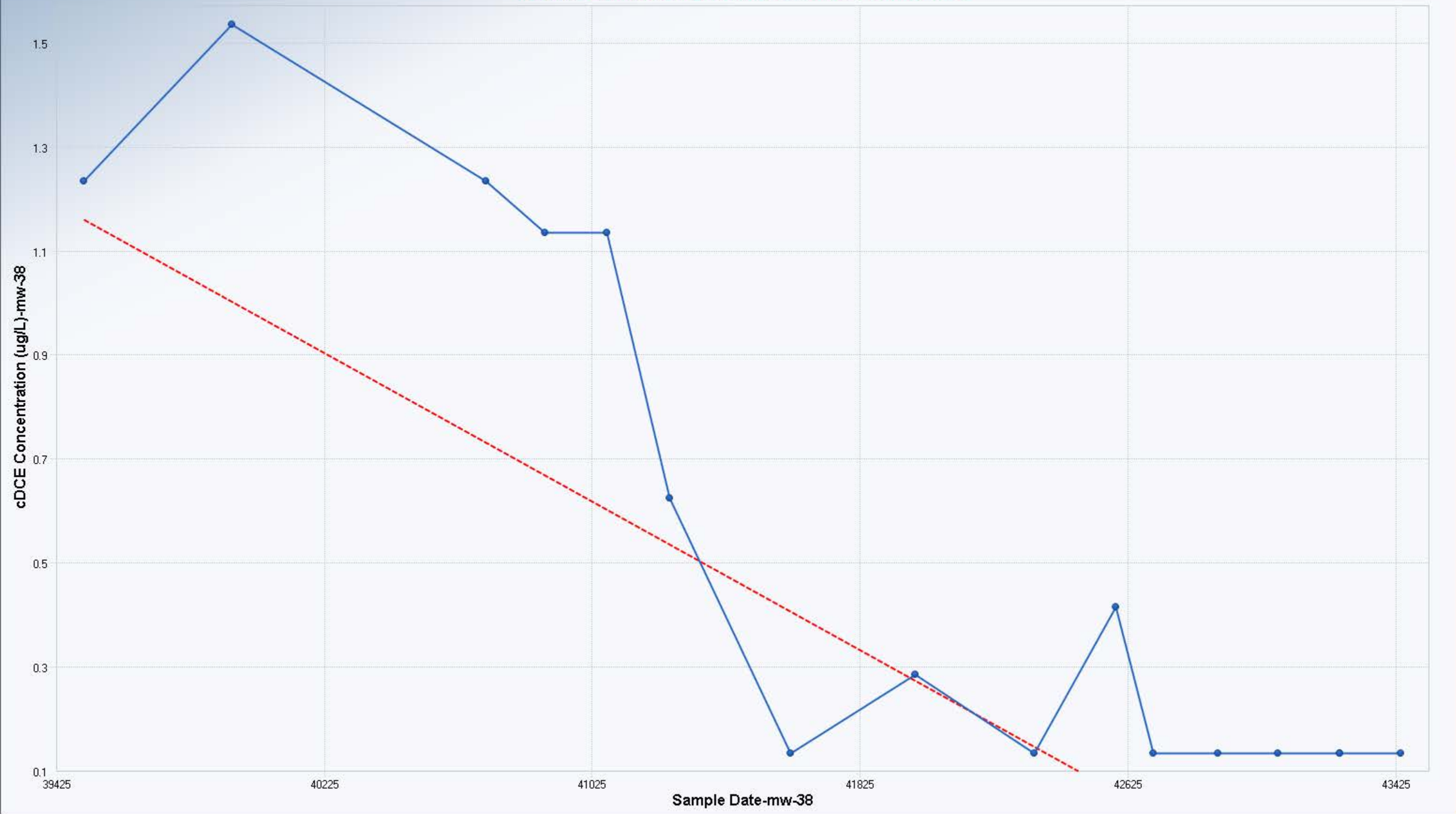
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5180
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

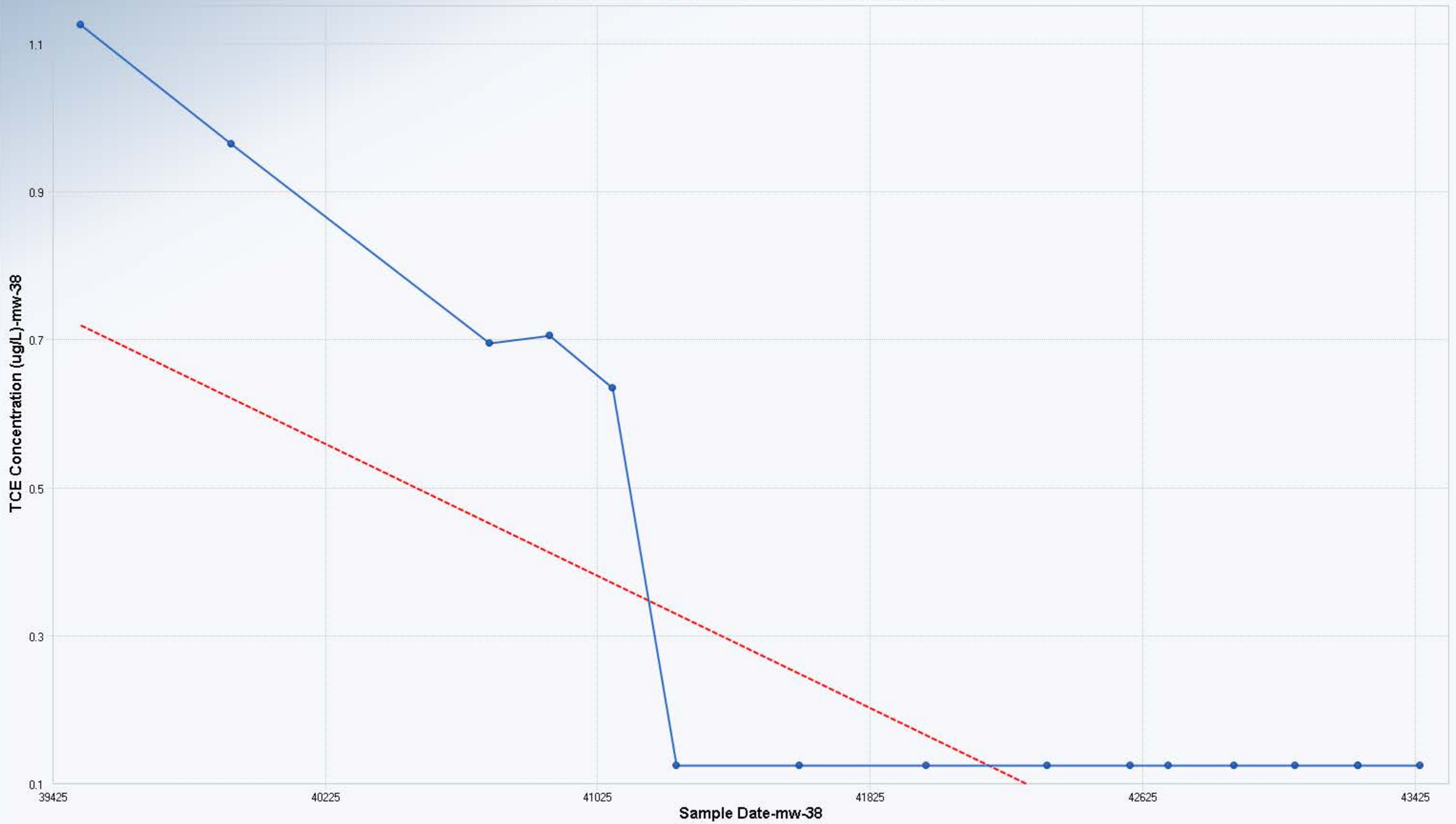
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.6398
Standardized Value of S	-3.8276
M-K Test Value (S)	-80
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0004
Theil-Sen Intercept	15.2483

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1200
Standardized Value of S	-3.4216
M-K Test Value (S)	-63
Tabulated p-value	0.0020
Approximate p-value	0.0003

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	9.5220

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

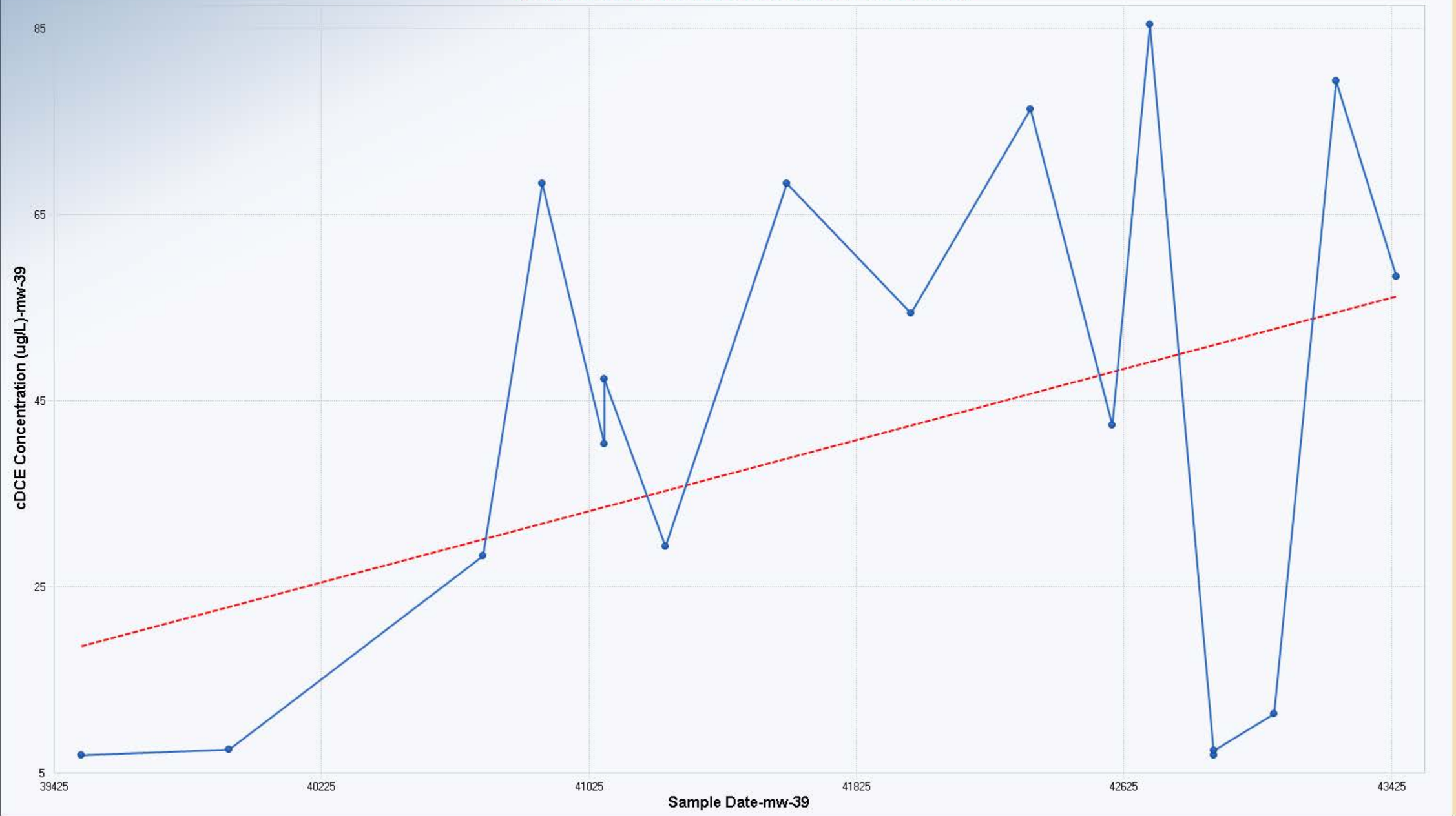
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.1592
Standardized Value of S	-0.2484
M-K Test Value (S)	-7
Tabulated p-value	0.4200
Approximate p-value	0.4019

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0008
Theil-Sen Intercept	55.8039

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

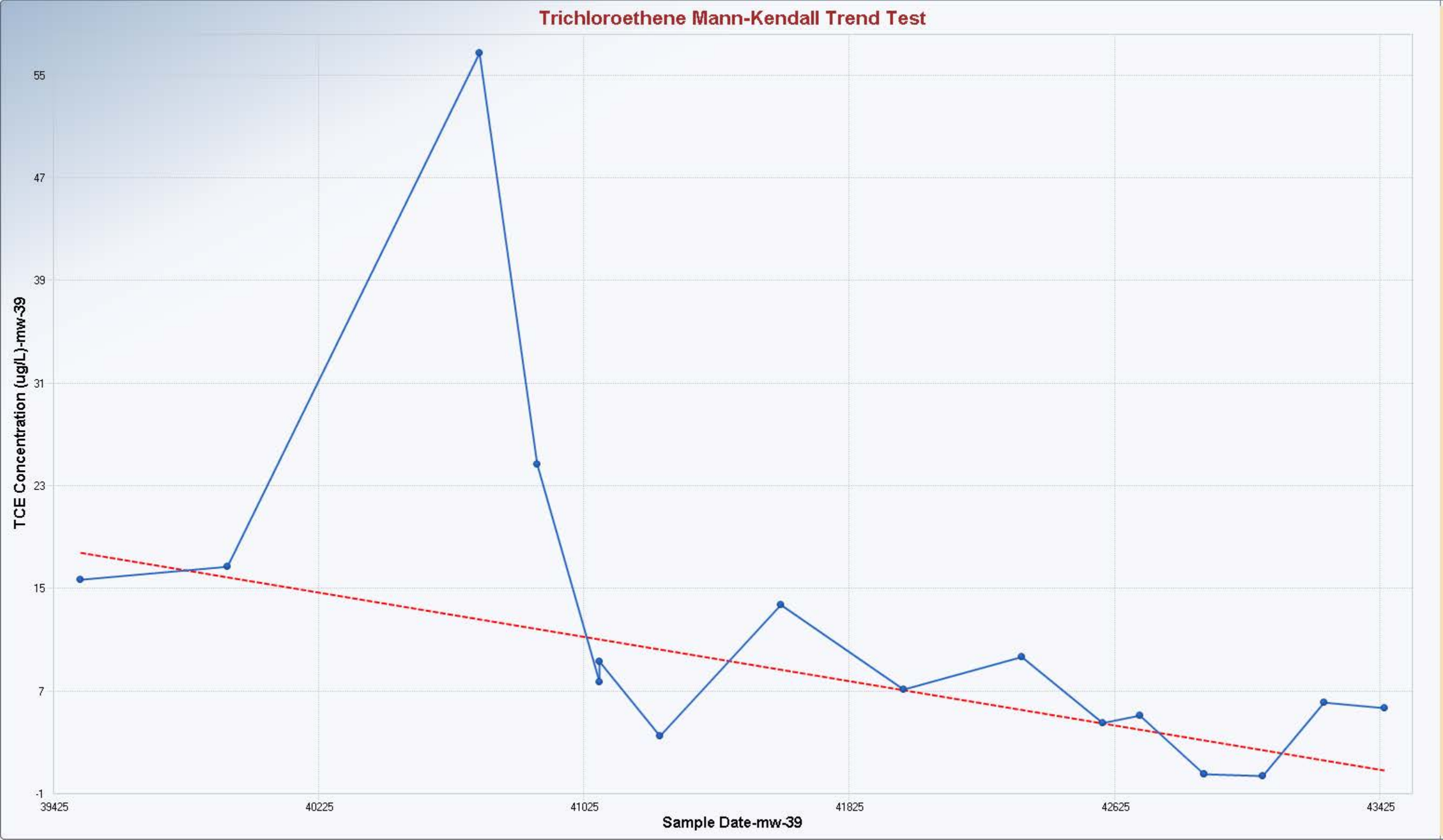
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.2350
Standardized Value of S	1.3617
M-K Test Value (S)	34
Tabulated p-value	0.0880
Approximate p-value	0.0867

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0095
Theil-Sen Intercept	-358.7141

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

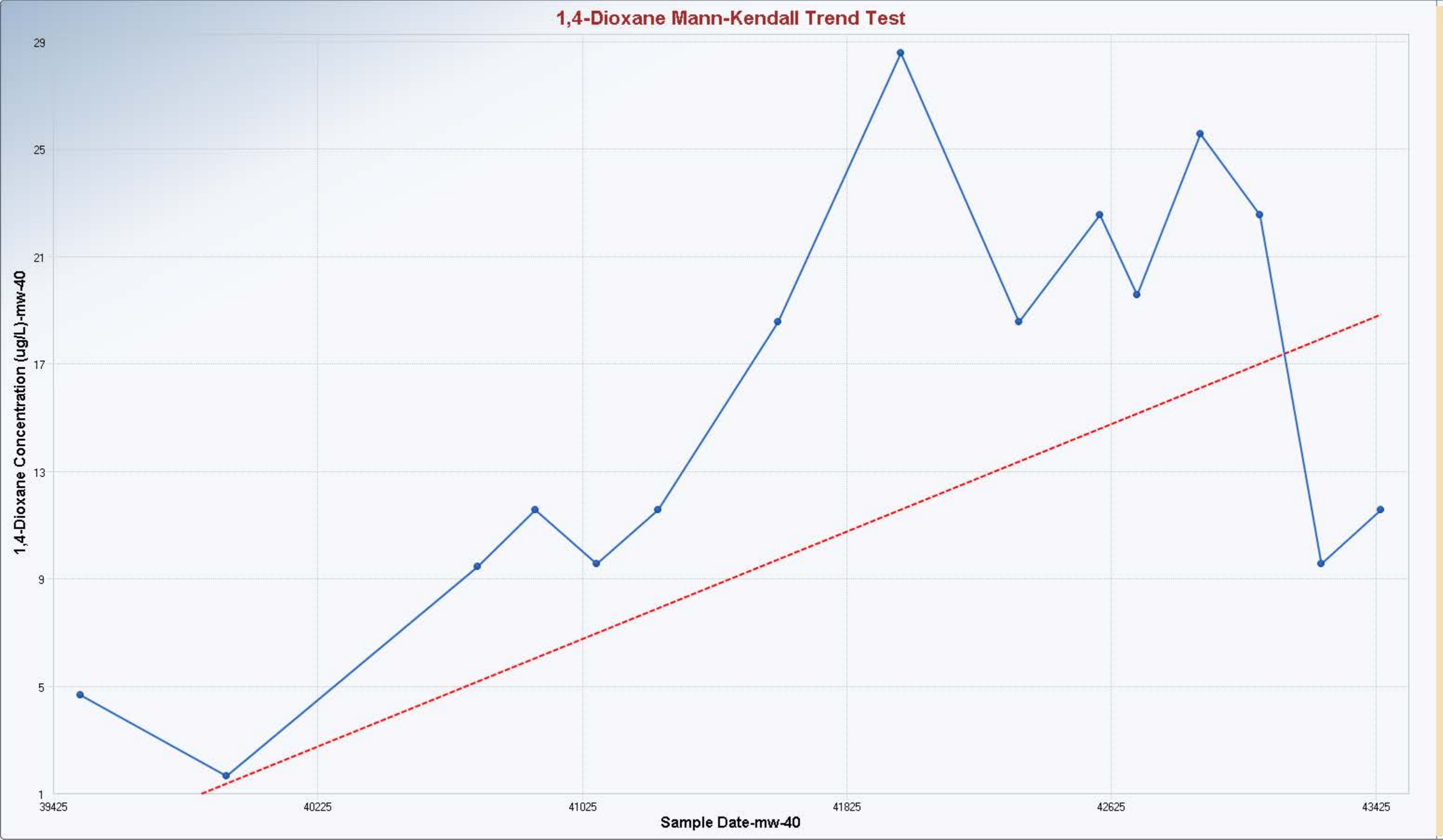
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.2762
Standardized Value of S	-3.0894
M-K Test Value (S)	-76
Tabulated p-value	0.0010
Approximate p-value	0.0010

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0043
Theil-Sen Intercept	188.1844

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.0416
Standardized Value of S	2.3950
M-K Test Value (S)	49
Tabulated p-value	0.0080
Approximate p-value	0.0083

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0050
Theil-Sen Intercept	-198.7692

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

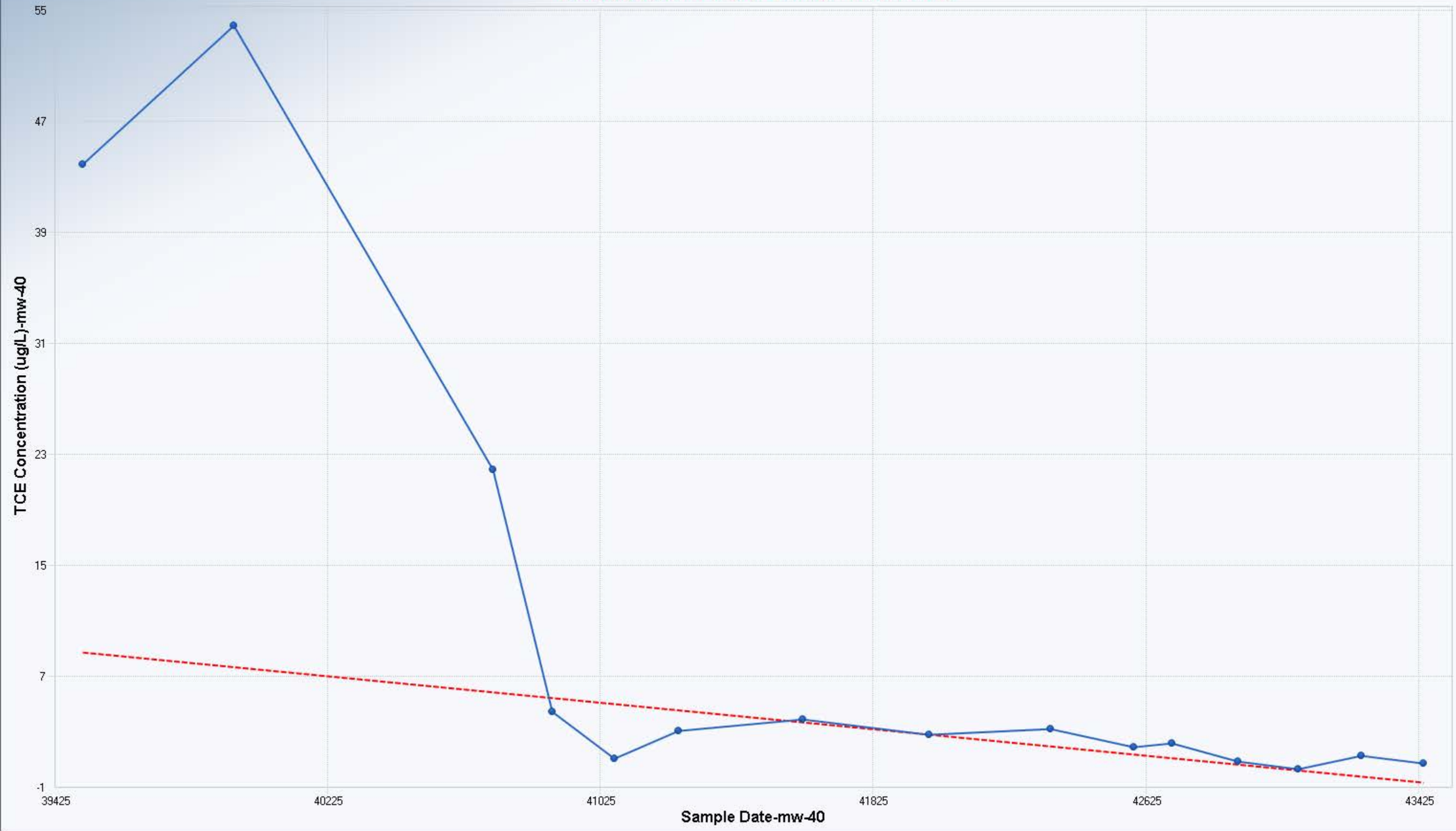
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1825
Standardized Value of S	-1.0405
M-K Test Value (S)	-22
Tabulated p-value	0.1410
Approximate p-value	0.1491

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0087
Theil-Sen Intercept	410.9547

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

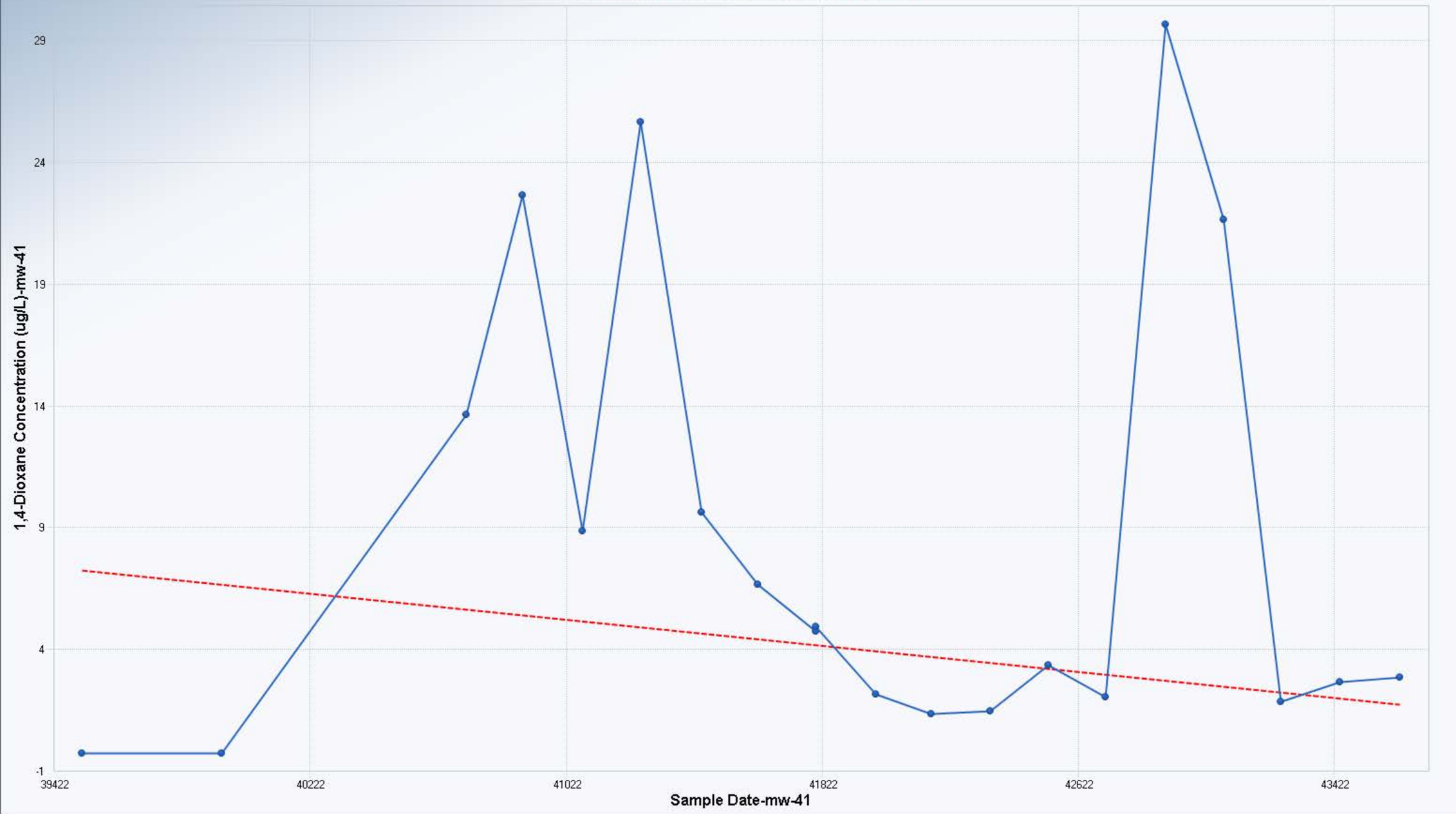
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.2073
Standardized Value of S	-3.6621
M-K Test Value (S)	-75
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0024
Theil-Sen Intercept	103.1870

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8058
Standardized Value of S	-0.5843
M-K Test Value (S)	-19
Tabulated p-value	0.2930
Approximate p-value	0.2795

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0013
Theil-Sen Intercept	60.7373

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

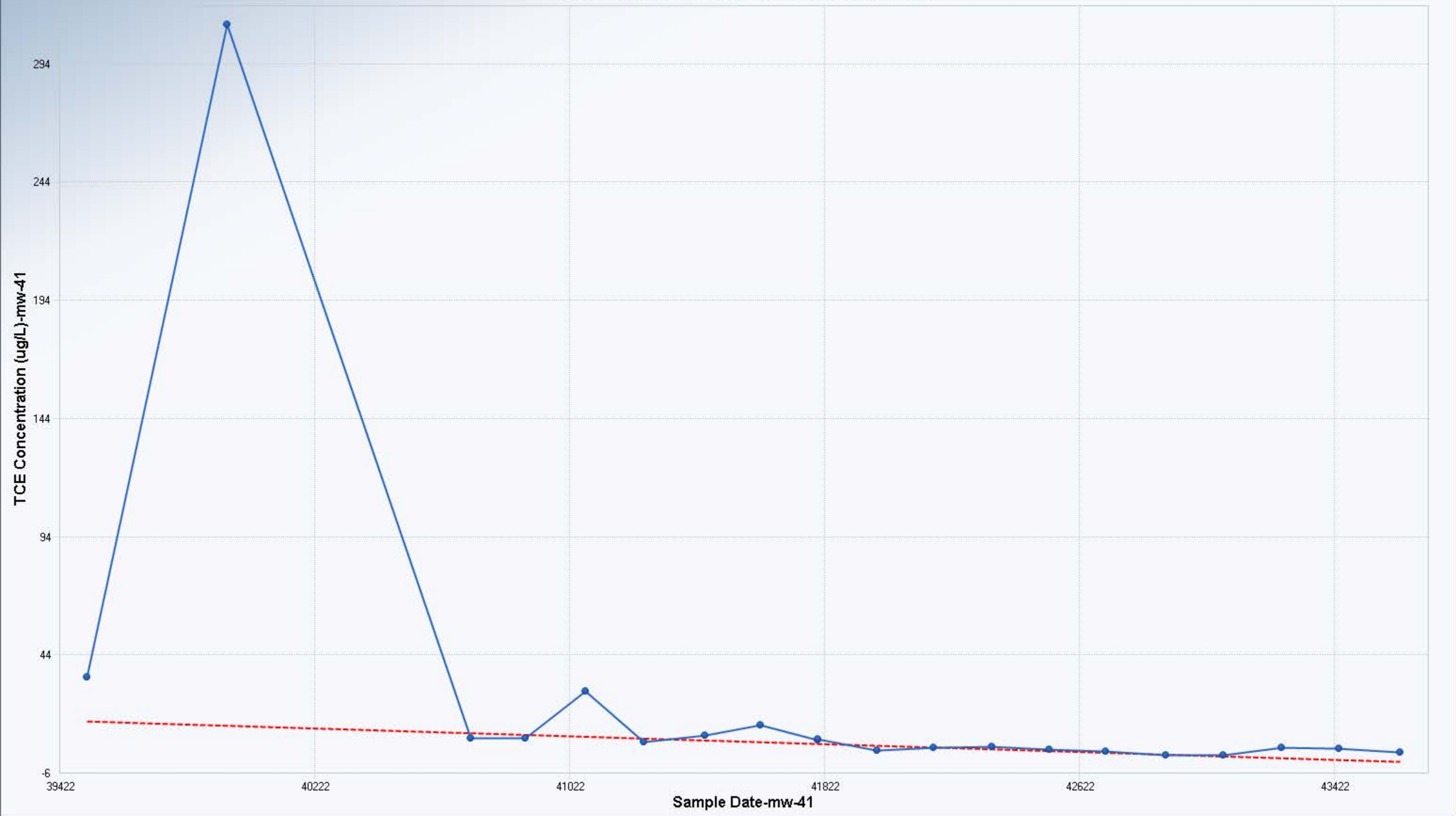
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7571
Standardized Value of S	-0.6177
M-K Test Value (S)	-20
Tabulated p-value	0.2710
Approximate p-value	0.2684

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0032
Theil-Sen Intercept	155.3439

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8058
Standardized Value of S	-4.2200
M-K Test Value (S)	-131
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0042
Theil-Sen Intercept	180.2941

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

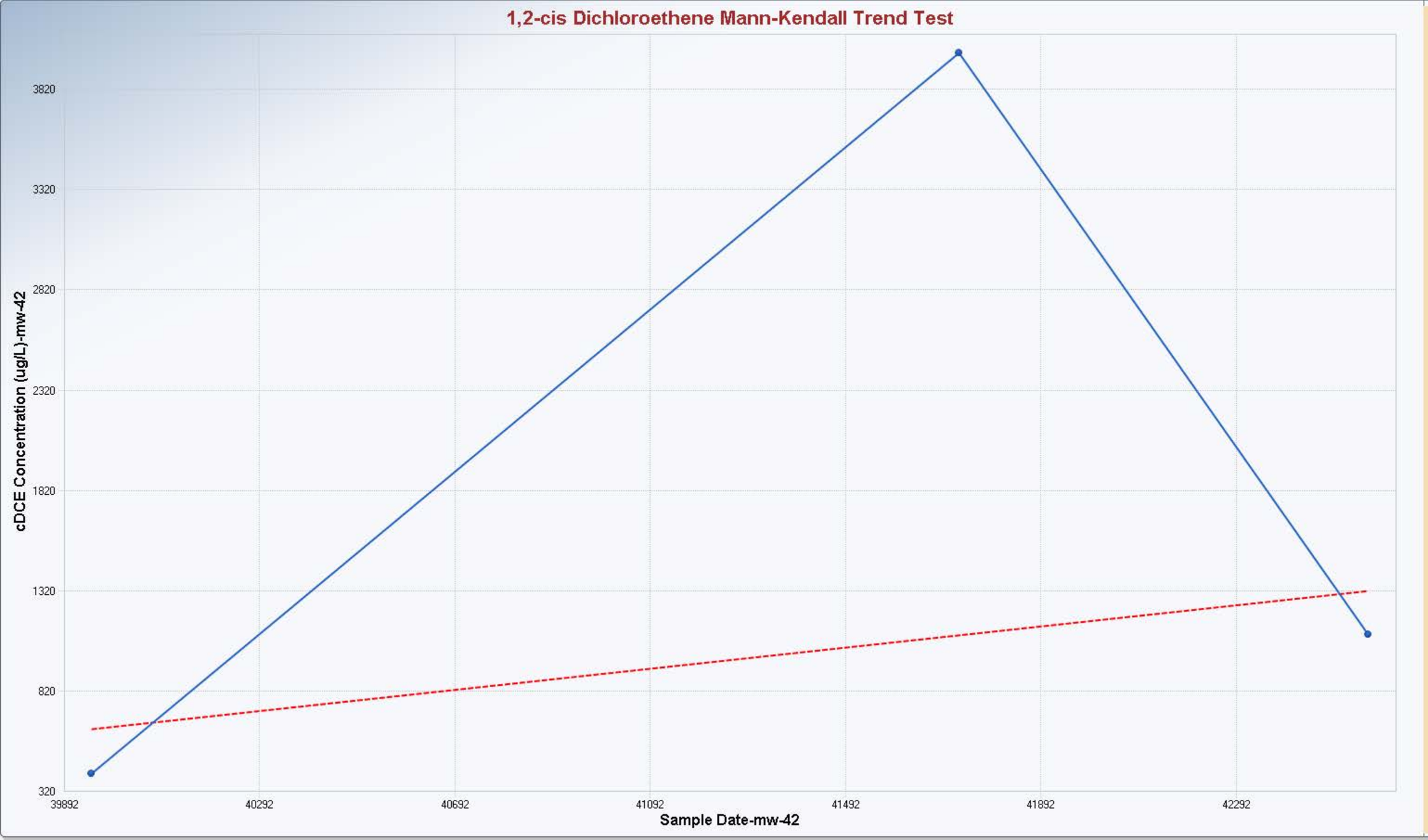
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0172
Theil-Sen Intercept	-695.3243

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

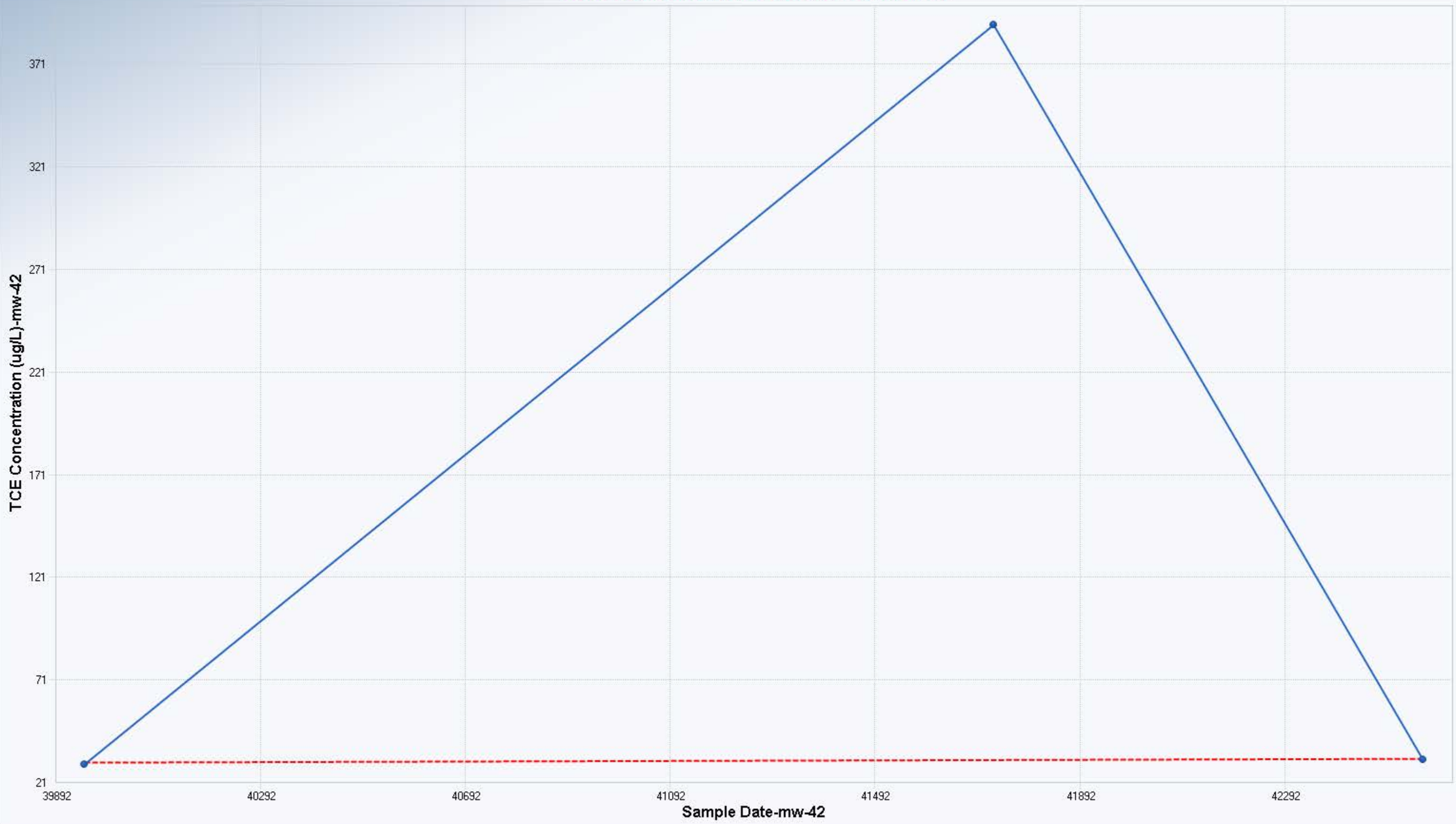
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.2638
Theil-Sen Intercept	-9,905.1835

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0008
Theil-Sen Intercept	0.1009

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

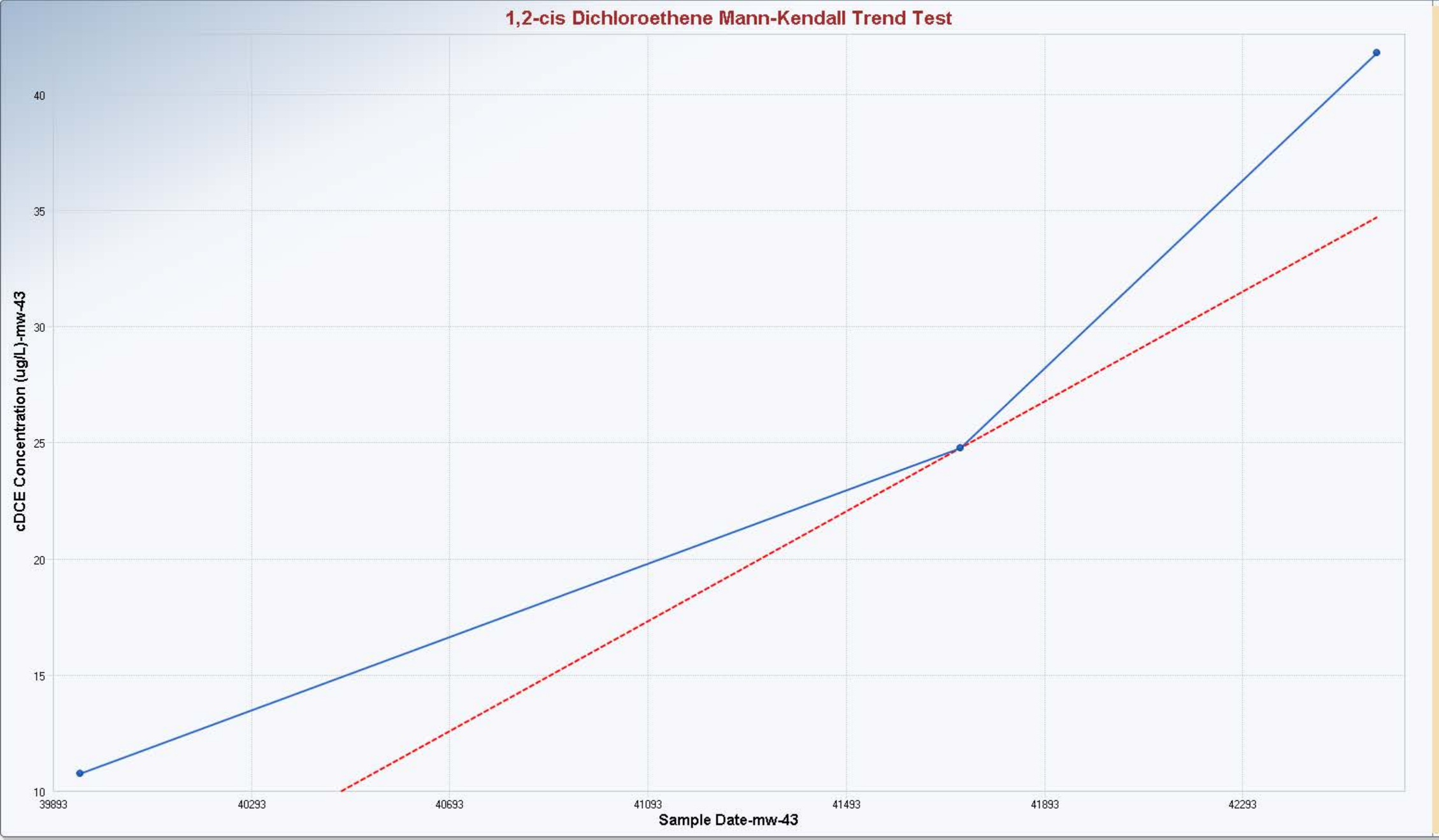
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0015
Theil-Sen Intercept	-59.4270

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

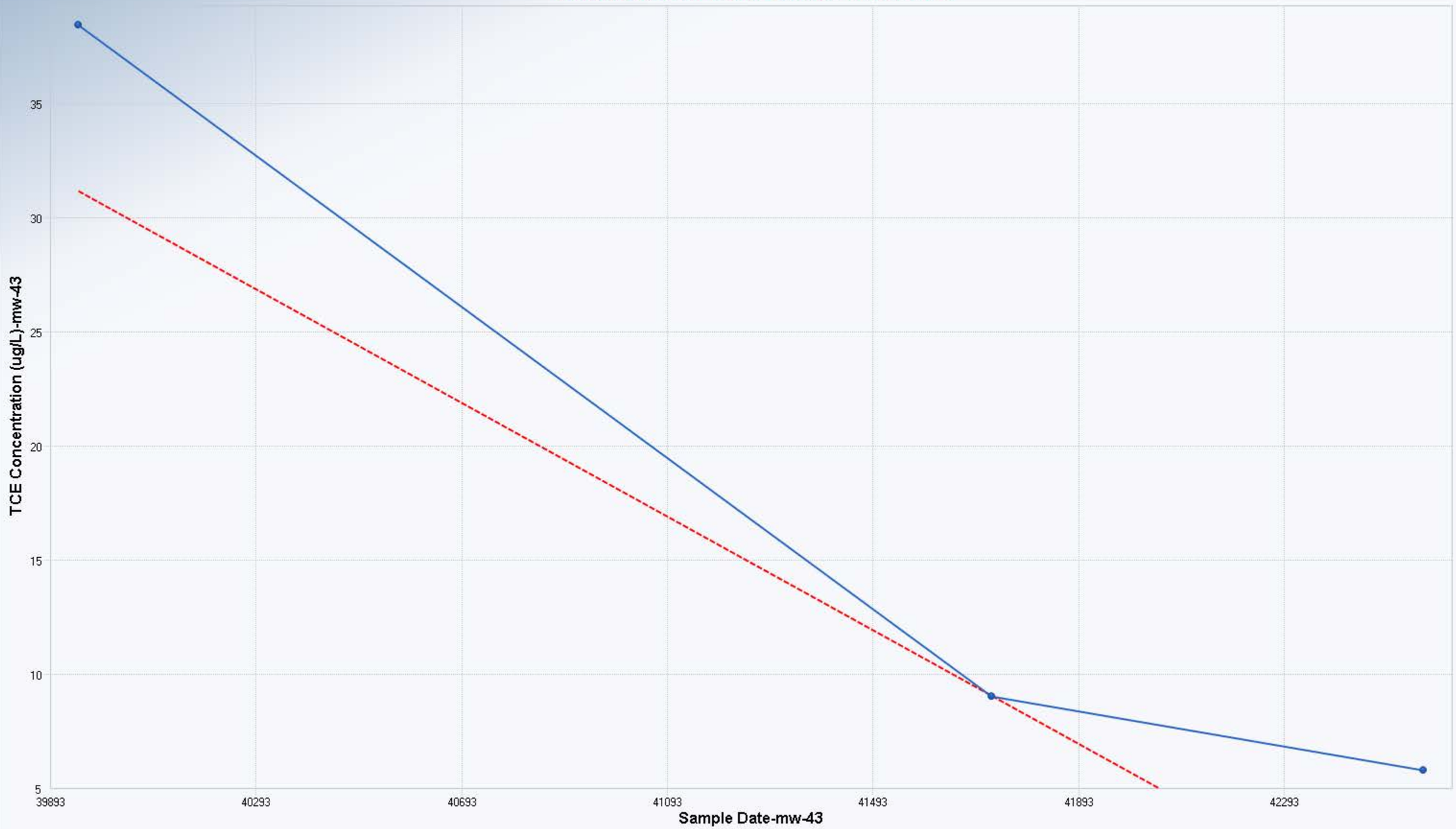
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0119
Theil-Sen Intercept	-469.6249

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

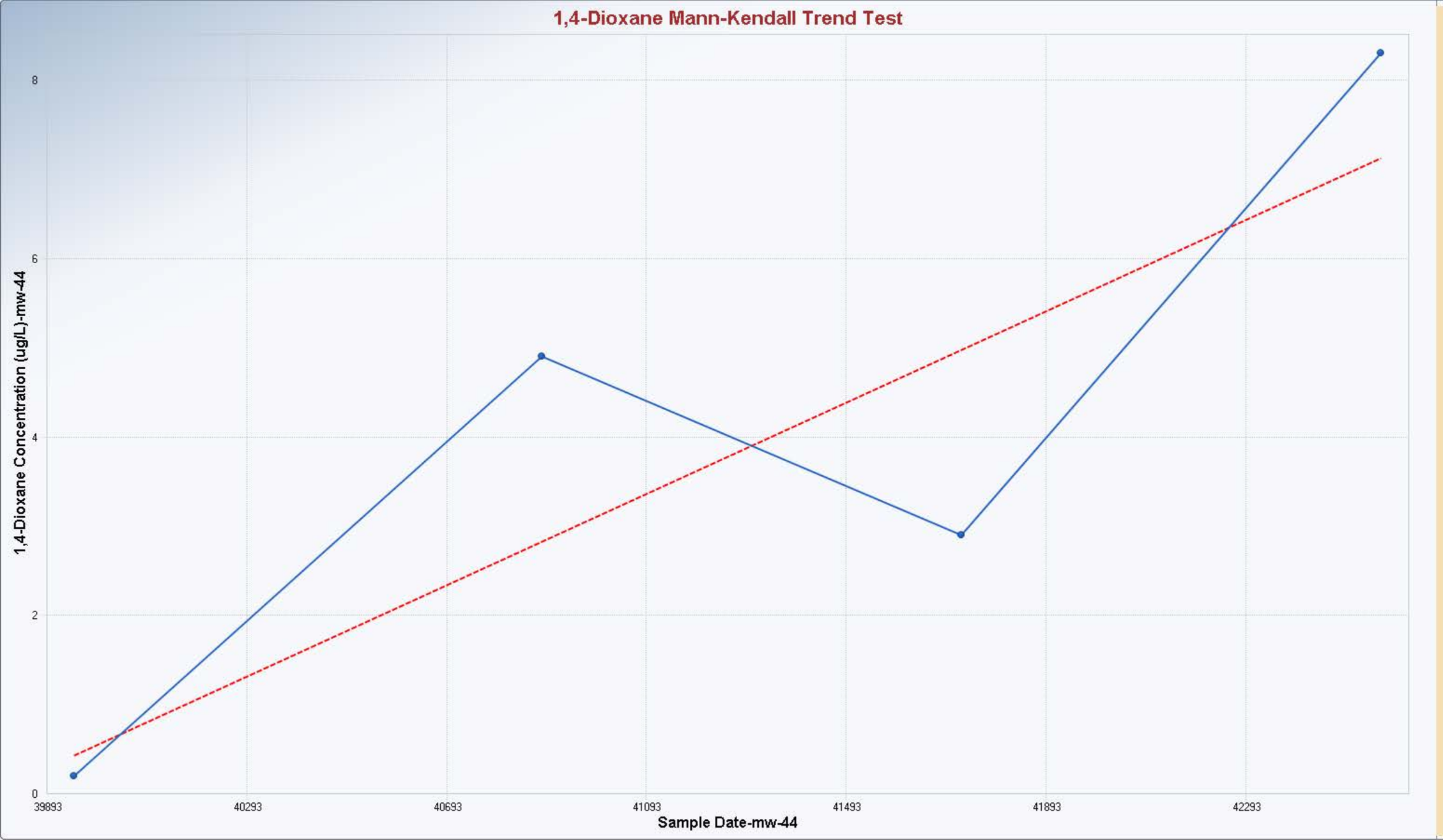
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0125
Theil-Sen Intercept	528.7539

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



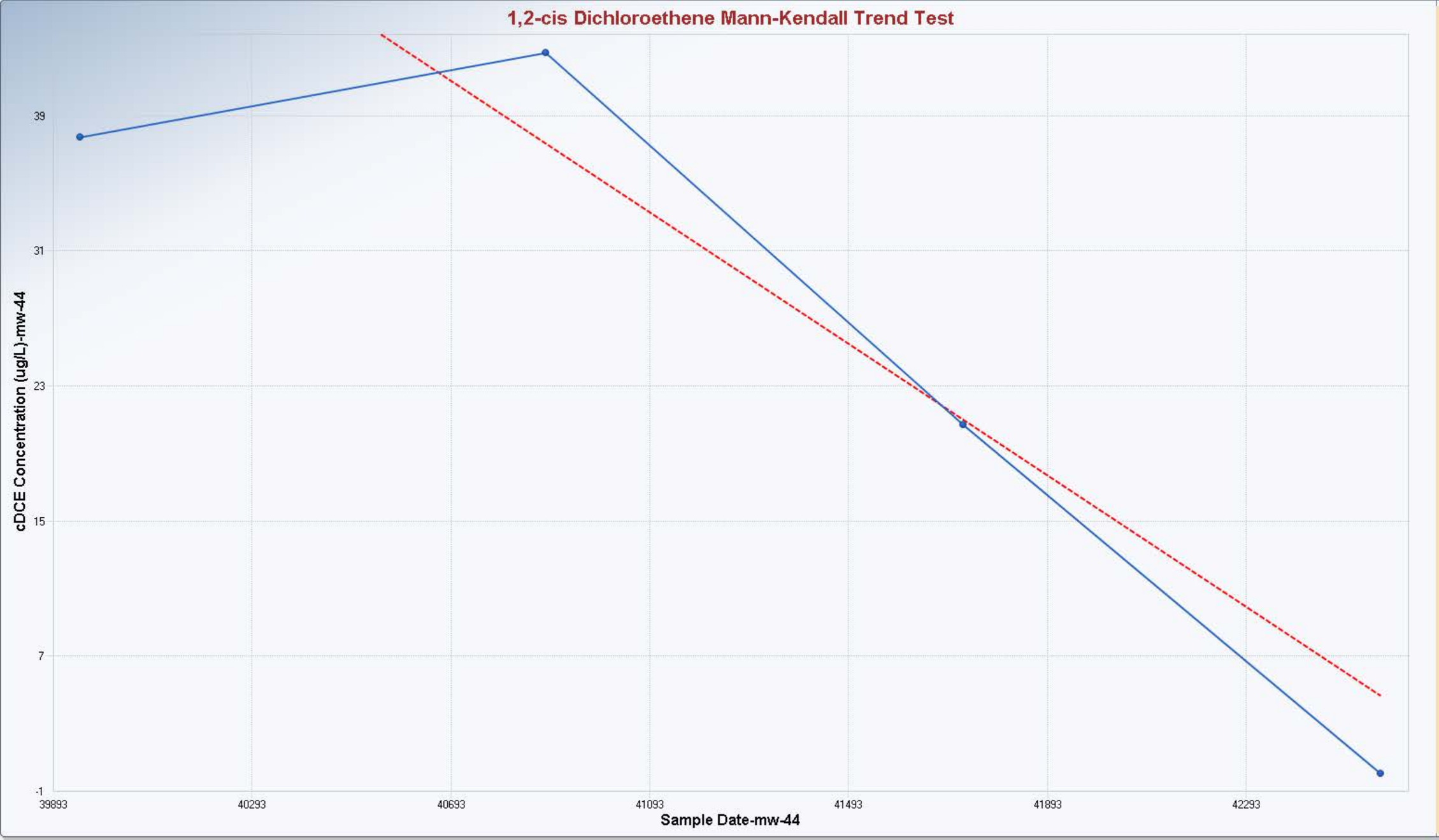
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	1.0190
M-K Test Value (S)	4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0026
Theil-Sen Intercept	-101.9905

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.0190
M-K Test Value (S)	-4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0195
Theil-Sen Intercept	834.4913

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.6984
M-K Test Value (S)	-6
Tabulated p-value	0.0420
Approximate p-value	0.0447

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0137
Theil-Sen Intercept	575.5561

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

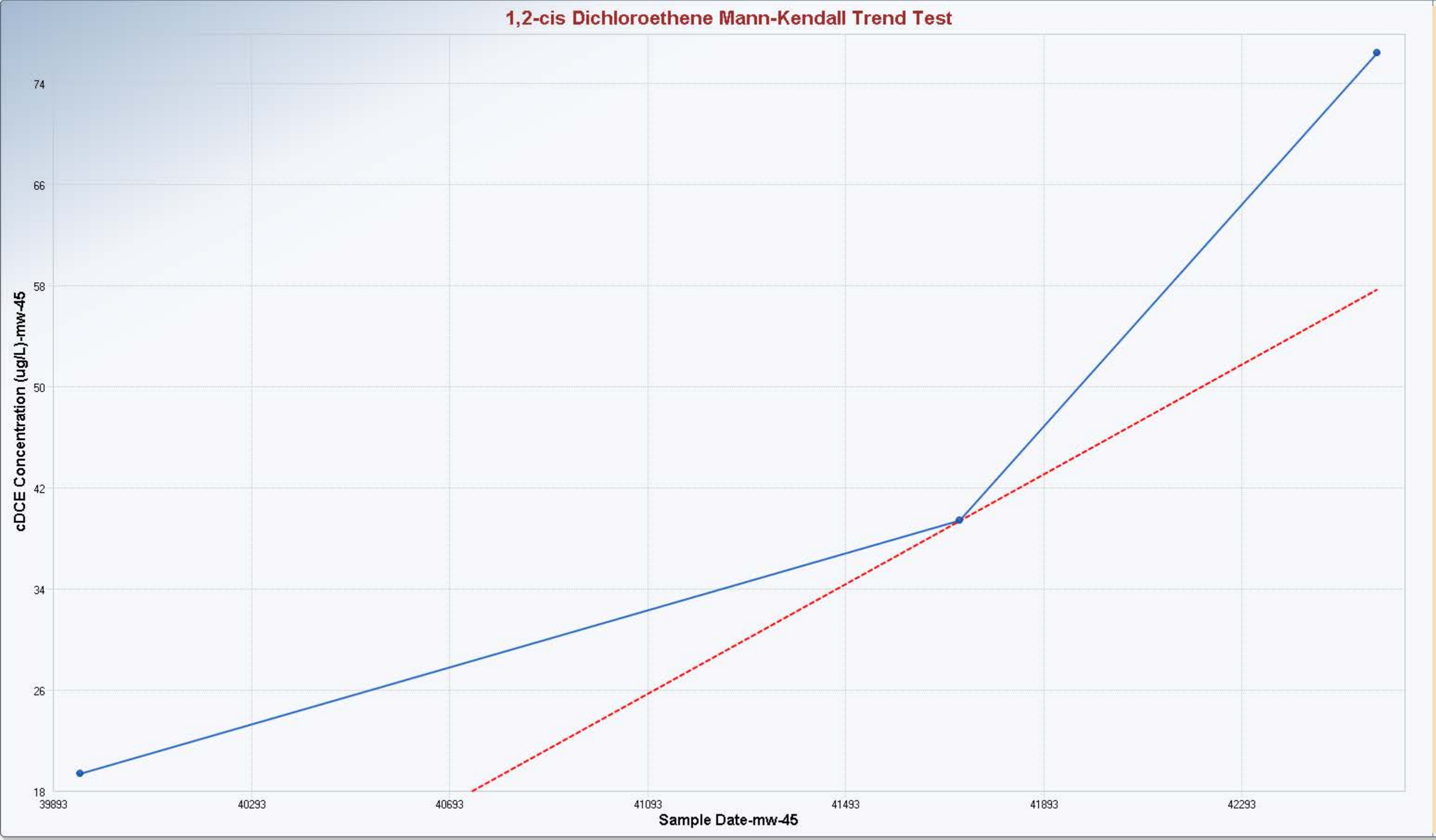
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0013
Theil-Sen Intercept	-52.1064

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0218
Theil-Sen Intercept	-869.7547

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0002
Theil-Sen Intercept	10.0715

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	0.6124
M-K Test Value (S)	2
Tabulated p-value	
Approximate p-value	0.2701

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0013
Theil-Sen Intercept	-54.0018

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

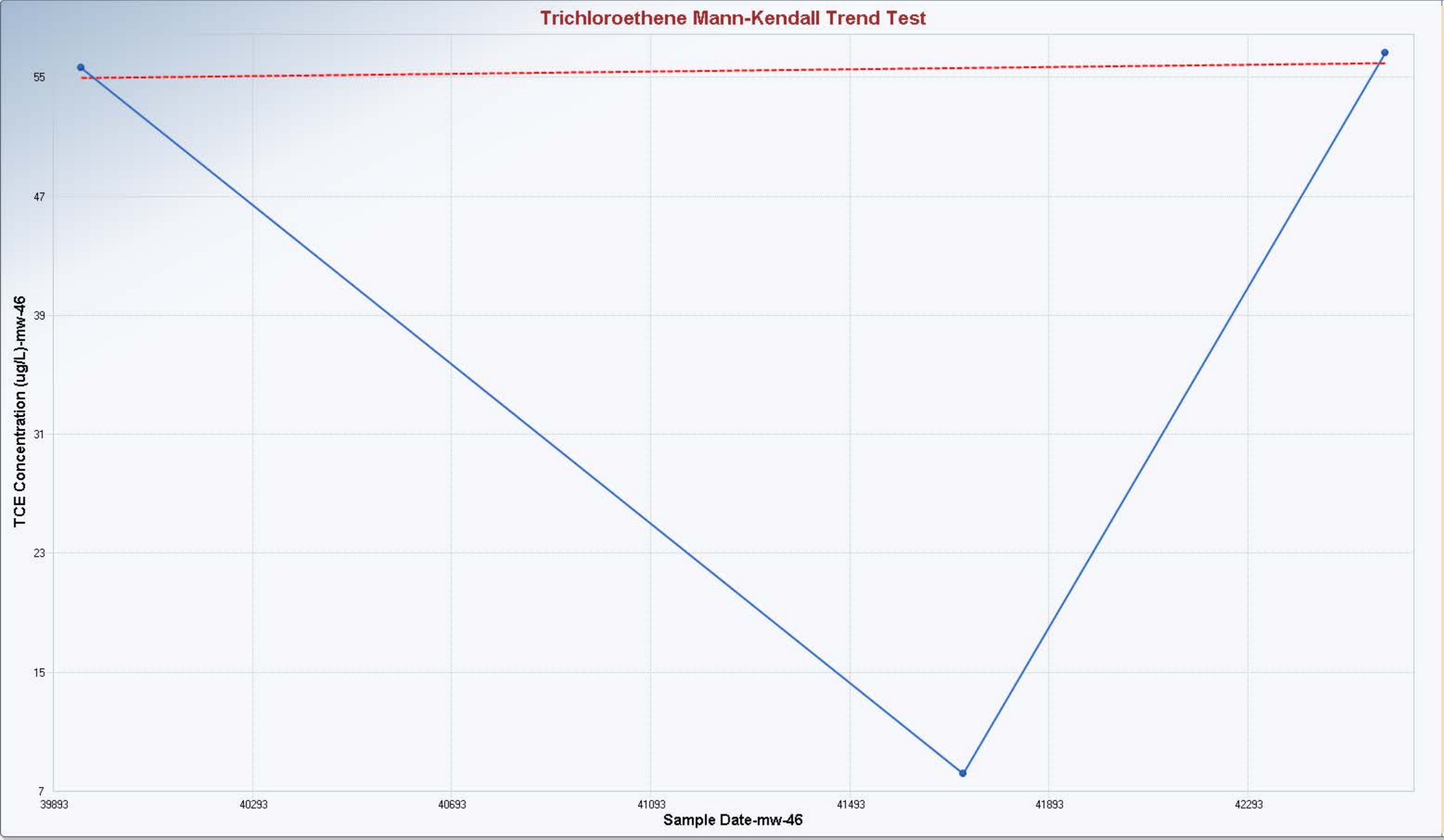
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.1392
Theil-Sen Intercept	-5,712.9825

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	40.0877

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

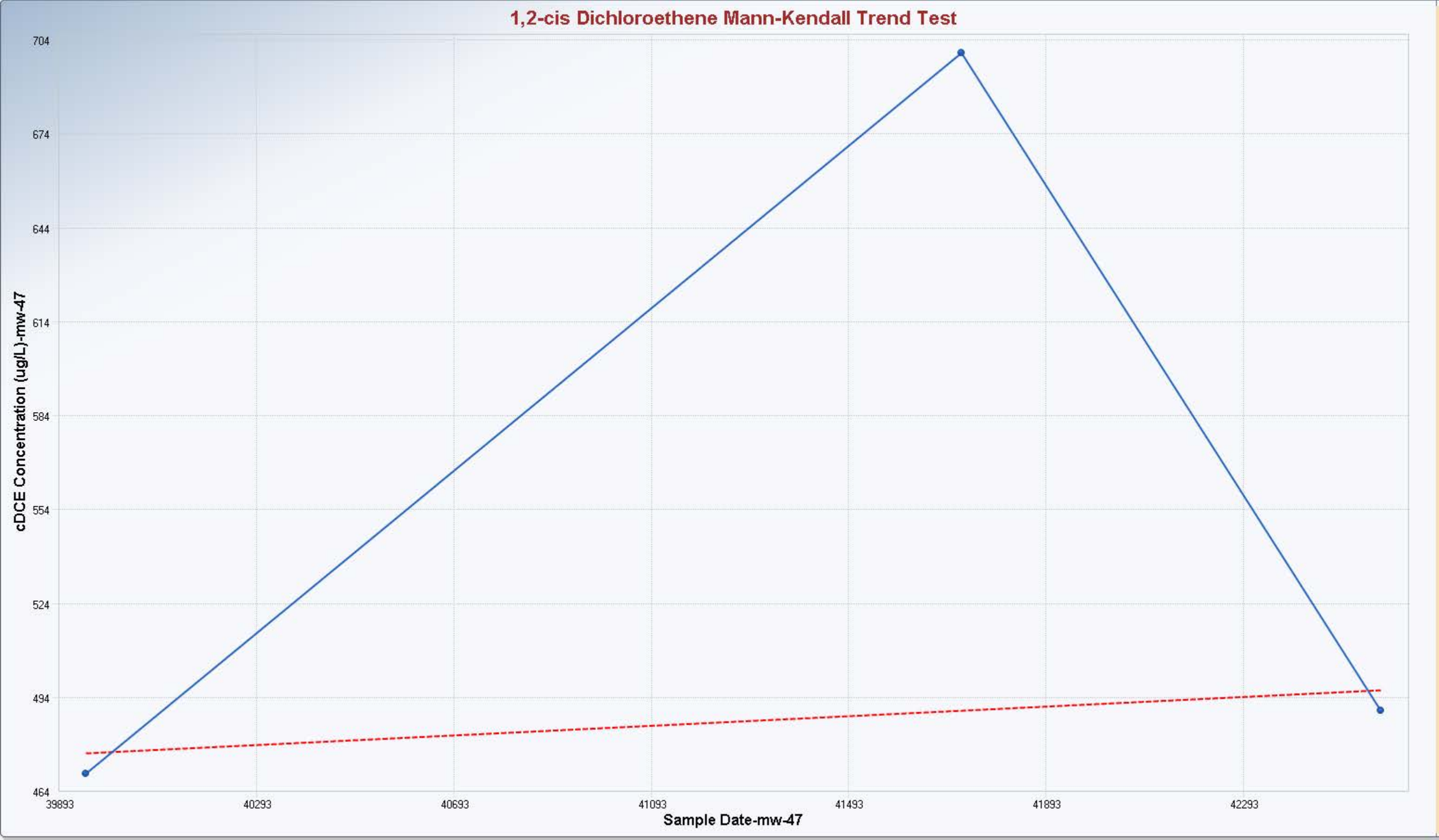
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0023
Theil-Sen Intercept	-95.2649

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0076
Theil-Sen Intercept	171.7544

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0357
Theil-Sen Intercept	1,503.3895

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

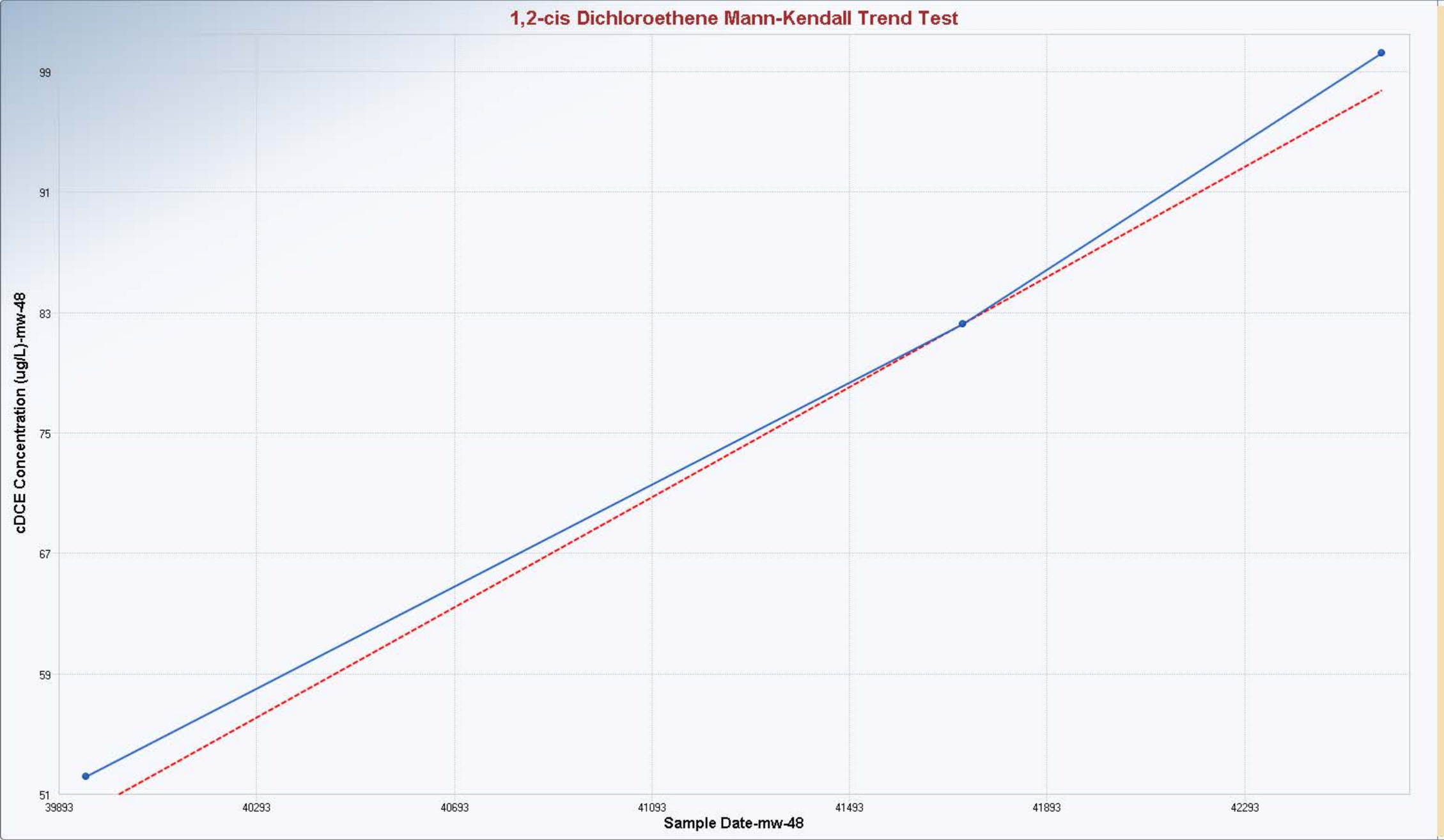
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0049
Theil-Sen Intercept	-196.5684

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0183
Theil-Sen Intercept	-681.7895

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0090
Theil-Sen Intercept	402.1211

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

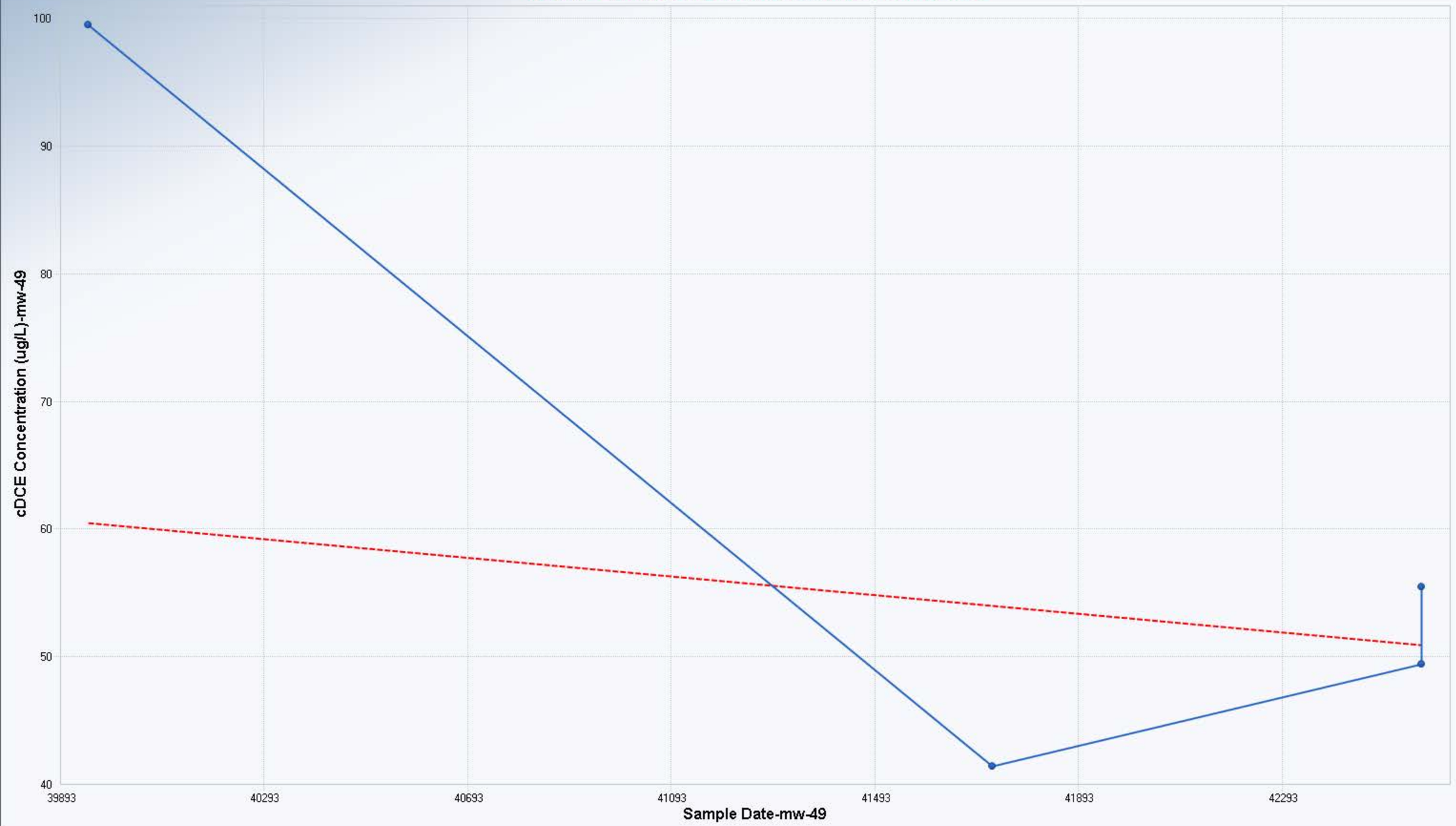
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0037
Theil-Sen Intercept	205.9459

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-1.4446
M-K Test Value (S)	-5
Tabulated p-value	0.1670
Approximate p-value	0.0743

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0105
Theil-Sen Intercept	443.3398

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0905
Standardized Value of S	0.9017
M-K Test Value (S)	11
Tabulated p-value	0.1900
Approximate p-value	0.1836

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	-15.3719

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

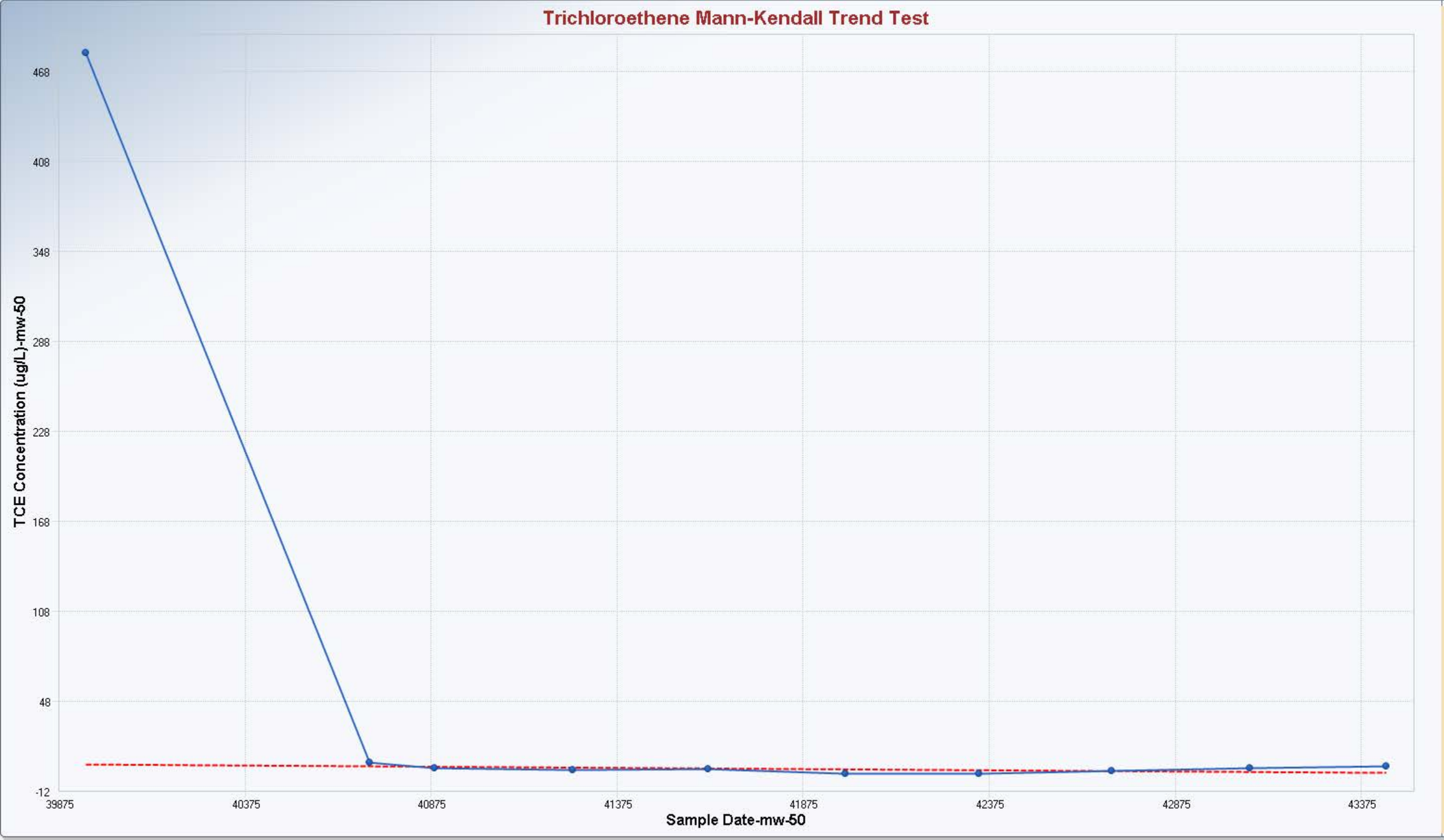
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0905
Standardized Value of S	-1.9837
M-K Test Value (S)	-23
Tabulated p-value	0.0230
Approximate p-value	0.0236

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0714
Theil-Sen Intercept	3,472.6866

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0905
Standardized Value of S	-1.0820
M-K Test Value (S)	-13
Tabulated p-value	0.1460
Approximate p-value	0.1396

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0016
Theil-Sen Intercept	72.0152

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

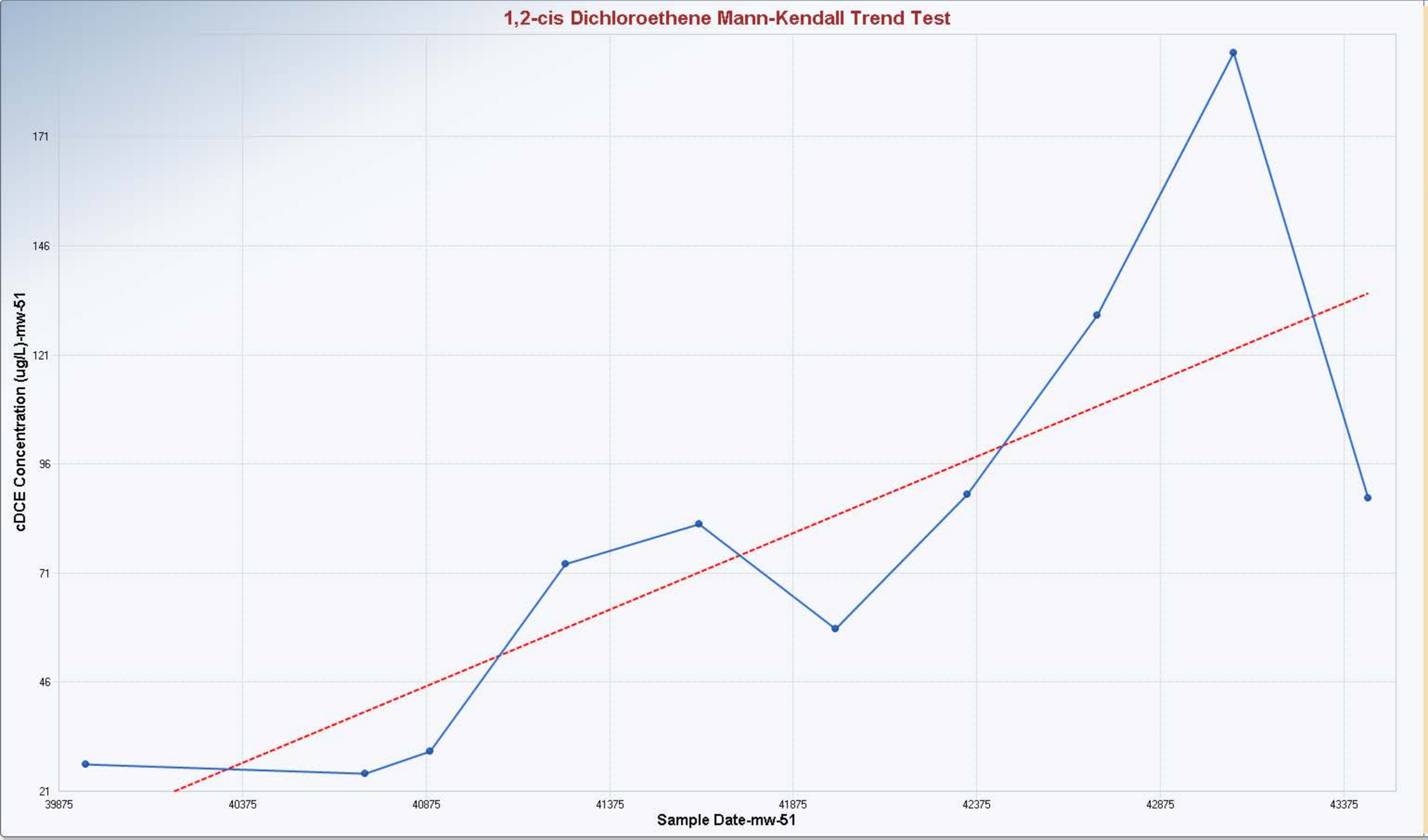
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.1803
Standardized Value of S	2.1466
M-K Test Value (S)	25
Tabulated p-value	0.0140
Approximate p-value	0.0159

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0042
Theil-Sen Intercept	-166.2950

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.1803
Standardized Value of S	2.8622
M-K Test Value (S)	33
Tabulated p-value	0.0010
Approximate p-value	0.0021

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0352
Theil-Sen Intercept	-1,393.7785

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.1355
Standardized Value of S	-2.4247
M-K Test Value (S)	-28
Tabulated p-value	0.0050
Approximate p-value	0.0077

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0038
Theil-Sen Intercept	162.9609

Statistically significant evidence of a decreasing trend at the specified level of significance.

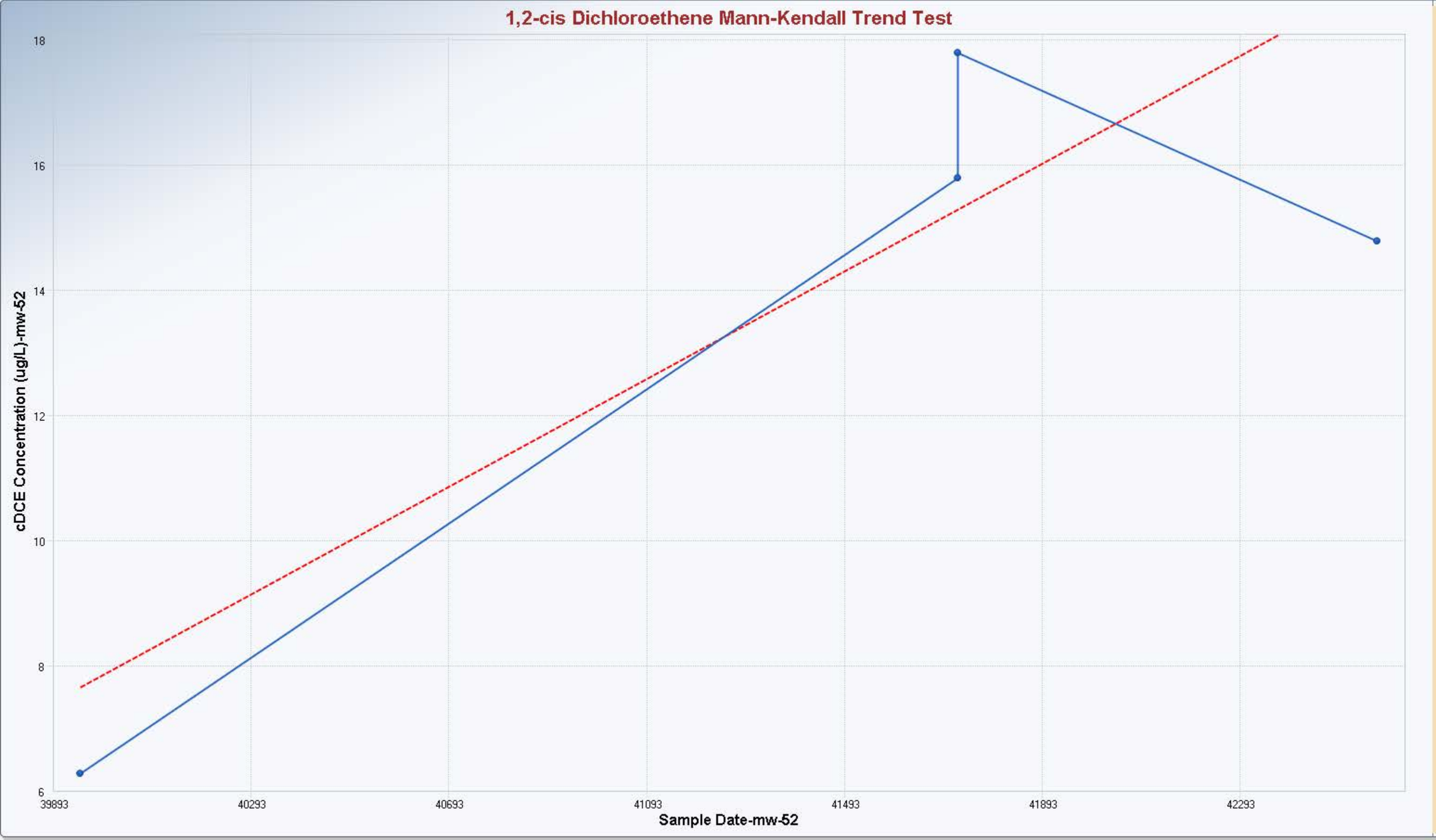
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	0.3397
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3670

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0043
Theil-Sen Intercept	-163.7819

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-0.7223
M-K Test Value (S)	-3
Tabulated p-value	0.3750
Approximate p-value	0.2351

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0008
Theil-Sen Intercept	38.8514

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.5144
Standardized Value of S	-0.4823
M-K Test Value (S)	-8
Tabulated p-value	0.3190
Approximate p-value	0.3148

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0021
Theil-Sen Intercept	95.3170

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4799
Standardized Value of S	0.9669
M-K Test Value (S)	15
Tabulated p-value	0.1900
Approximate p-value	0.1668

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0025
Theil-Sen Intercept	-81.1916

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

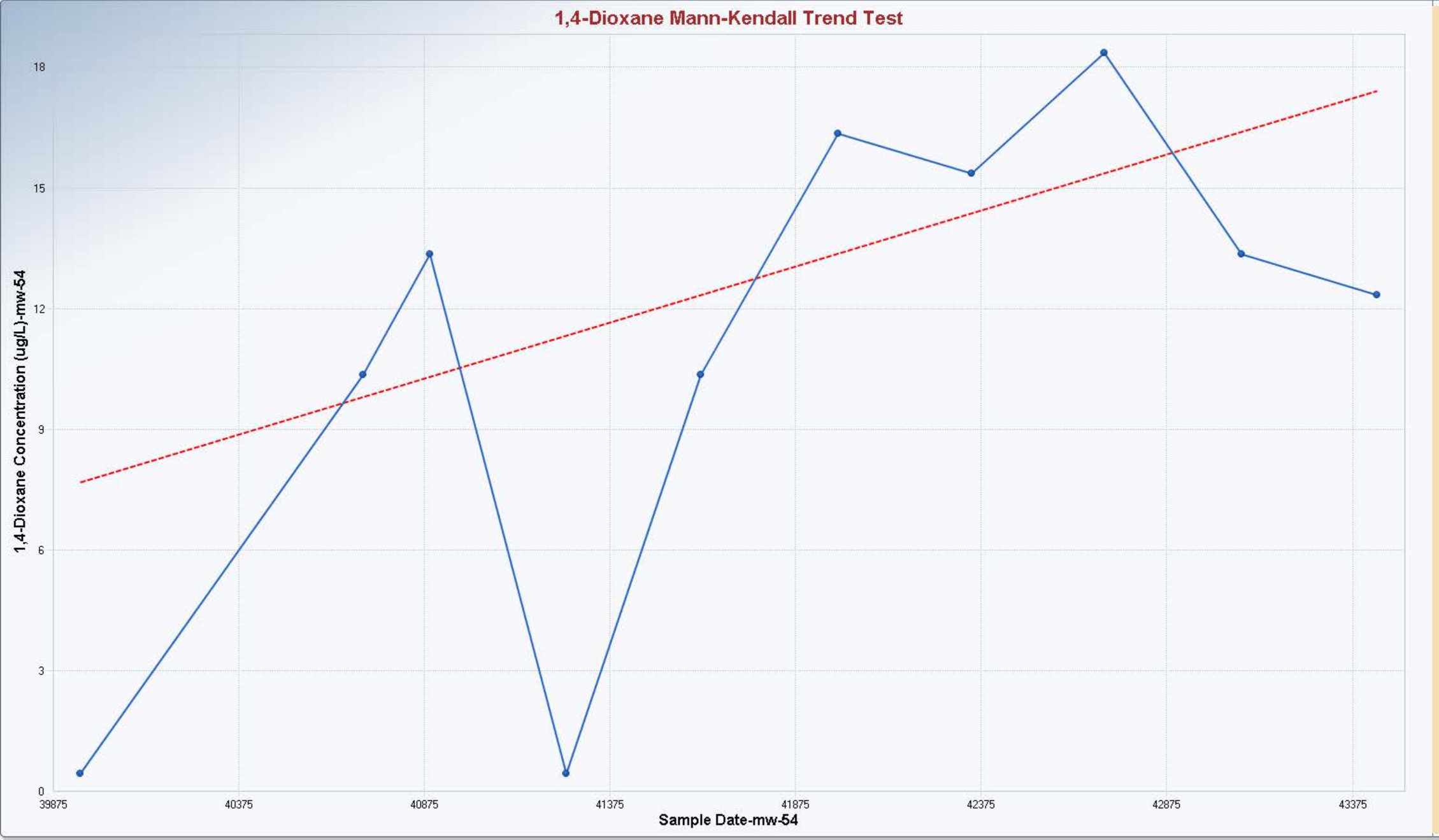
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4568
Standardized Value of S	-3.4586
M-K Test Value (S)	-51
Tabulated p-value	0.0000
Approximate p-value	0.0003

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0041
Theil-Sen Intercept	175.2101

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

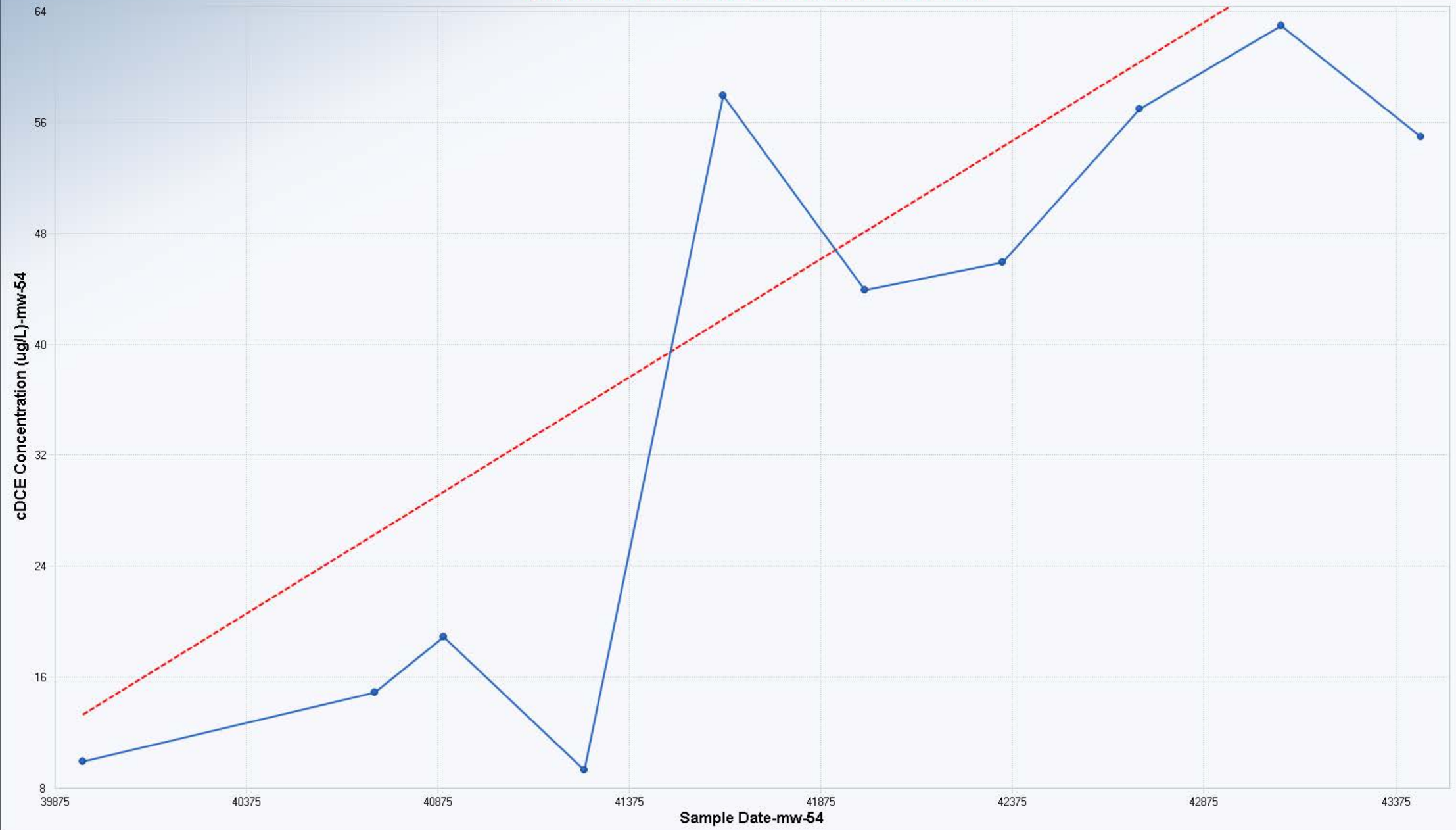
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0454
Standardized Value of S	1.5391
M-K Test Value (S)	18
Tabulated p-value	0.0540
Approximate p-value	0.0619

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0028
Theil-Sen Intercept	-104.1053

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

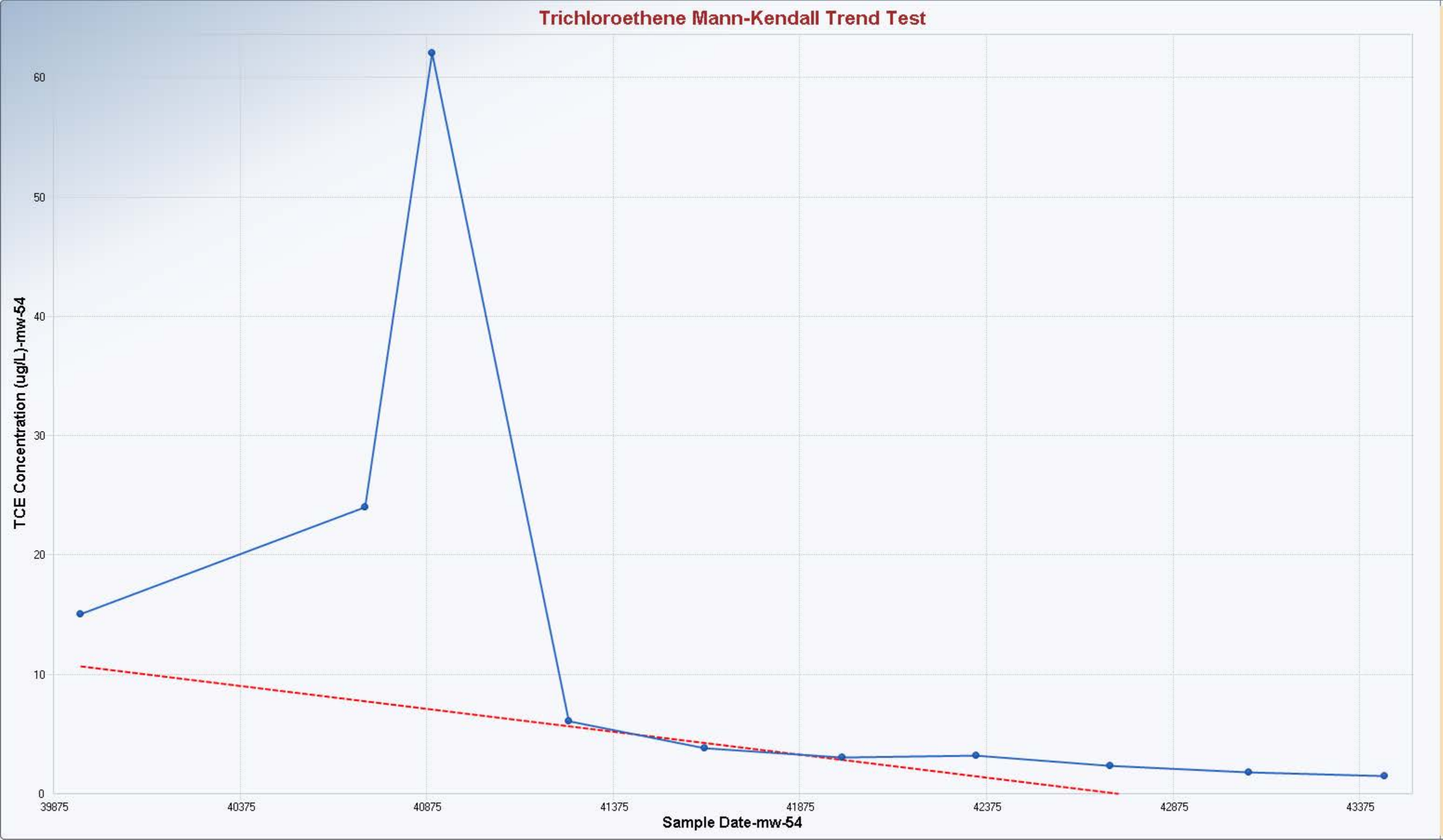
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.1803
Standardized Value of S	2.3255
M-K Test Value (S)	27
Tabulated p-value	0.0080
Approximate p-value	0.0100

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0170
Theil-Sen Intercept	-667.6373

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



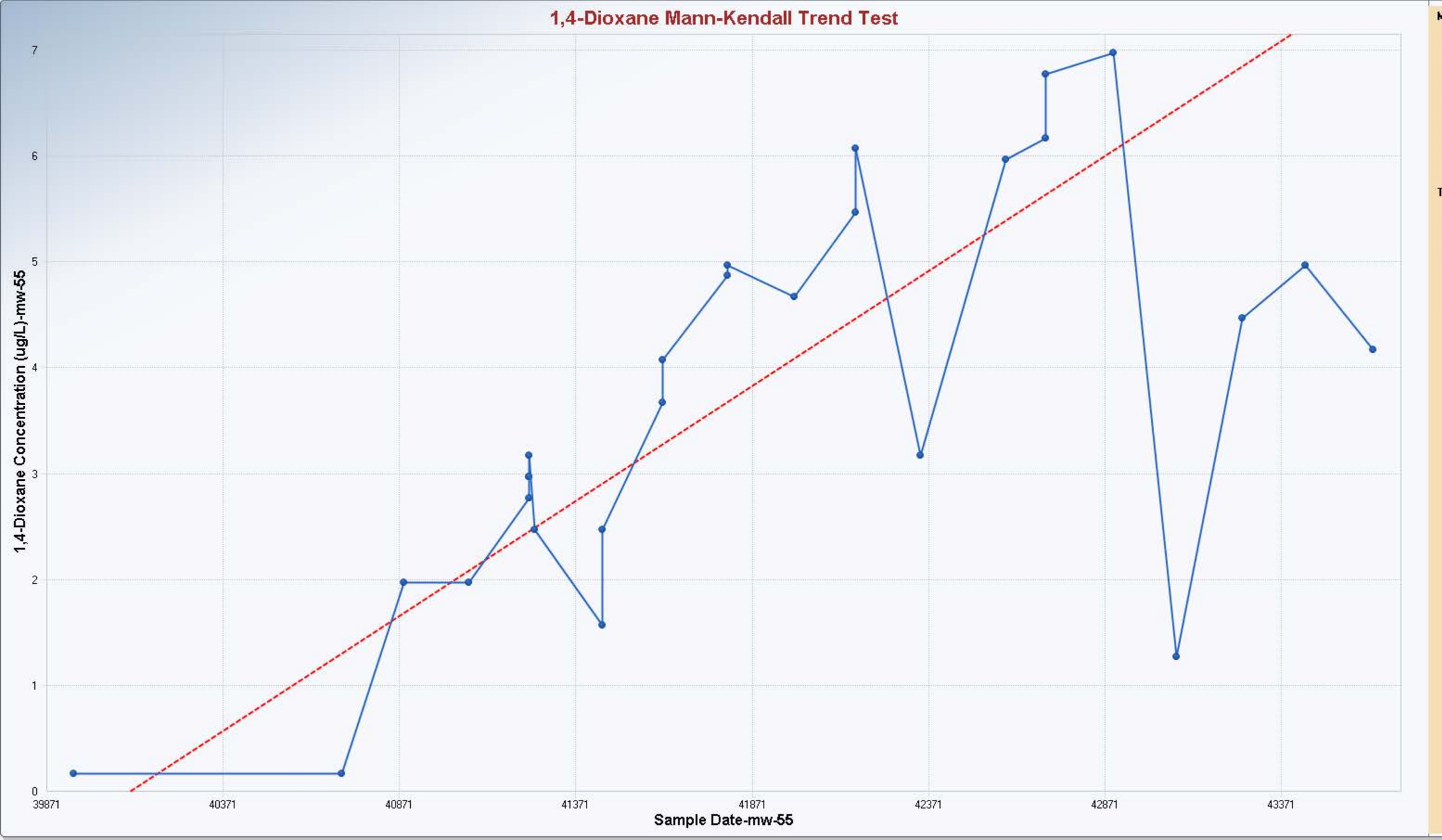
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.1803
Standardized Value of S	-3.2199
M-K Test Value (S)	-37
Tabulated p-value	0.0000
Approximate p-value	0.0006

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0039
Theil-Sen Intercept	165.1095

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

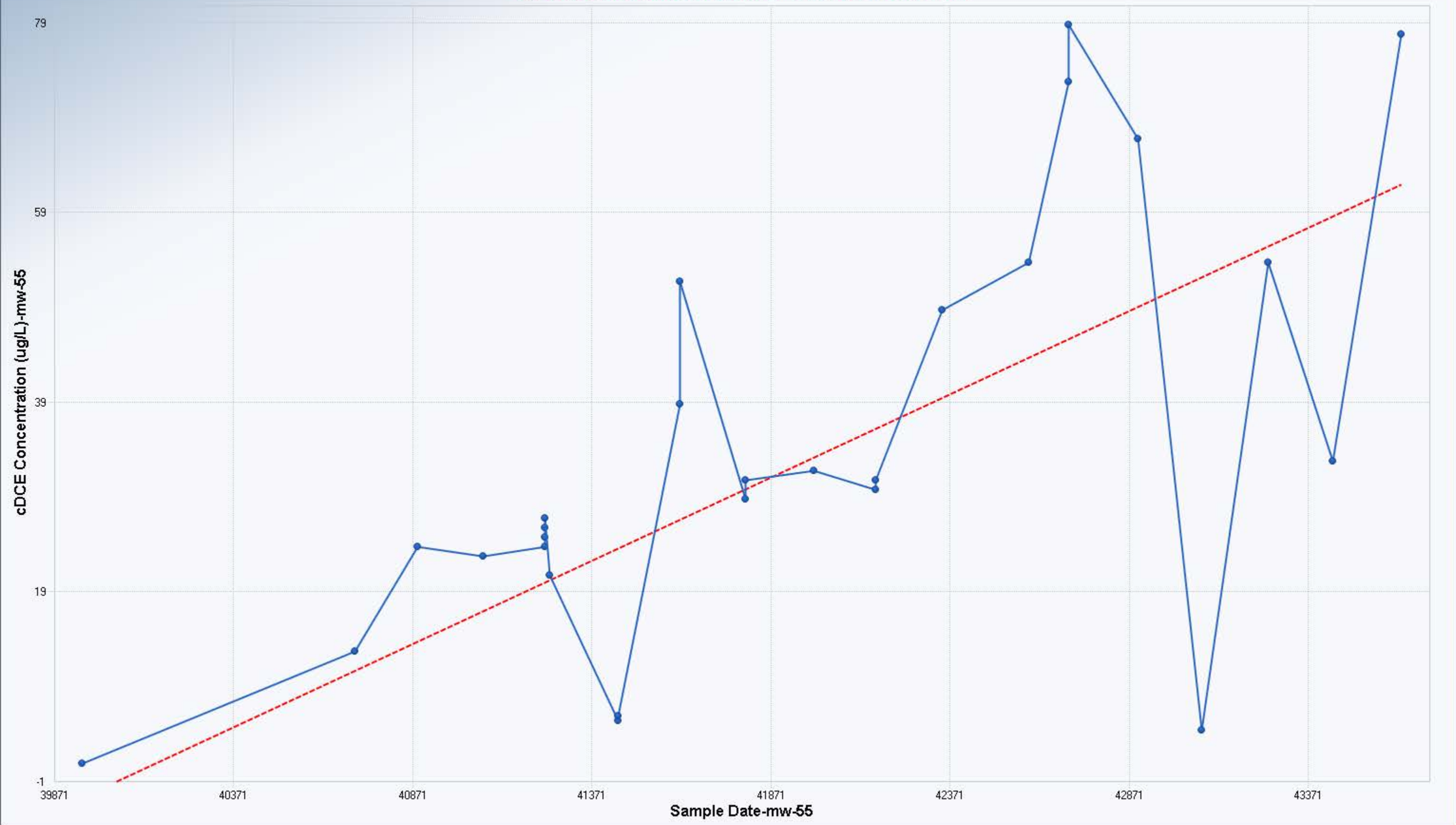
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.9062
Standardized Value of S	4.1748
M-K Test Value (S)	201
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0022
Theil-Sen Intercept	-87.2927

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.9375
Standardized Value of S	4.1930
M-K Test Value (S)	202
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0176
Theil-Sen Intercept	-704.6221

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

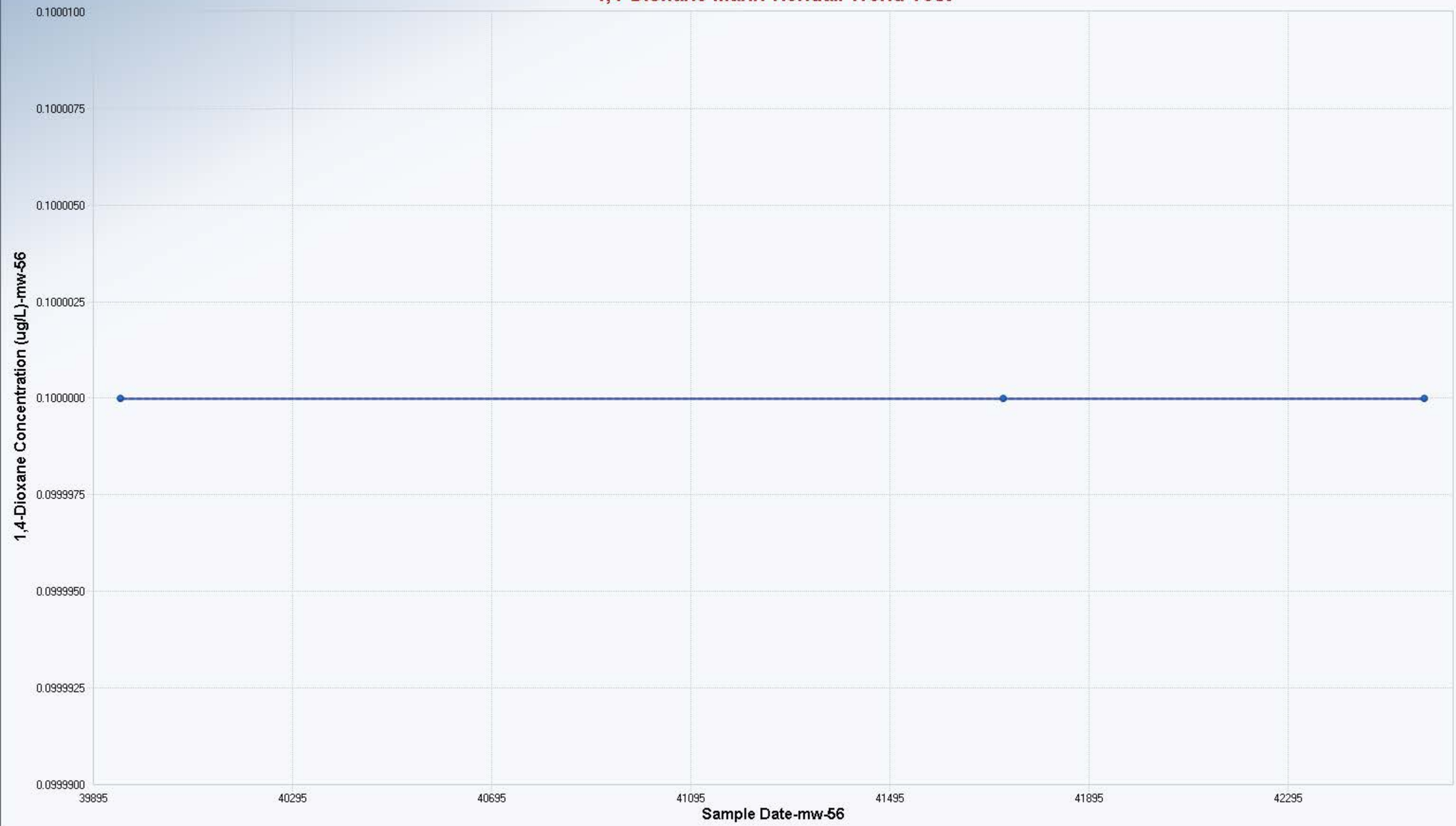
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	47.5079
Standardized Value of S	-2.1470
M-K Test Value (S)	-103
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0159

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0003
Theil-Sen Intercept	14.5948

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

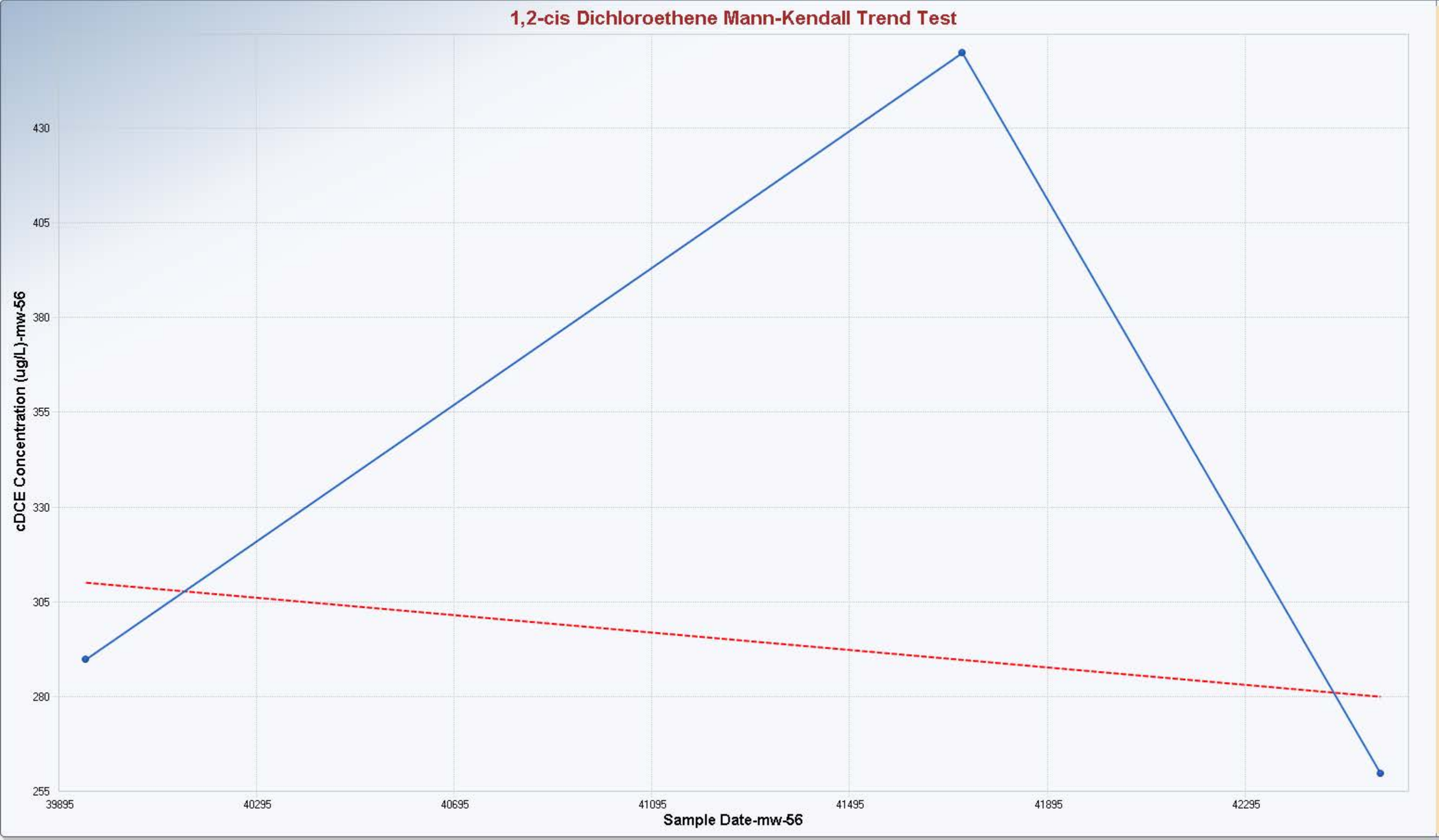
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

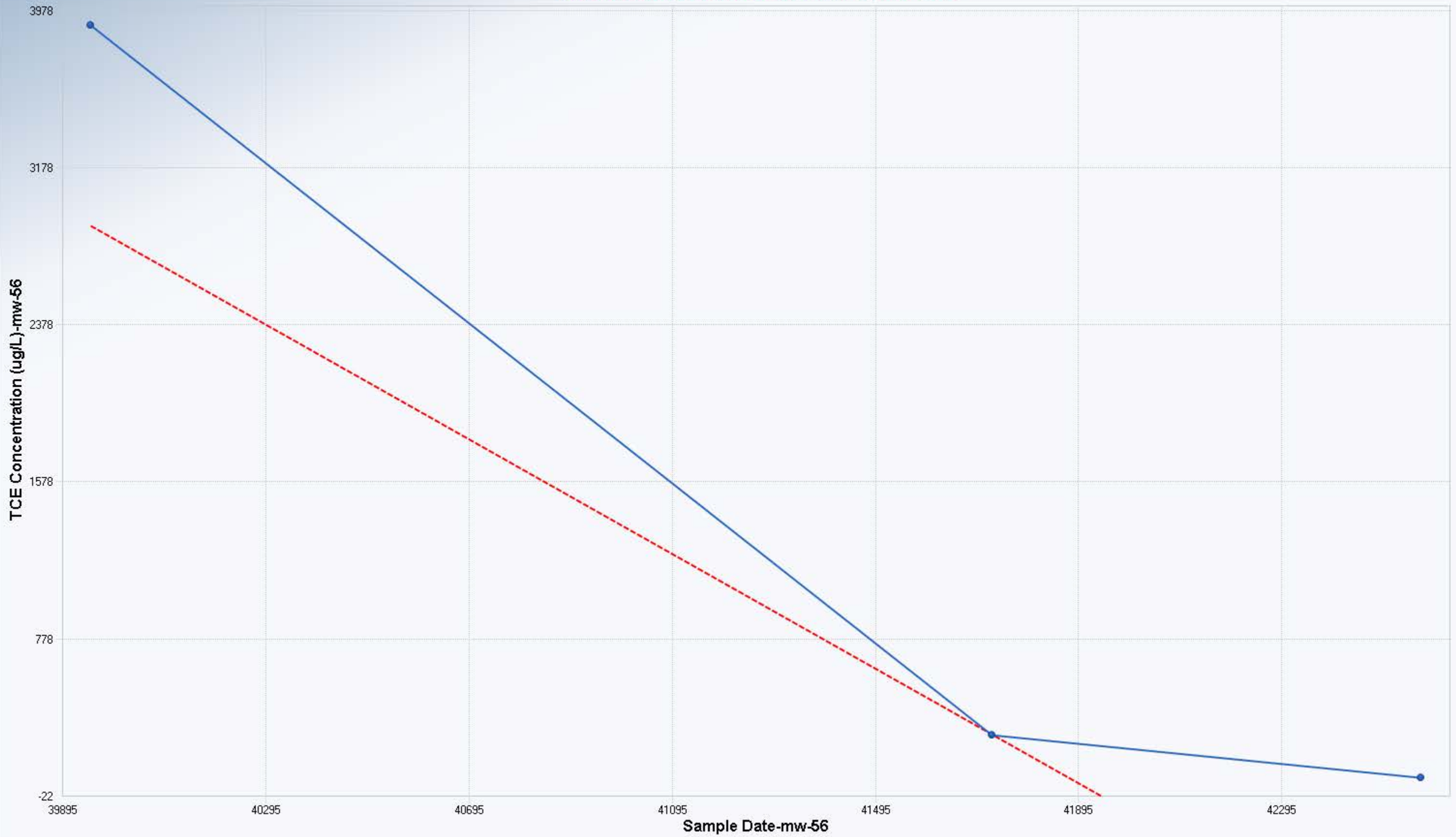
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0115
Theil-Sen Intercept	767.9381

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

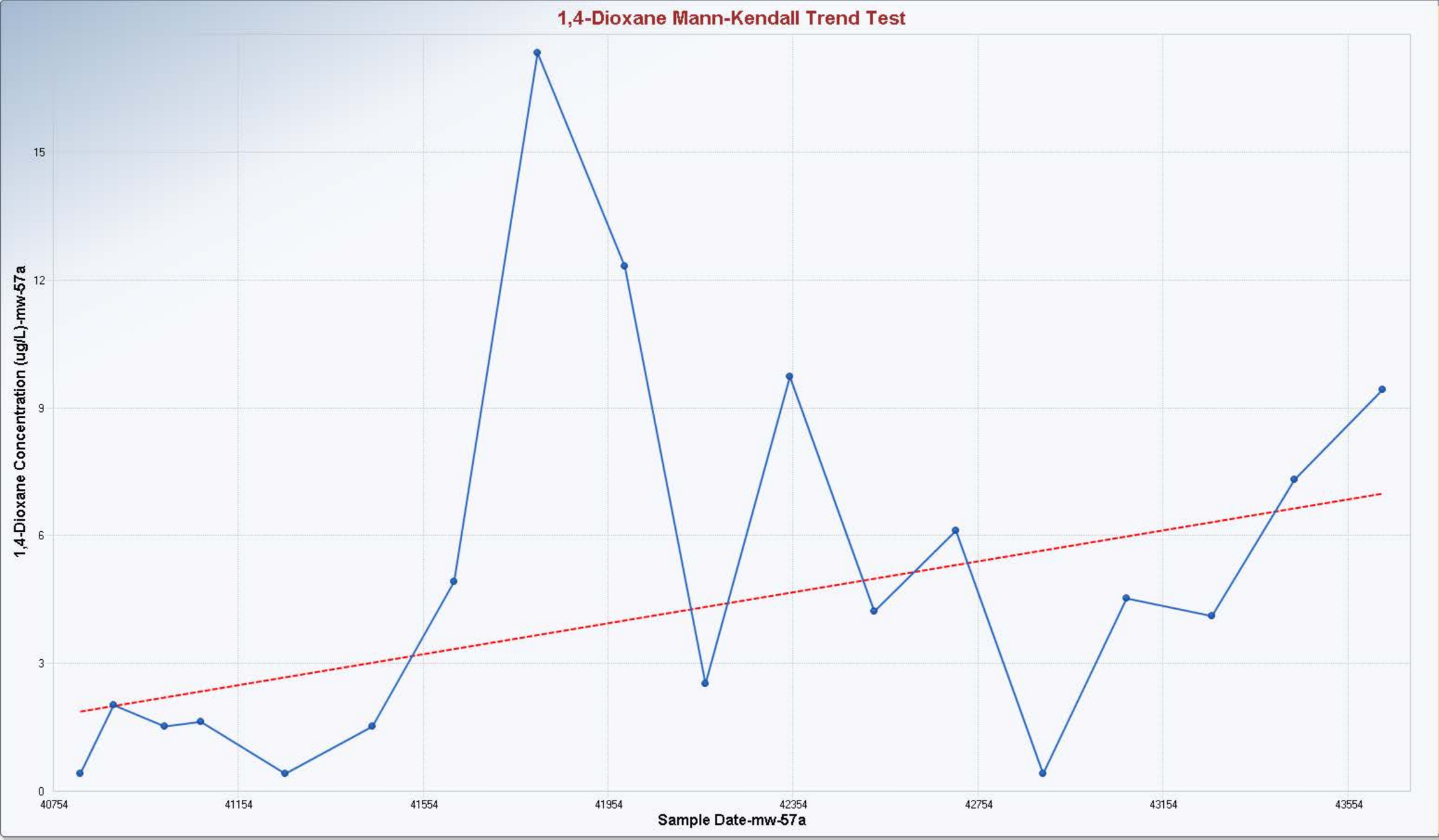
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-1.4609
Theil-Sen Intercept	61,243.0447

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3122
Standardized Value of S	1.9003
M-K Test Value (S)	51
Tabulated p-value	0.0290
Approximate p-value	0.0287

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0018
Theil-Sen Intercept	-72.3832

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

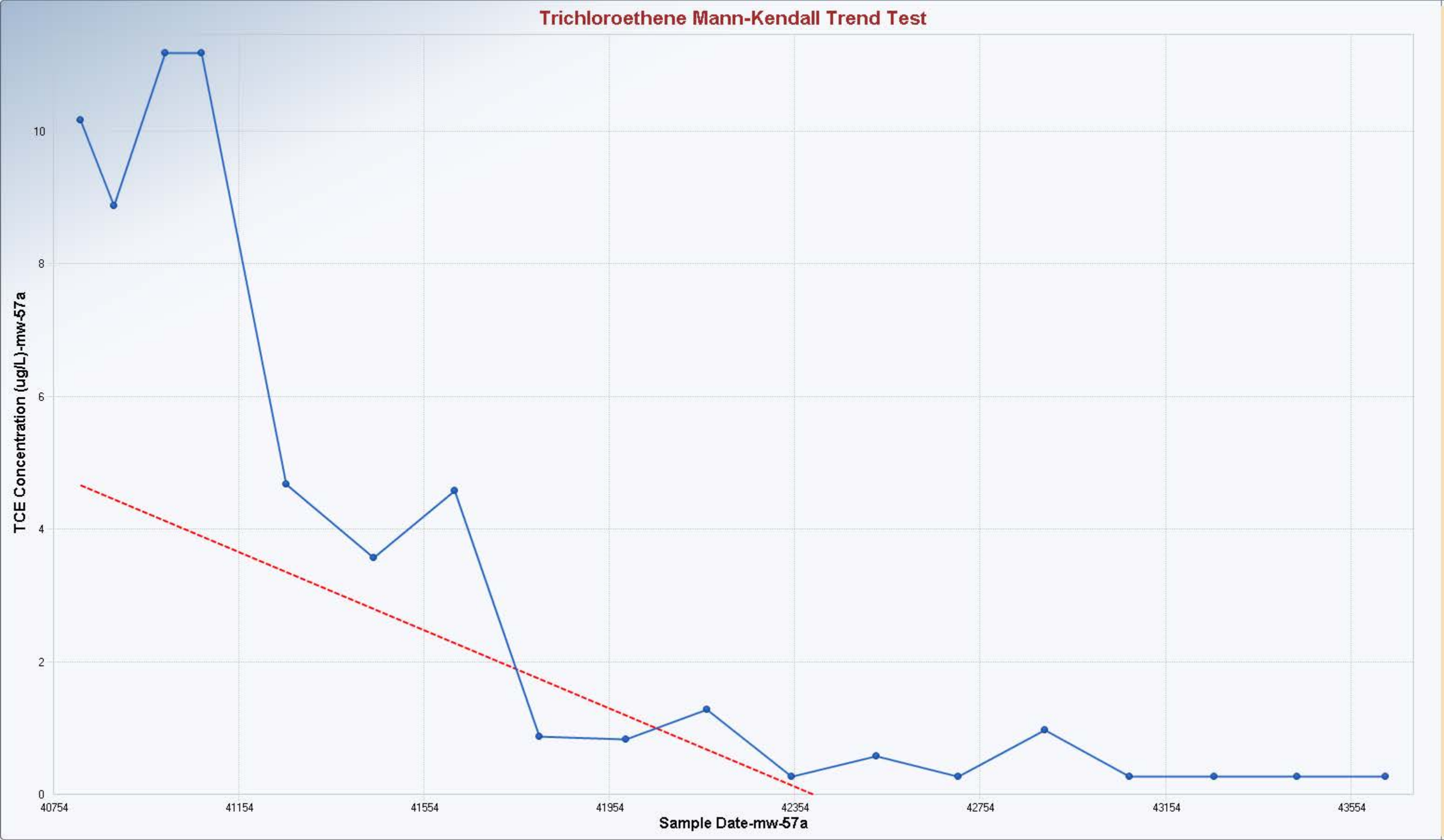
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.2170
Standardized Value of S	-4.3865
M-K Test Value (S)	-116
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0058
Theil-Sen Intercept	259.0837

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	25.8392
Standardized Value of S	-4.2571
M-K Test Value (S)	-111
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0030
Theil-Sen Intercept	125.0159

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

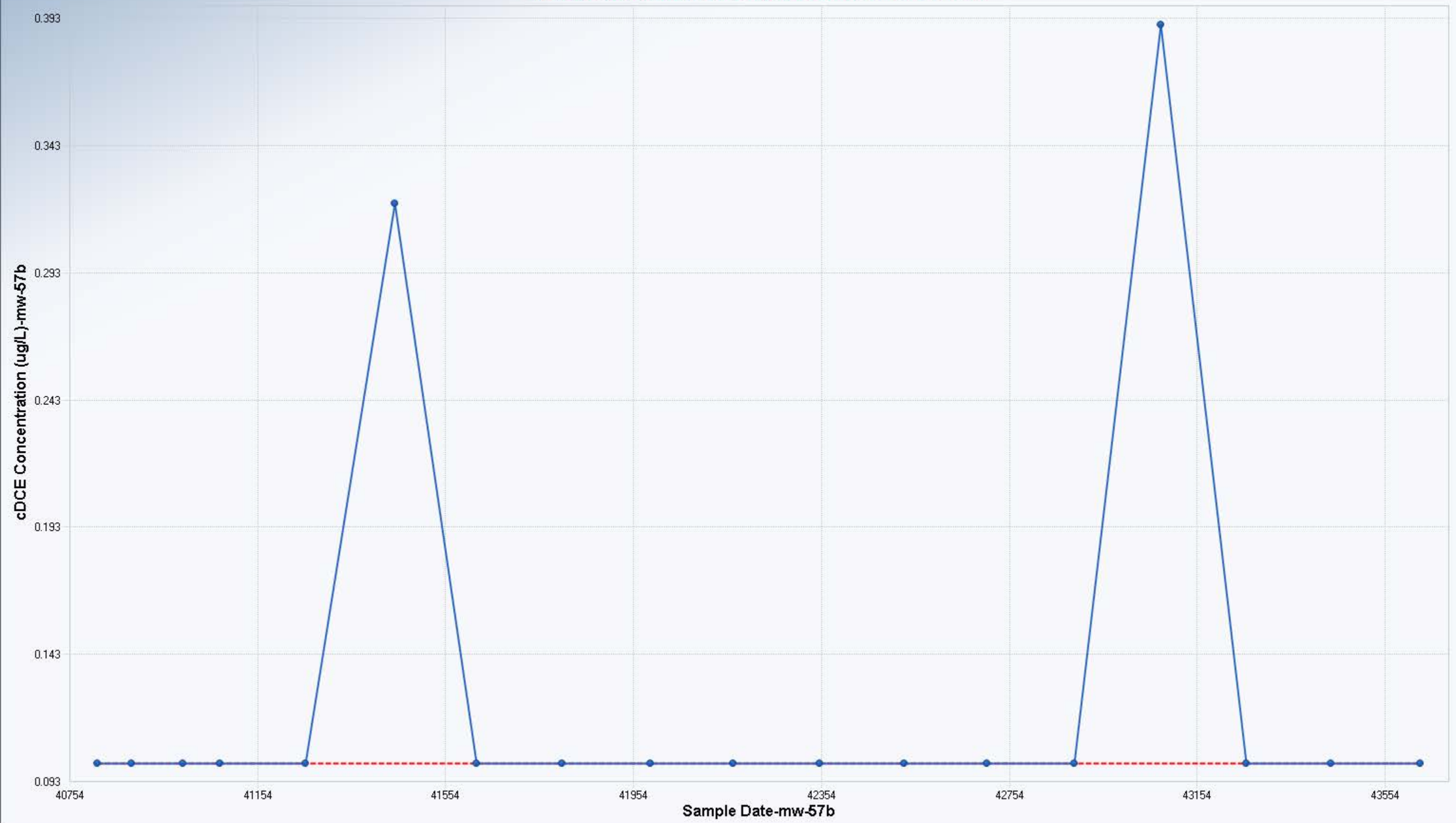
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	23.8747
Standardized Value of S	-2.5550
M-K Test Value (S)	-62
Tabulated p-value	0.0090
Approximate p-value	0.0053

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	20.9302

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

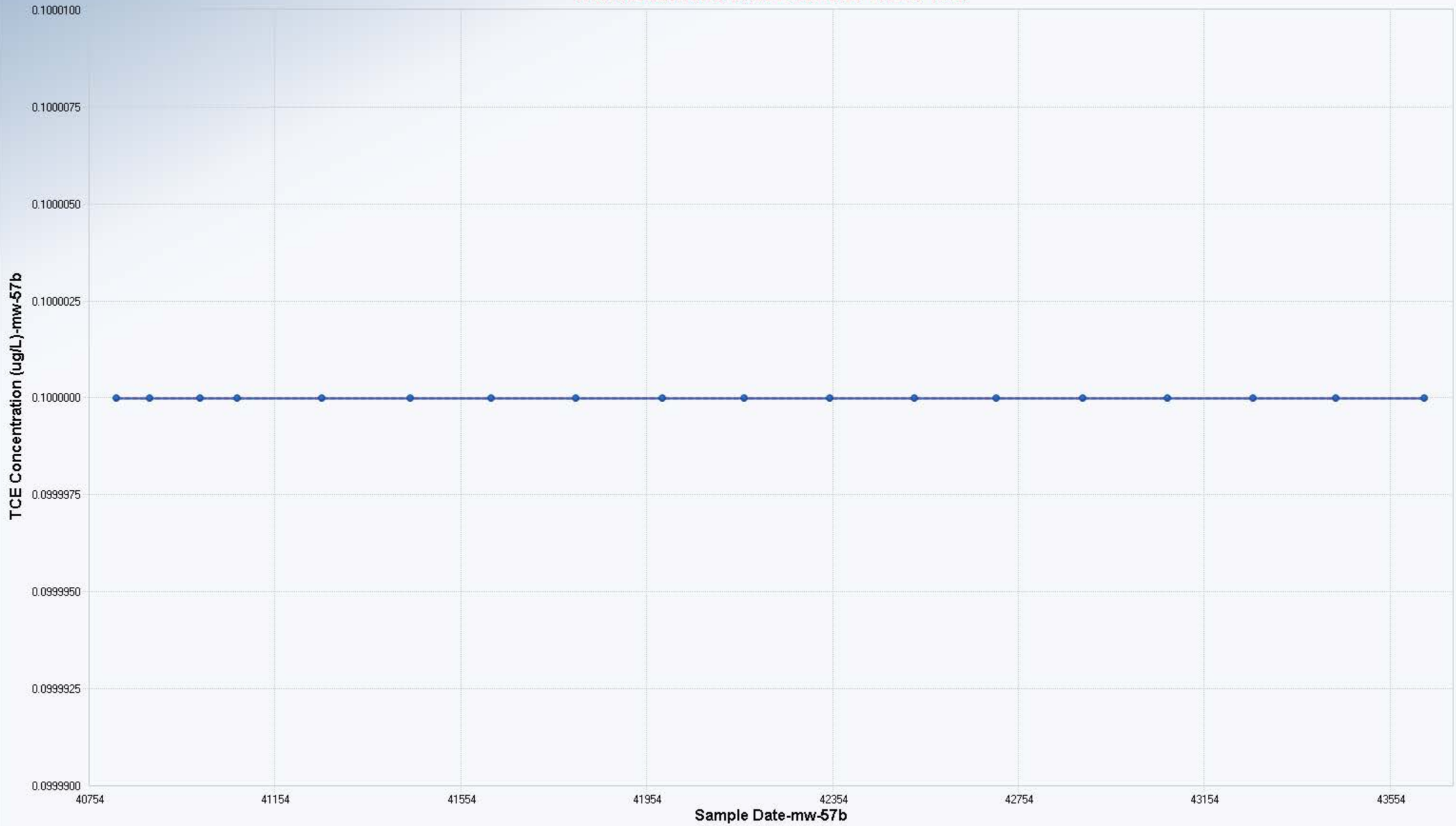
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.2712
Standardized Value of S	0.2803
M-K Test Value (S)	5
Tabulated p-value	0.4410
Approximate p-value	0.3896

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

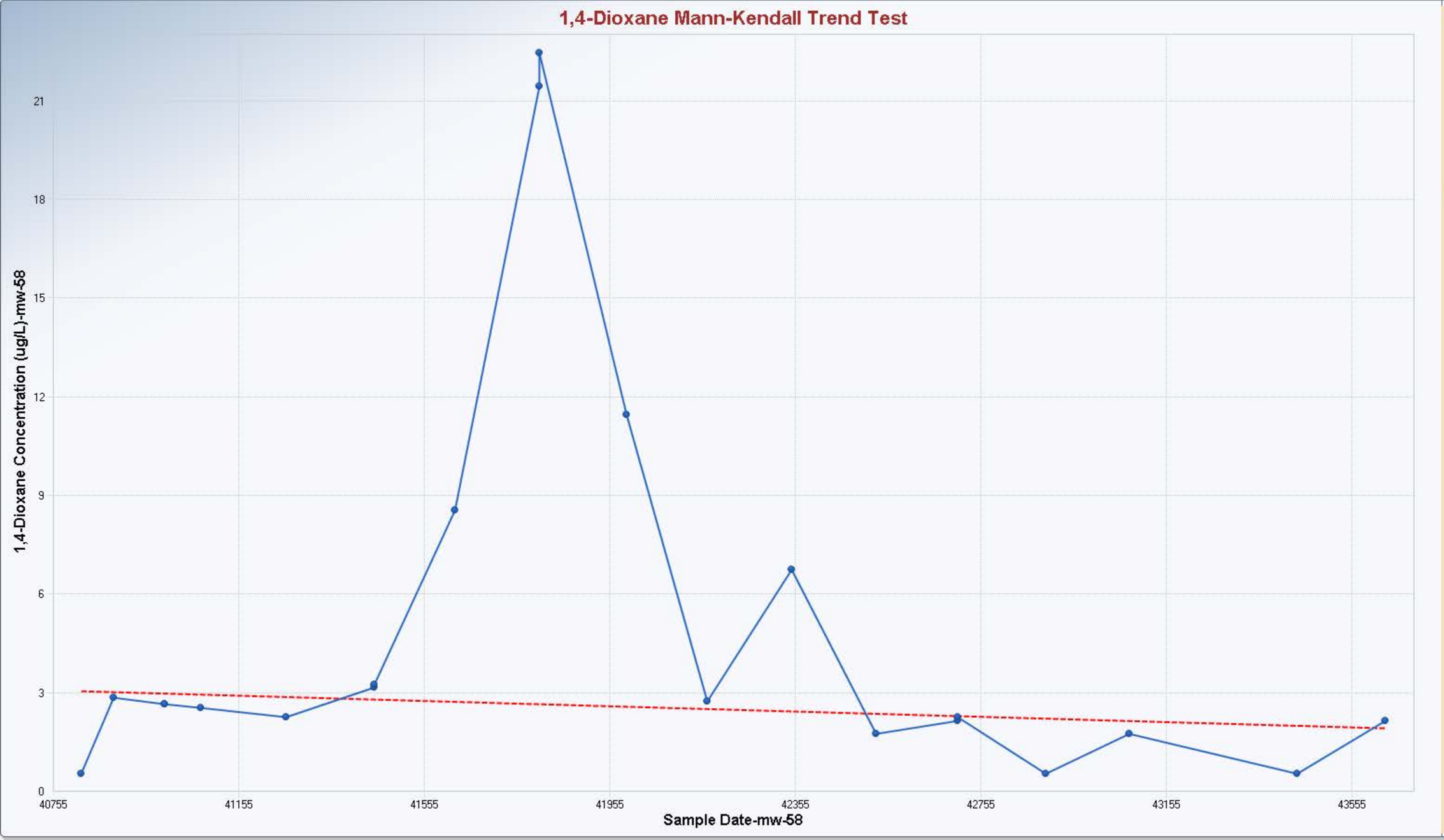
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0000
Standardized Value of S	-1.2121
M-K Test Value (S)	-41
Tabulated p-value	0.1210
Approximate p-value	0.1127

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0004
Theil-Sen Intercept	18.6058

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.9444
Standardized Value of S	-1.4874
M-K Test Value (S)	-50
Tabulated p-value	0.0700
Approximate p-value	0.0685

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0028
Theil-Sen Intercept	136.6882

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

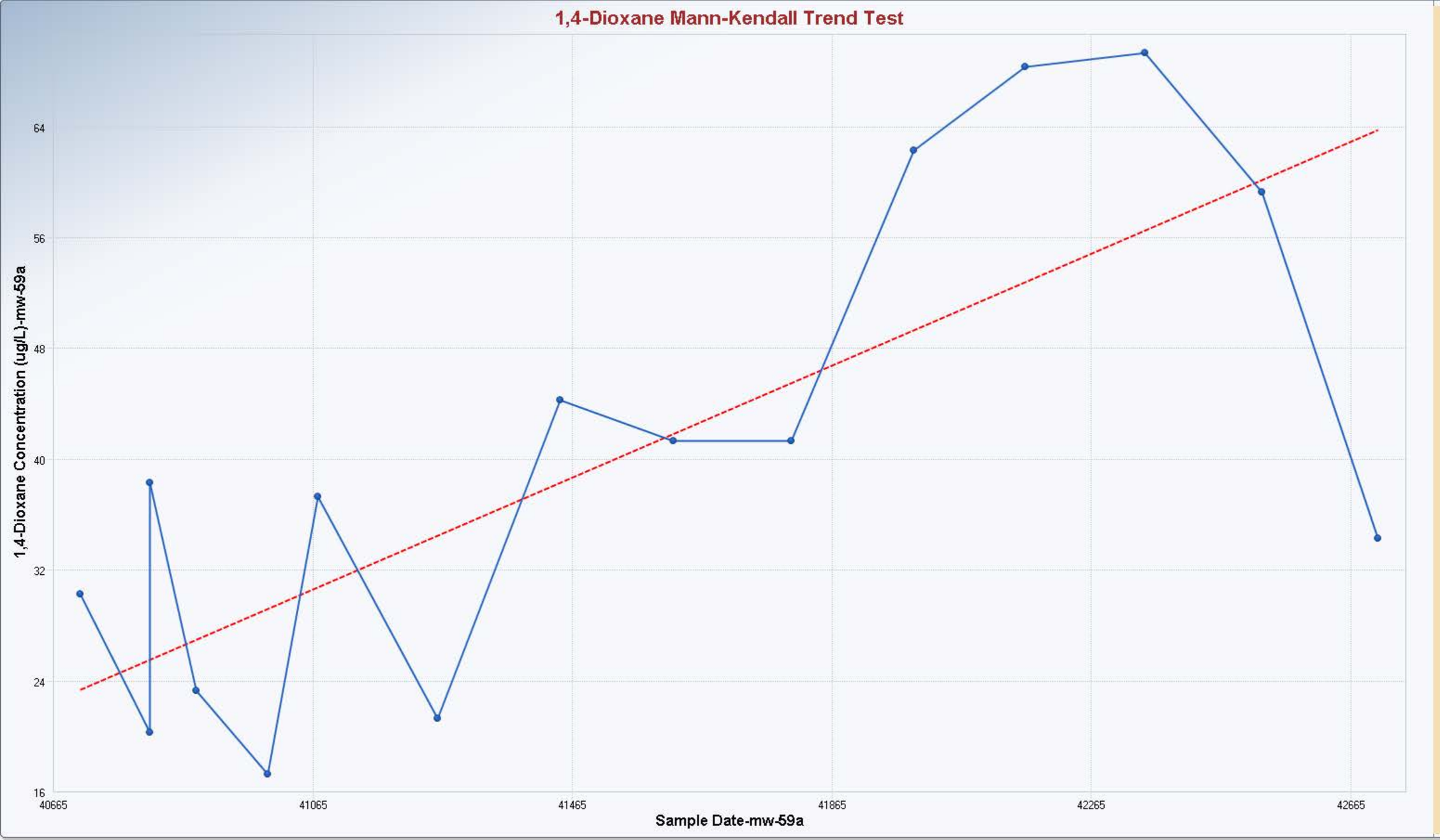
Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0857
Standardized Value of S	-4.6848
M-K Test Value (S)	-156
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0038
Theil-Sen Intercept	163.4769

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

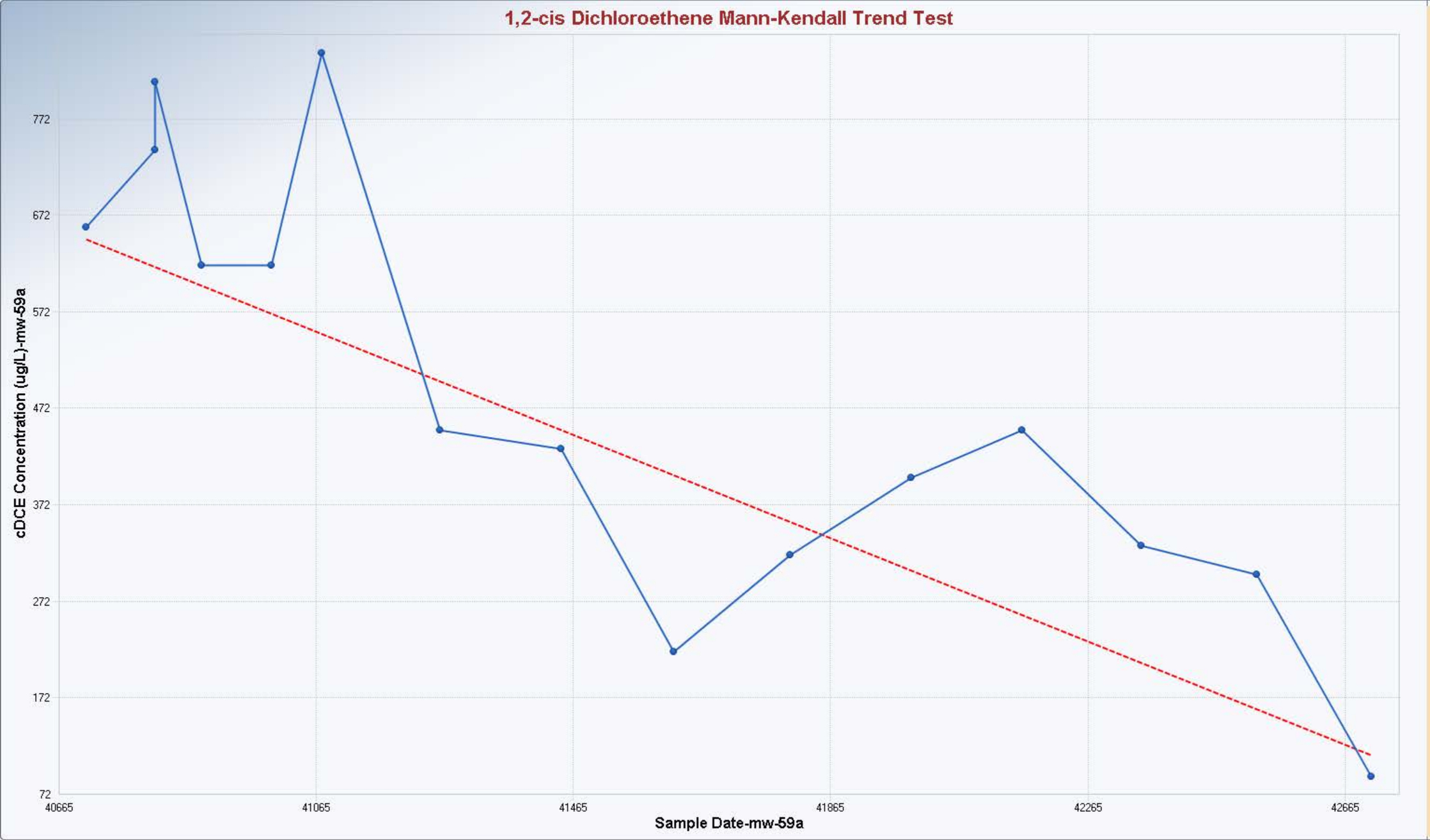
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1825
Standardized Value of S	2.5269
M-K Test Value (S)	52
Tabulated p-value	0.0040
Approximate p-value	0.0058

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0202
Theil-Sen Intercept	-799.5658

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1577
Standardized Value of S	-3.2742
M-K Test Value (S)	-67
Tabulated p-value	0.0000
Approximate p-value	0.0005

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.2673
Theil-Sen Intercept	11,527.4837

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	20.1825
Standardized Value of S	-3.8152
M-K Test Value (S)	-78
Tabulated p-value	0.0000
Approximate p-value	0.0001

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0884
Theil-Sen Intercept	3,755.3635

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

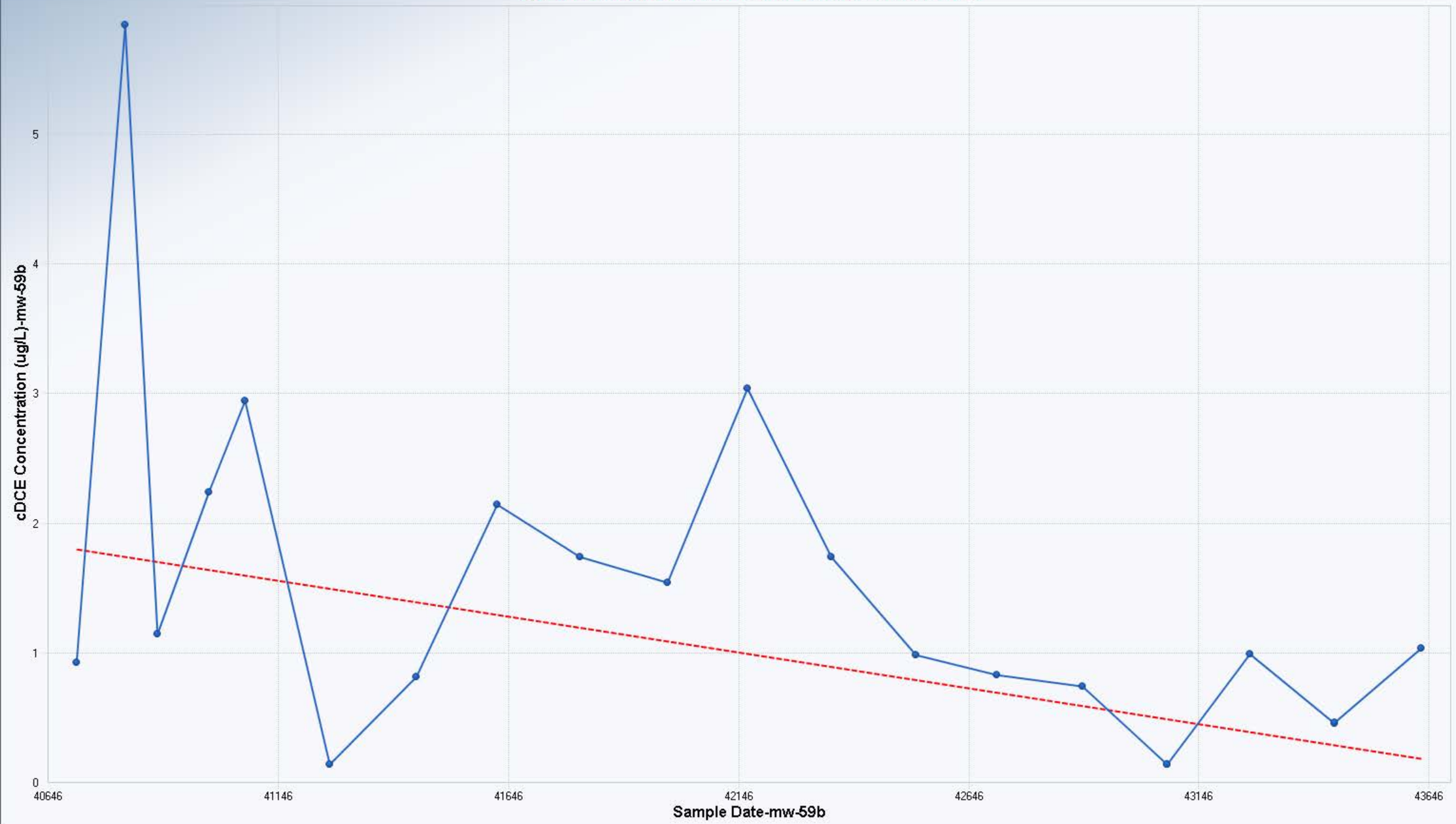
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.1160
Standardized Value of S	-1.9024
M-K Test Value (S)	-64
Tabulated p-value	0.0280
Approximate p-value	0.0286

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0017
Theil-Sen Intercept	77.8236

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

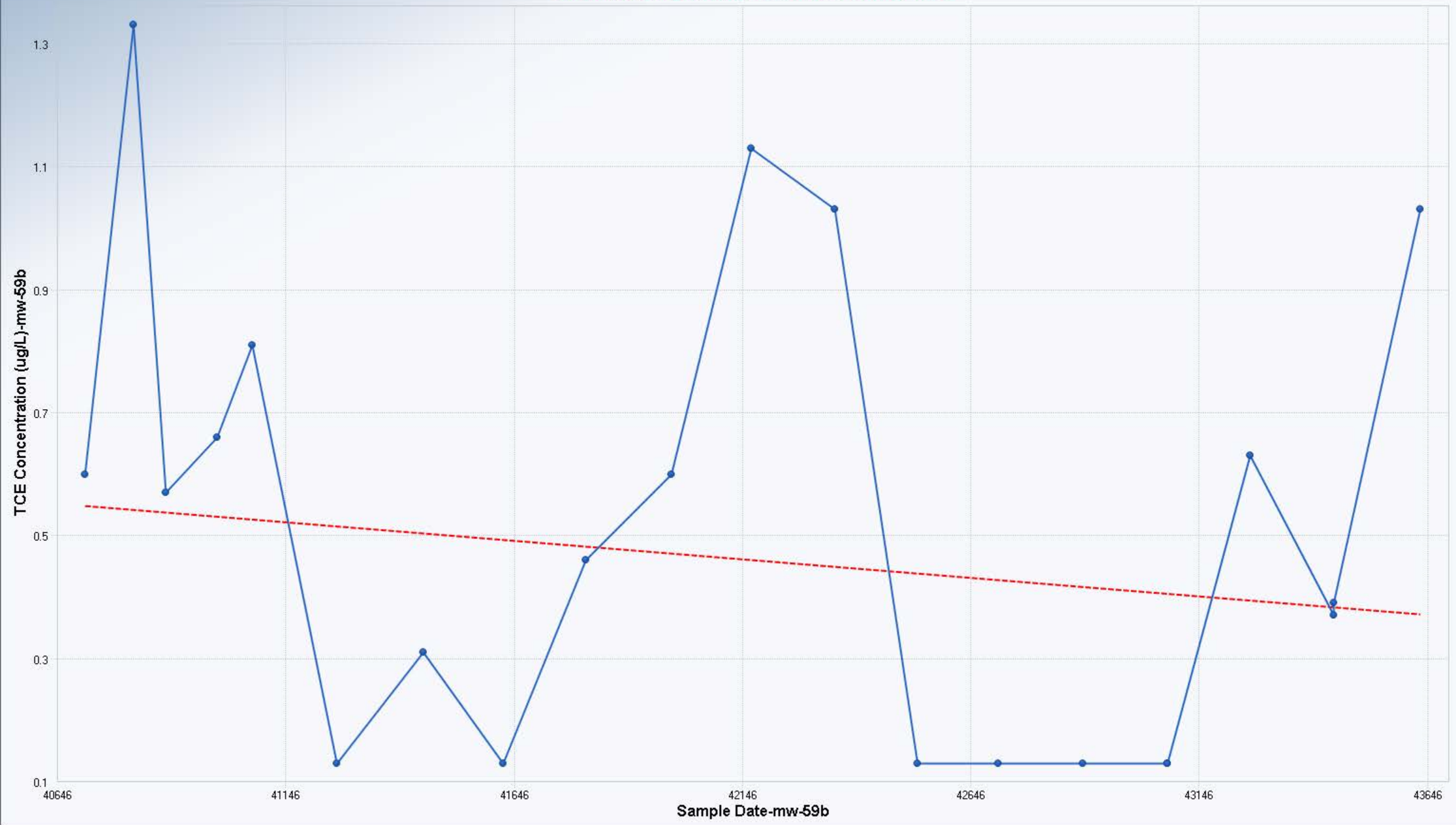
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0454
Standardized Value of S	-2.2091
M-K Test Value (S)	-74
Tabulated p-value	0.0130
Approximate p-value	0.0136

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0006
Theil-Sen Intercept	24.2578

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

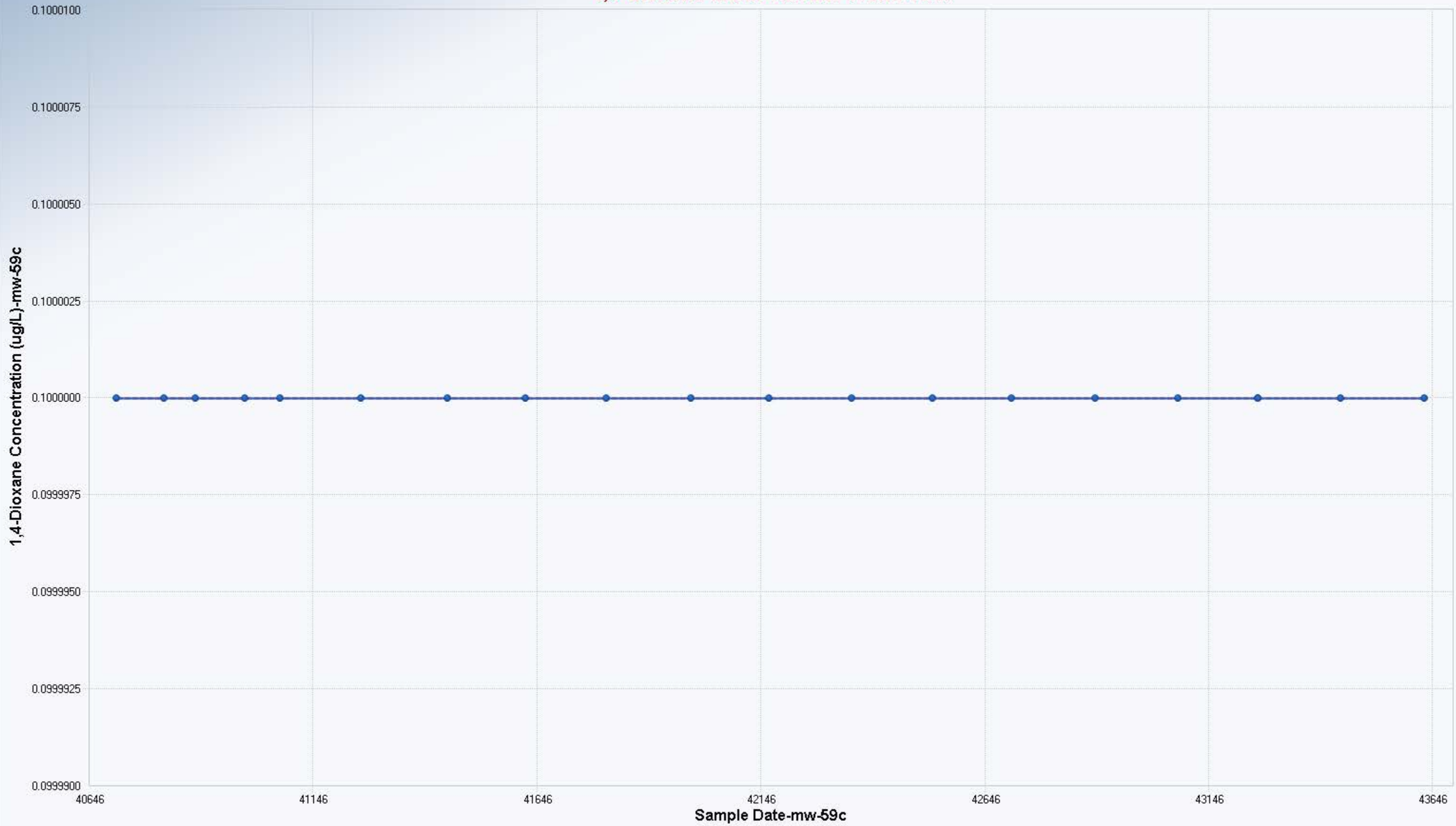
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.4088
Standardized Value of S	-0.8640
M-K Test Value (S)	-29
Tabulated p-value	0.2100
Approximate p-value	0.1938

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0001
Theil-Sen Intercept	2.9700

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

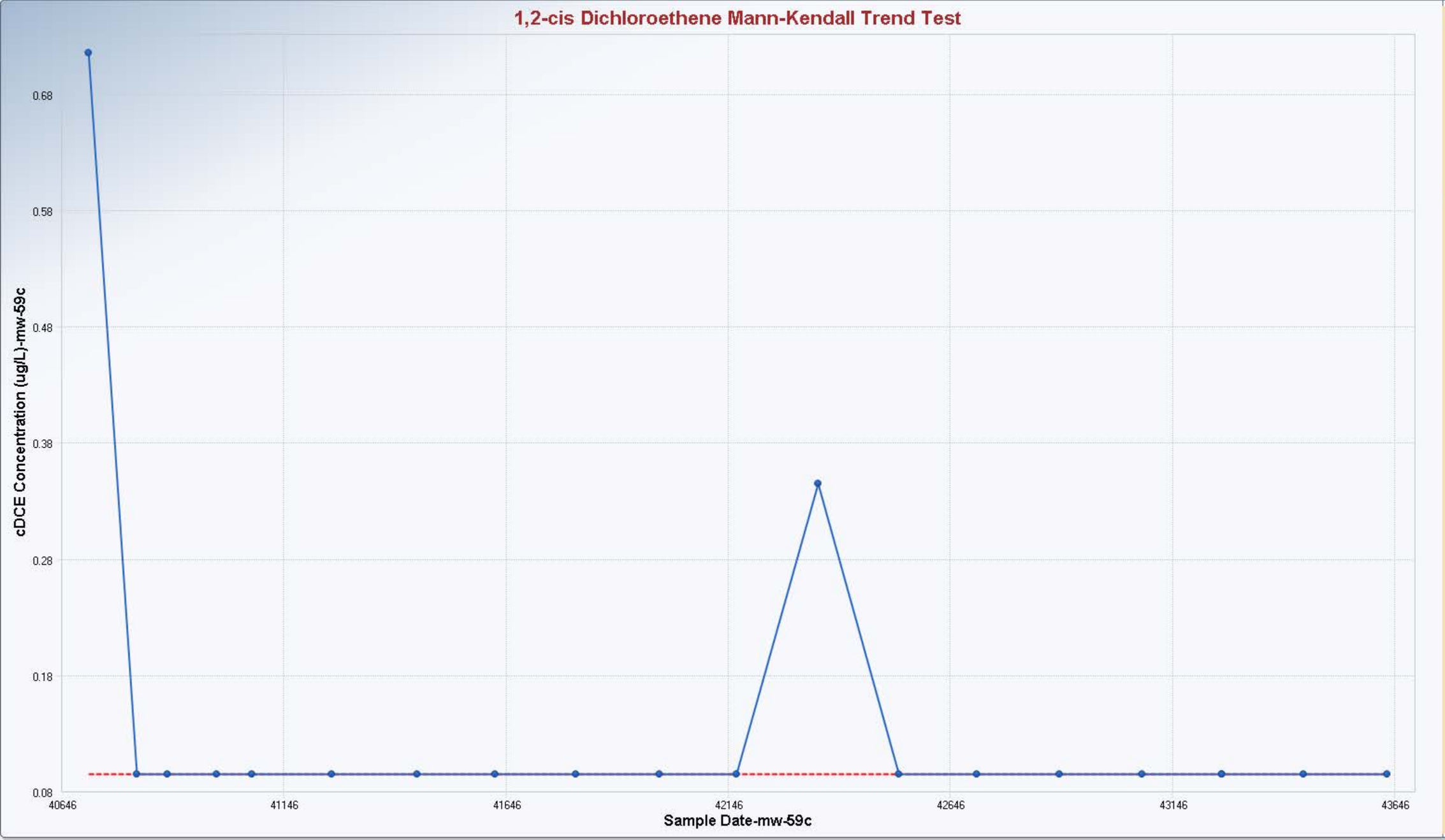
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5130
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

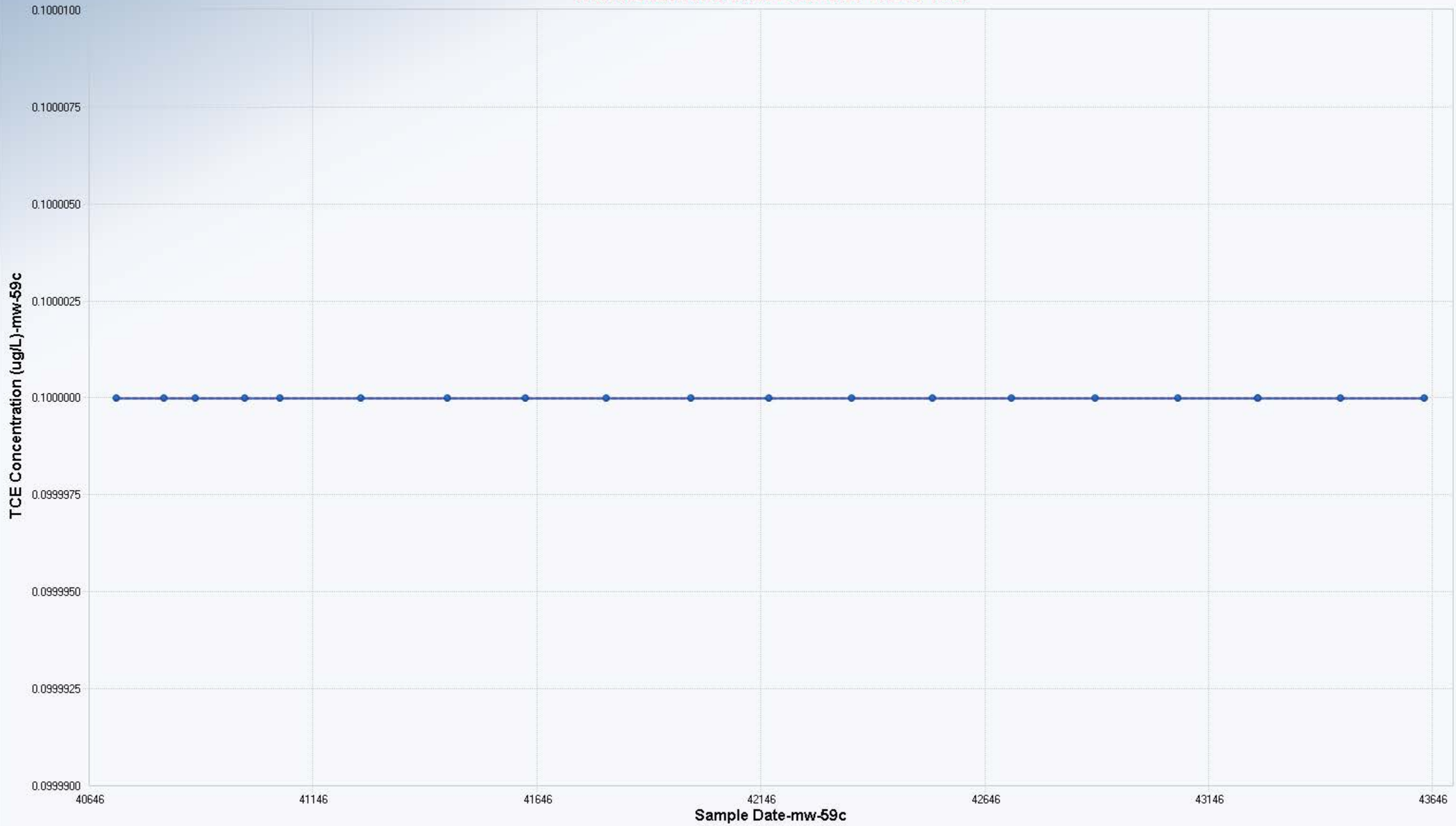
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	15.9060
Standardized Value of S	-1.0059
M-K Test Value (S)	-17
Tabulated p-value	0.3150
Approximate p-value	0.1572

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

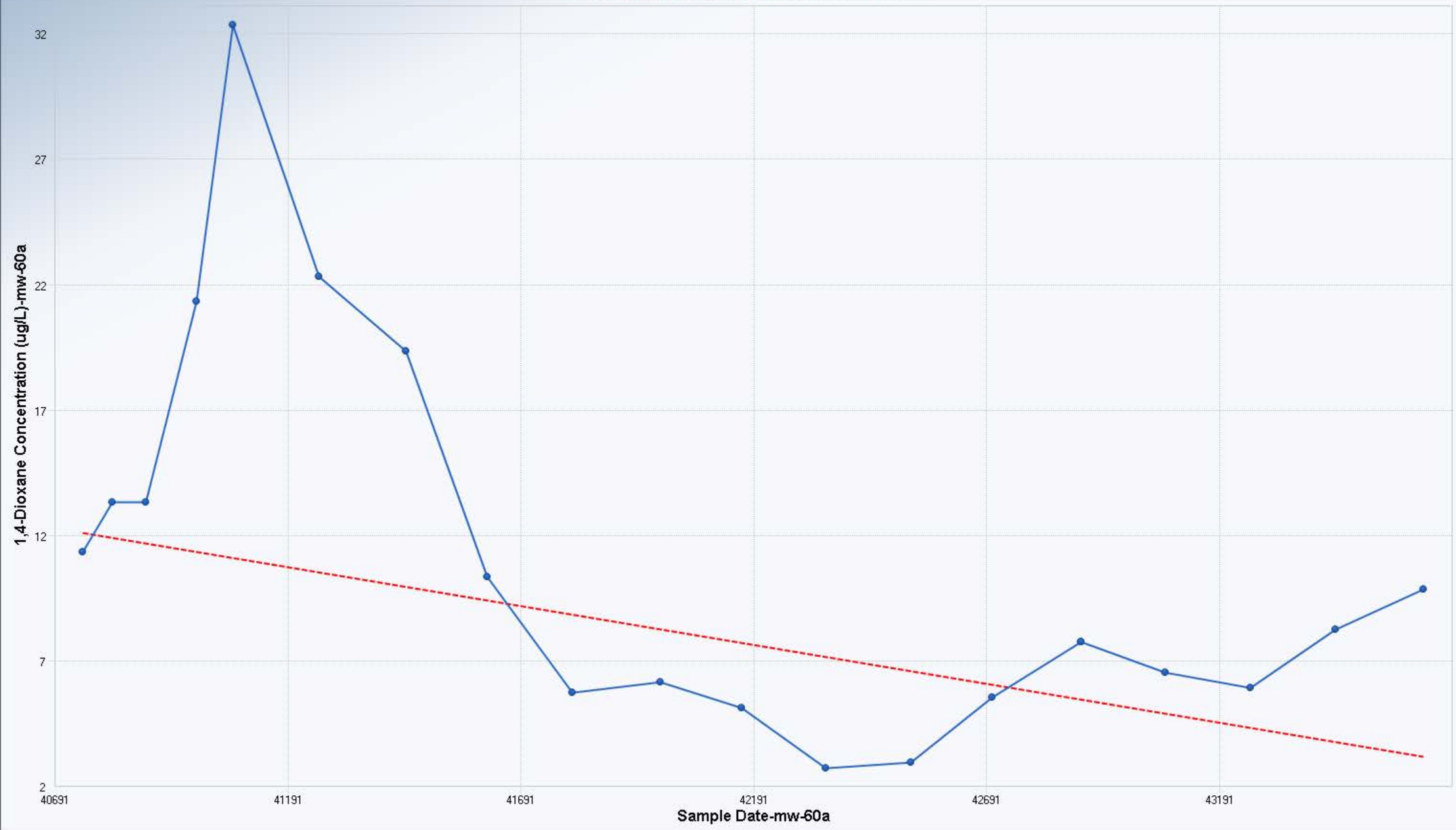
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5130
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

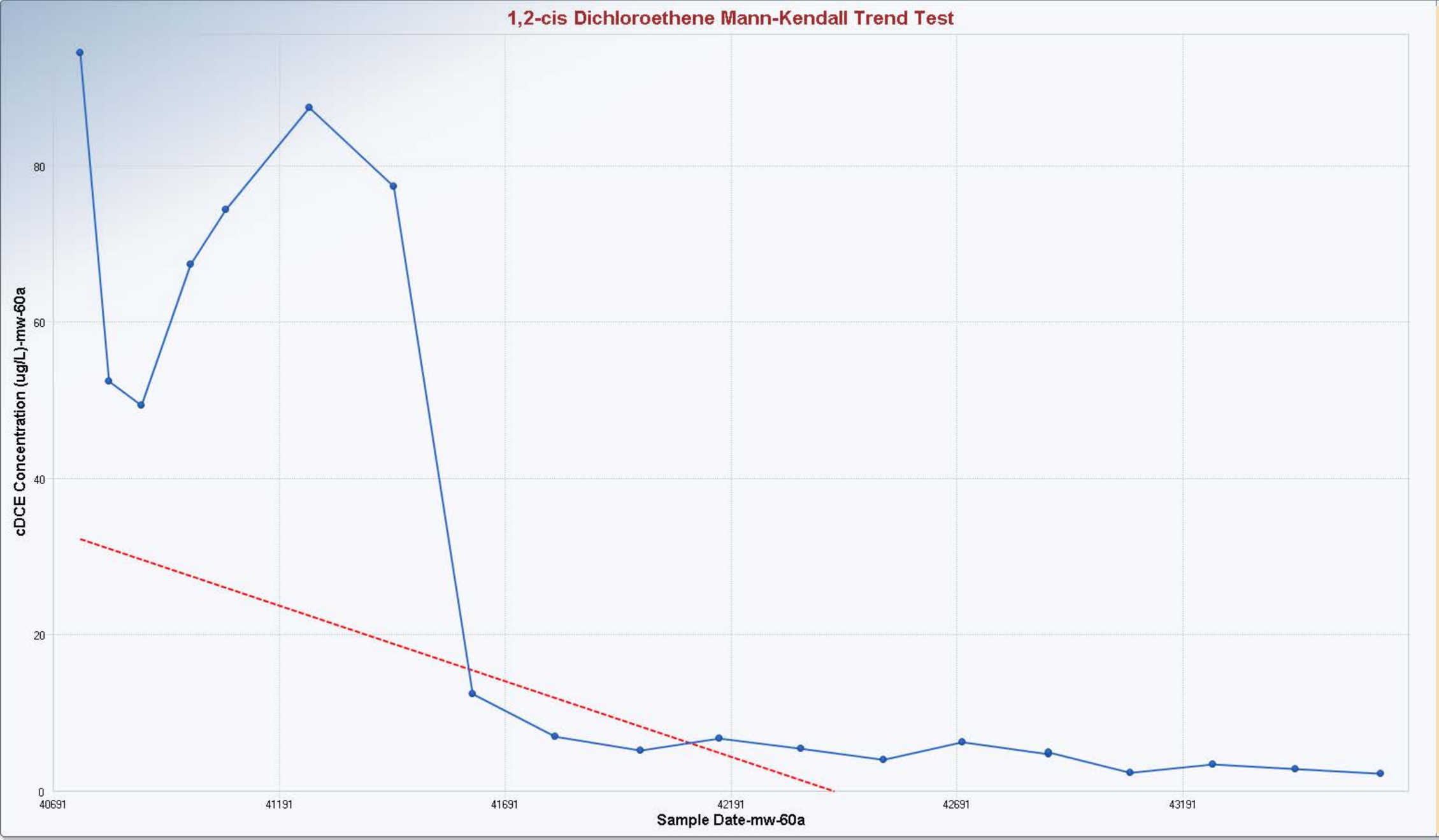
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	-1.8513
M-K Test Value (S)	-58
Tabulated p-value	0.0320
Approximate p-value	0.0321

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0031
Theil-Sen Intercept	138.3016

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

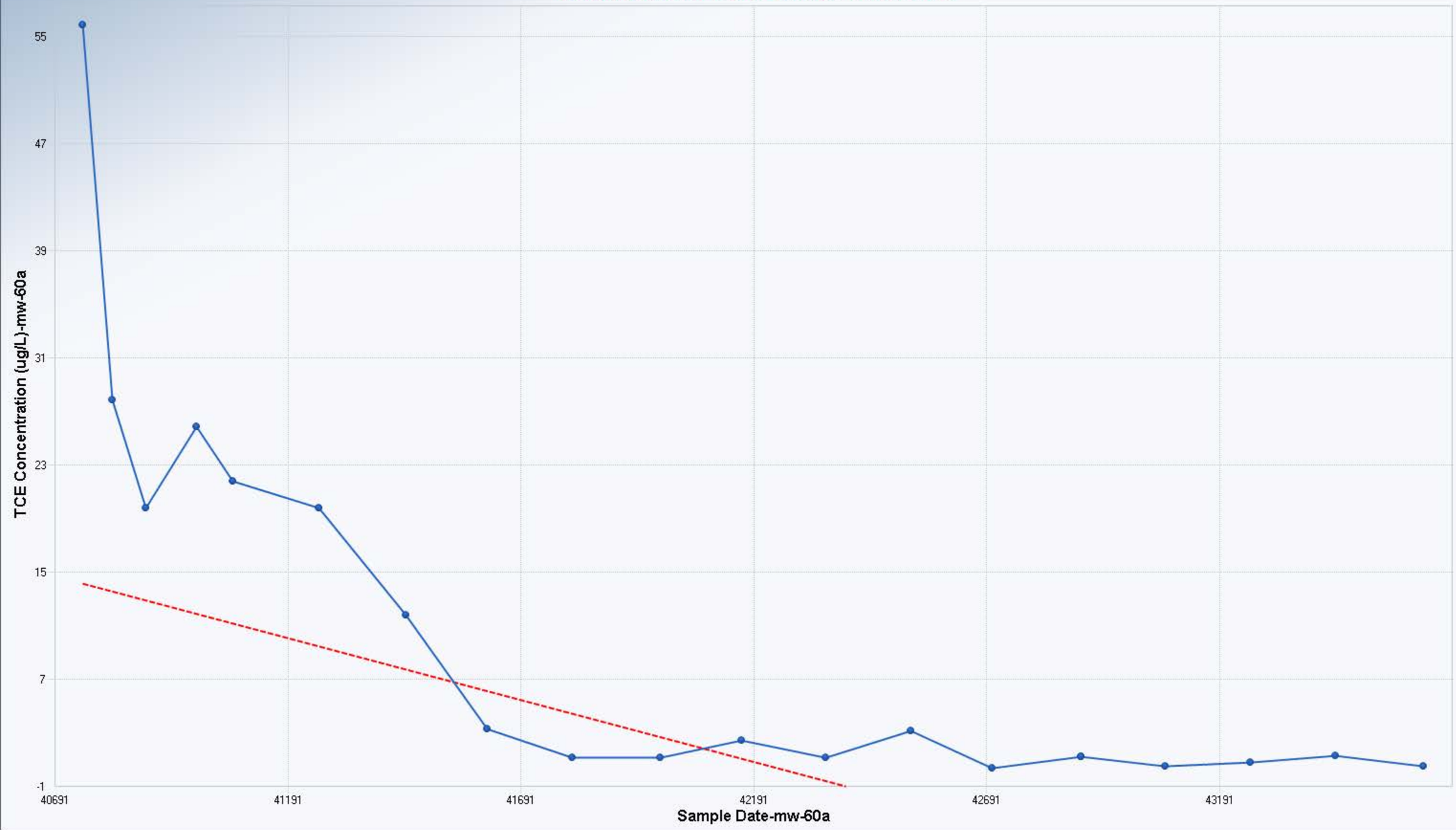
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8221
Standardized Value of S	-4.6395
M-K Test Value (S)	-144
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0194
Theil-Sen Intercept	822.4519

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7300
Standardized Value of S	-4.1002
M-K Test Value (S)	-127
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0093
Theil-Sen Intercept	391.8117

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.6386
Standardized Value of S	-4.1712
M-K Test Value (S)	-158
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0049
Theil-Sen Intercept	219.4667

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

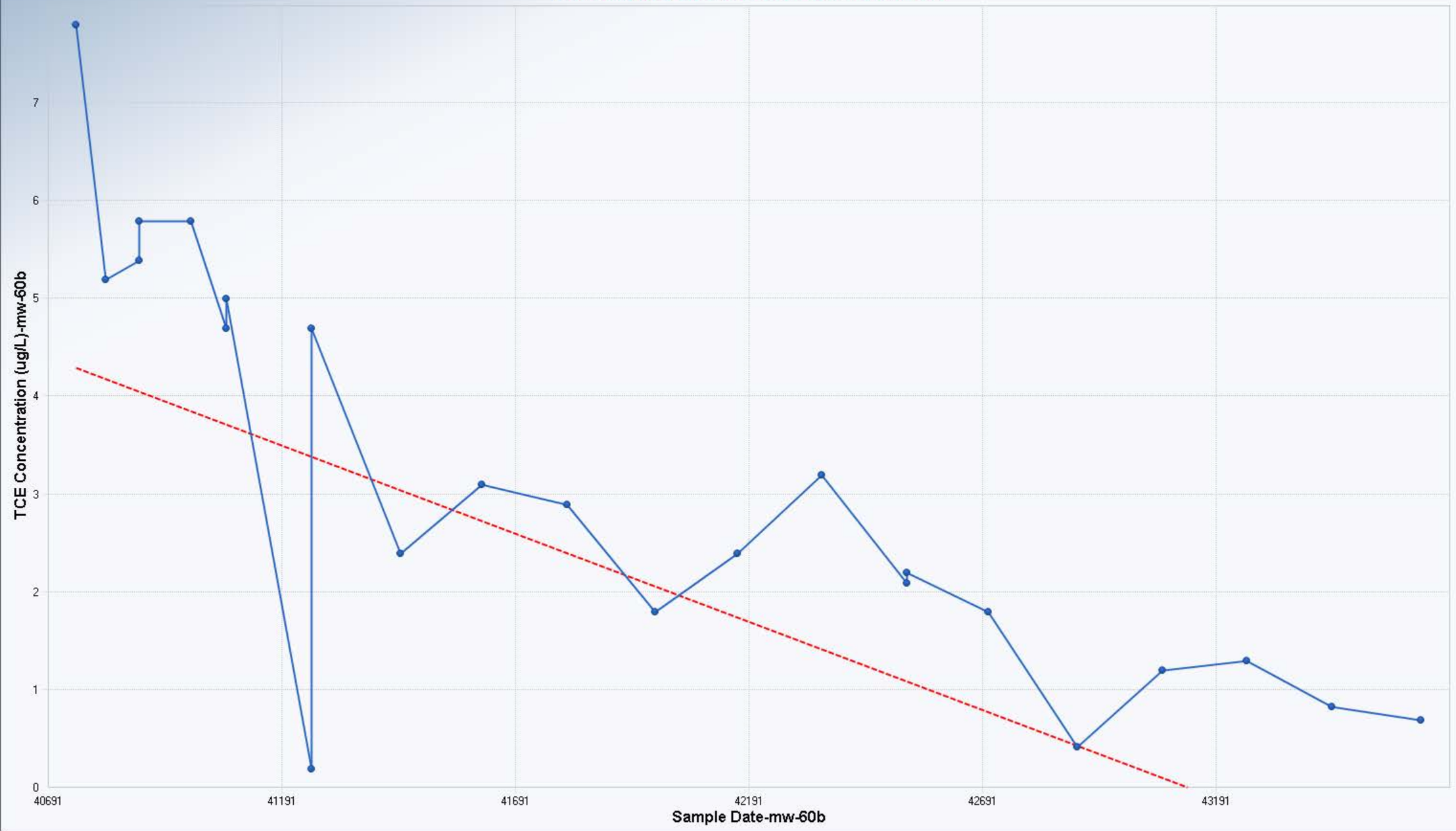
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8374
Standardized Value of S	-3.9643
M-K Test Value (S)	-151
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0191
Theil-Sen Intercept	833.2482

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

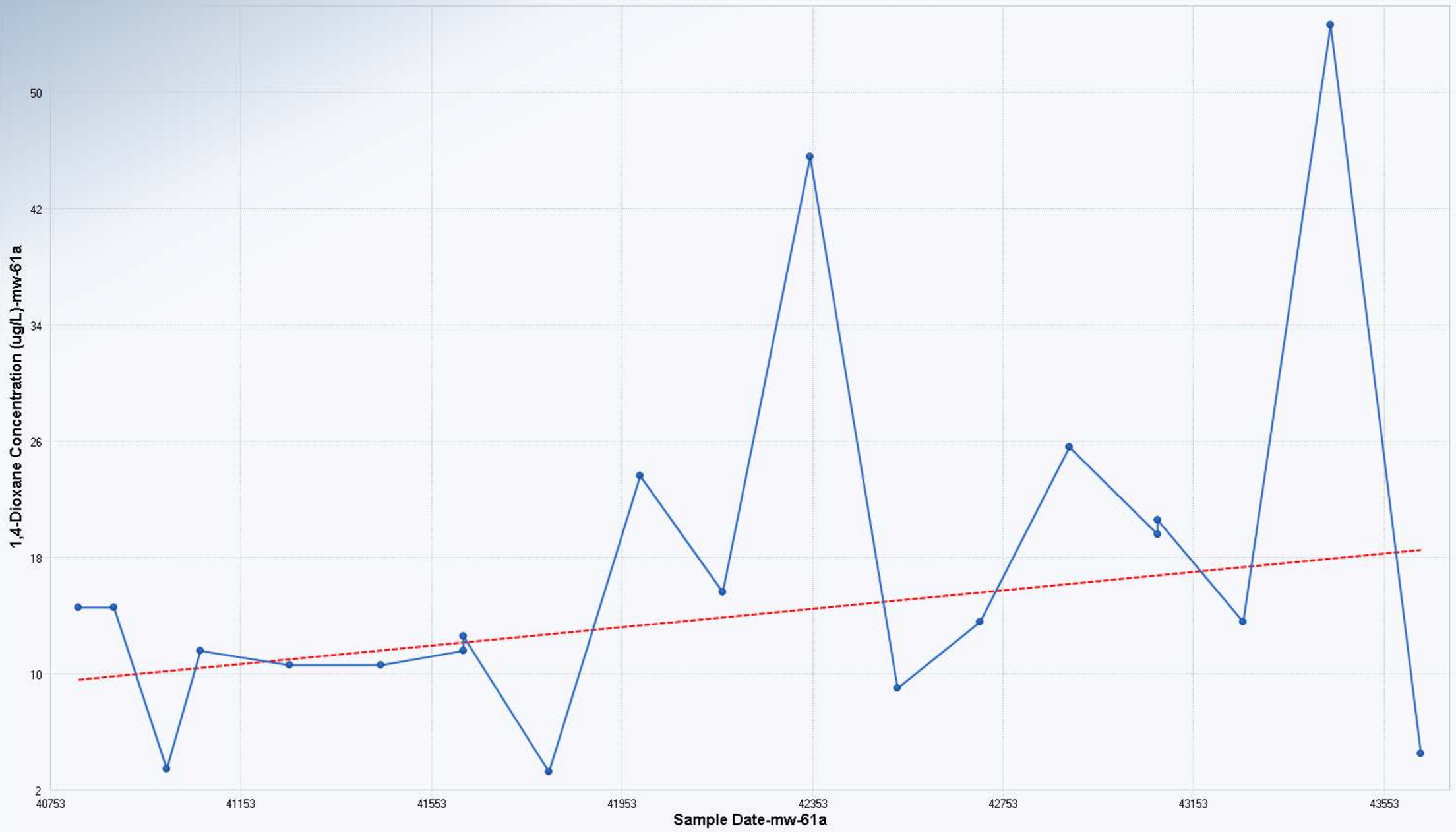
n	23
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	37.8109
Standardized Value of S	-4.6018
M-K Test Value (S)	-175
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0018
Theil-Sen Intercept	77.9027

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

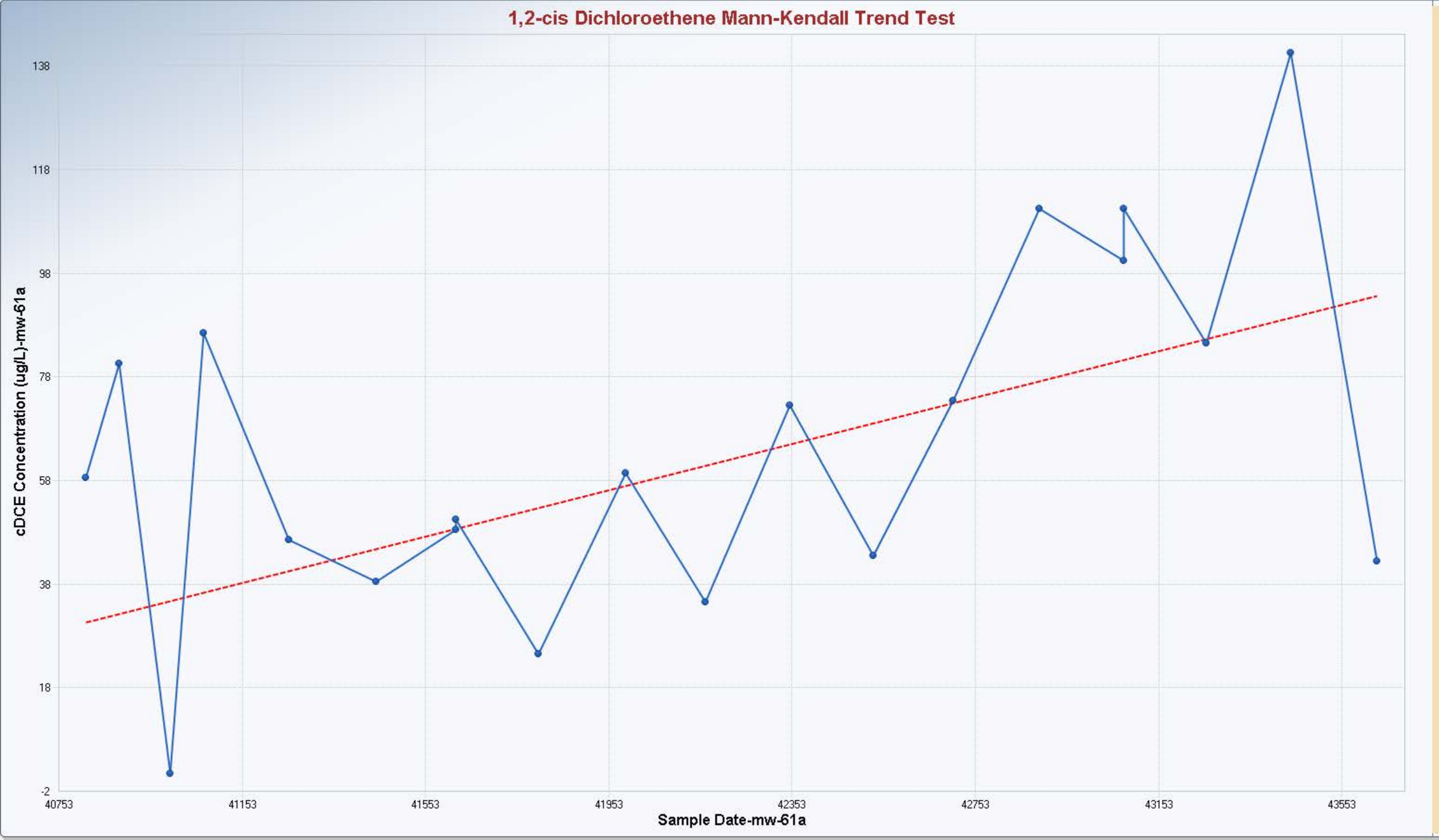
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7571
Standardized Value of S	1.4631
M-K Test Value (S)	46
Tabulated p-value	0.0730
Approximate p-value	0.0717

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0032
Theil-Sen Intercept	-119.0711

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

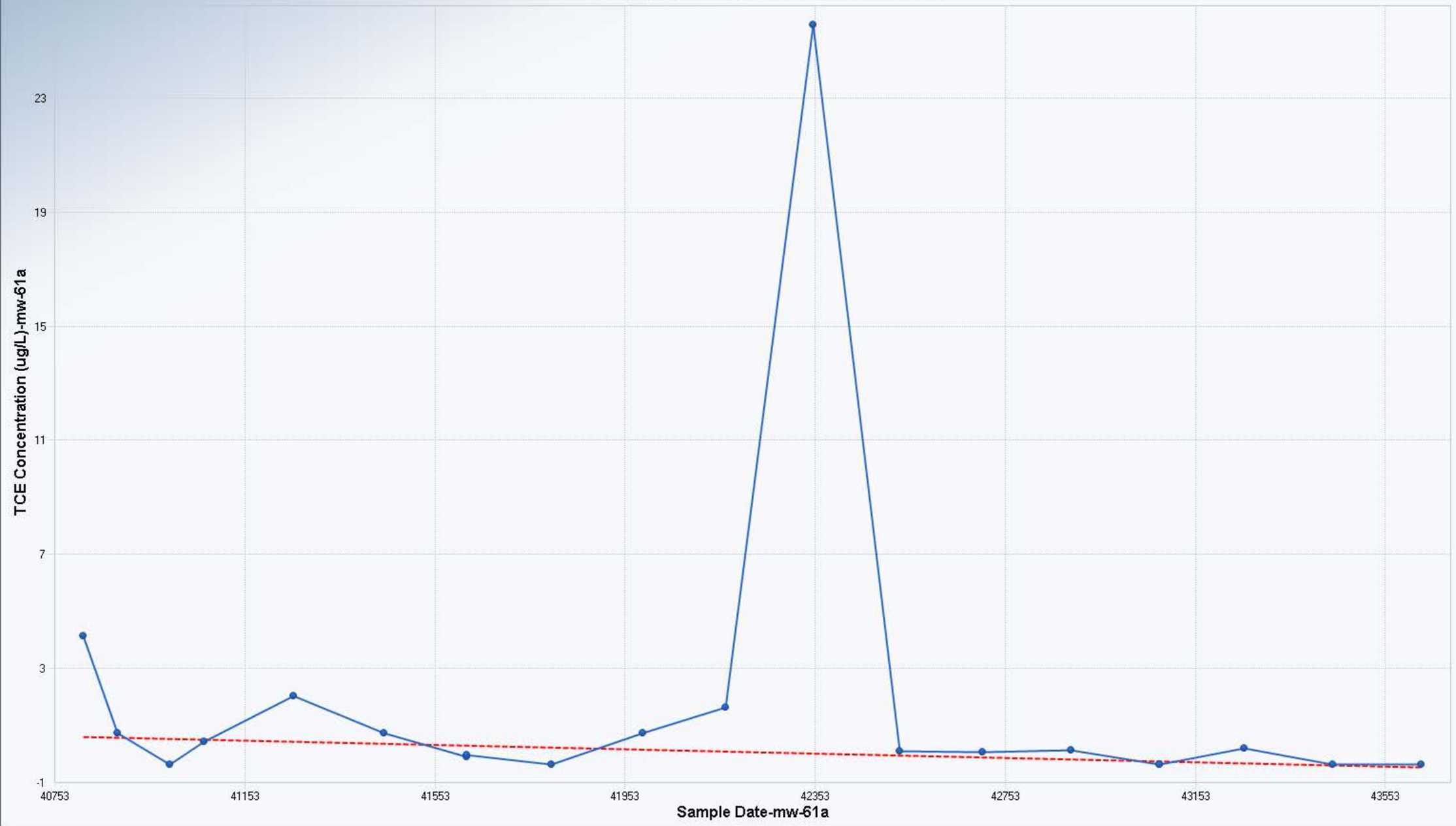
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.8058
Standardized Value of S	1.9477
M-K Test Value (S)	61
Tabulated p-value	0.0270
Approximate p-value	0.0257

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0224
Theil-Sen Intercept	-883.2021

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

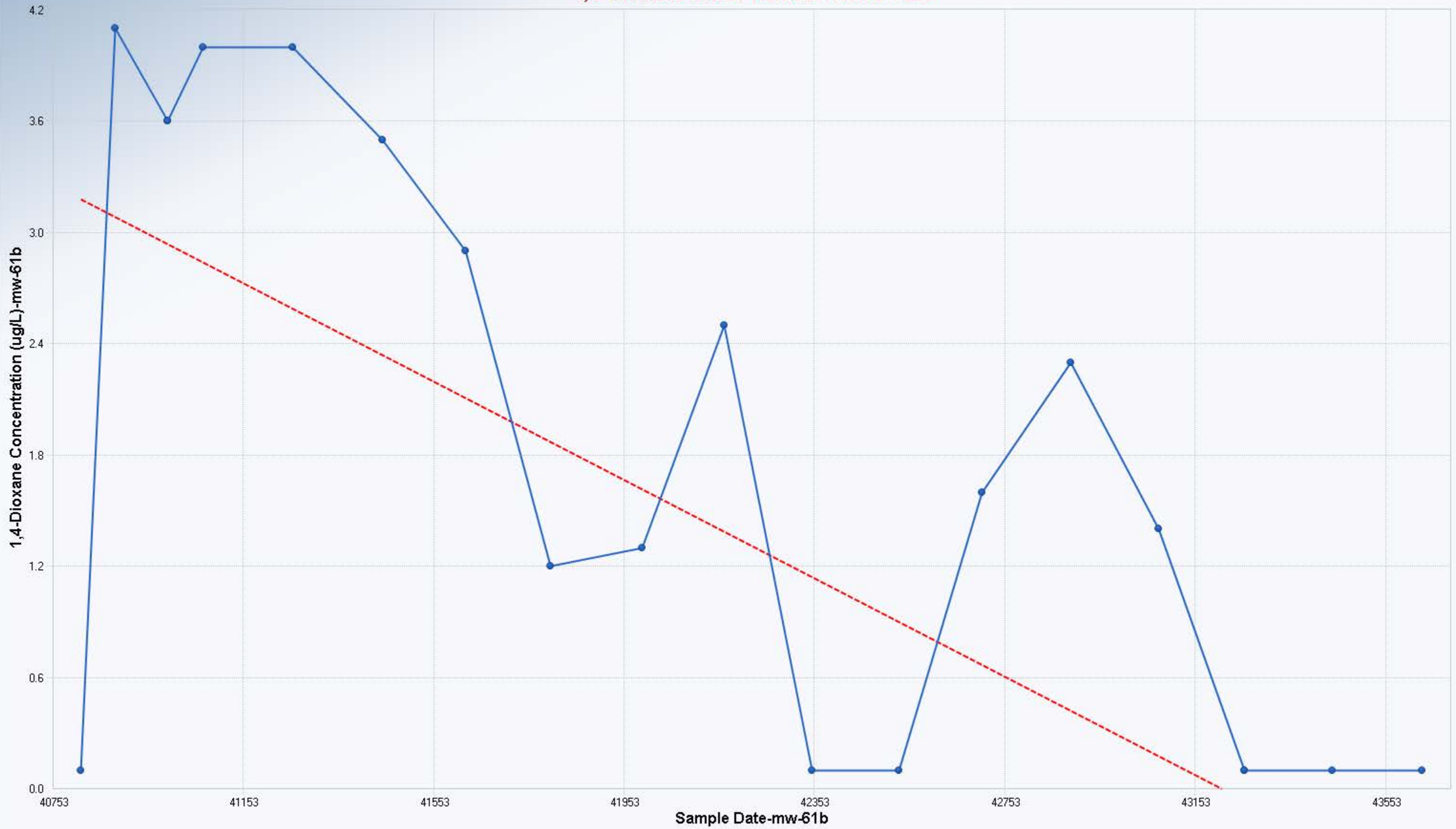
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.2985
Standardized Value of S	-1.9473
M-K Test Value (S)	-60
Tabulated p-value	0.0270
Approximate p-value	0.0257

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0004
Theil-Sen Intercept	16.9115

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

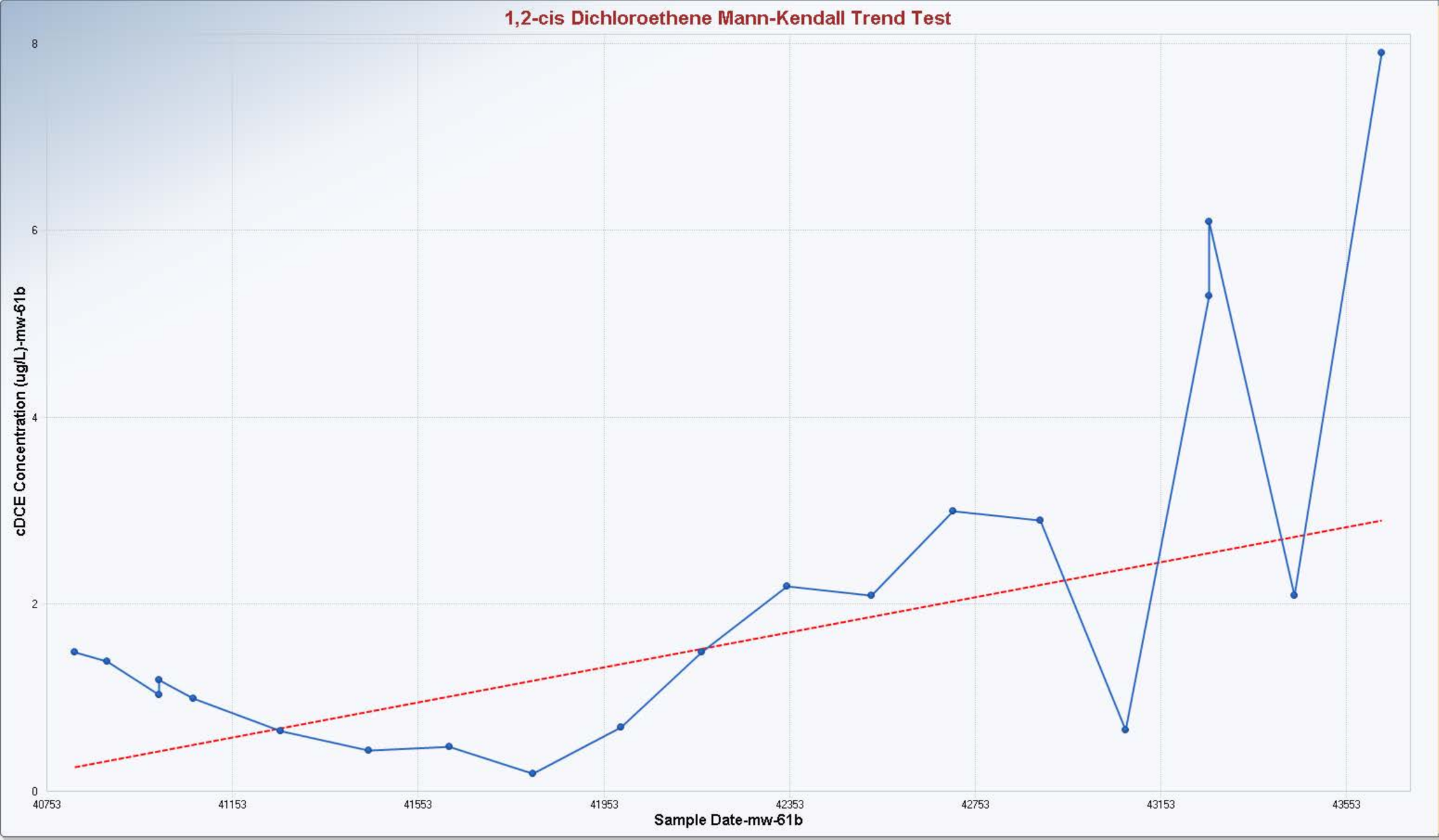
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.0610
Standardized Value of S	-3.3266
M-K Test Value (S)	-101
Tabulated p-value	0.0000
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0013
Theil-Sen Intercept	57.3891

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

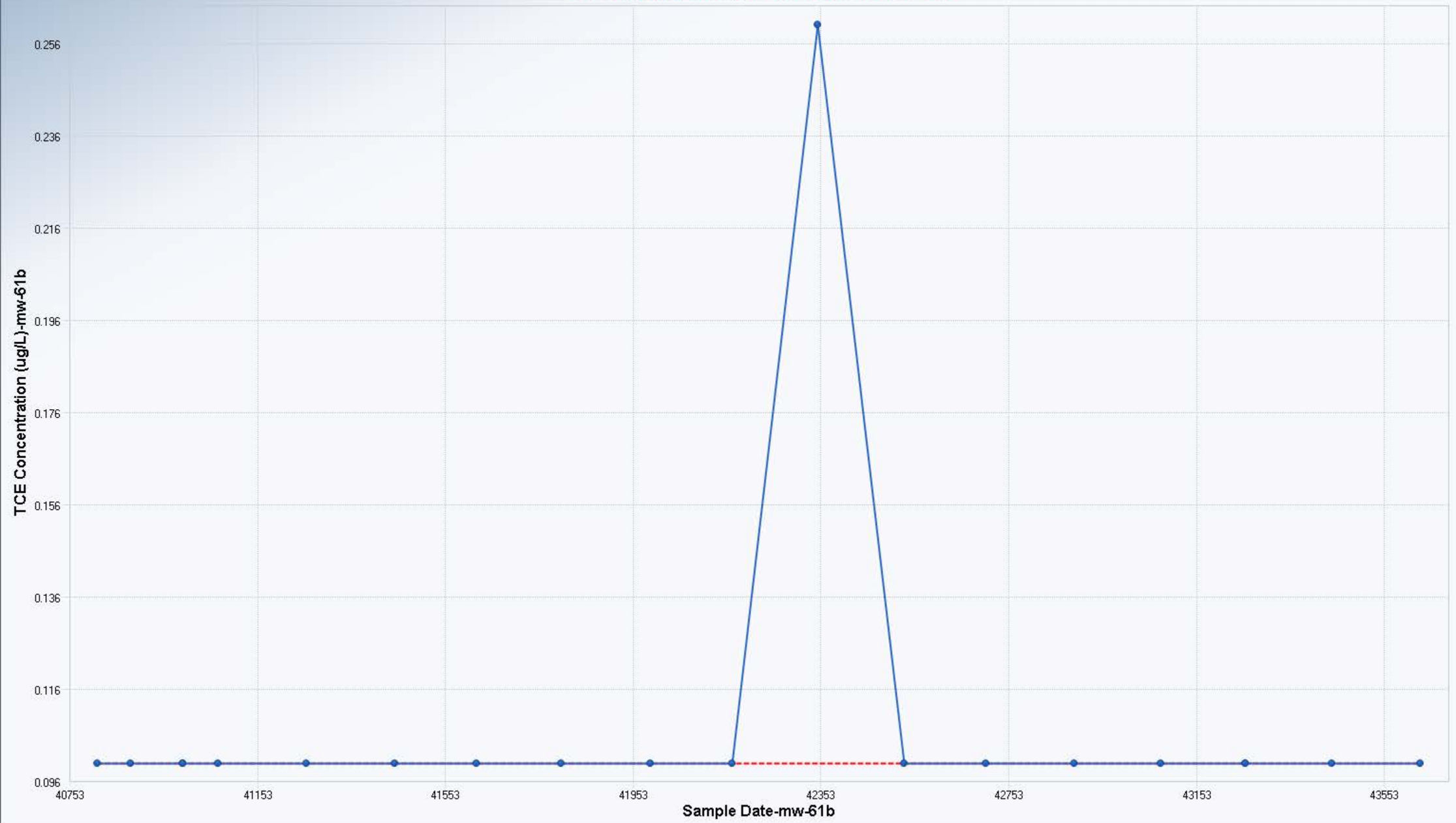
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	2.3709
M-K Test Value (S)	74
Tabulated p-value	0.0080
Approximate p-value	0.0089

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0009
Theil-Sen Intercept	-38.1049

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

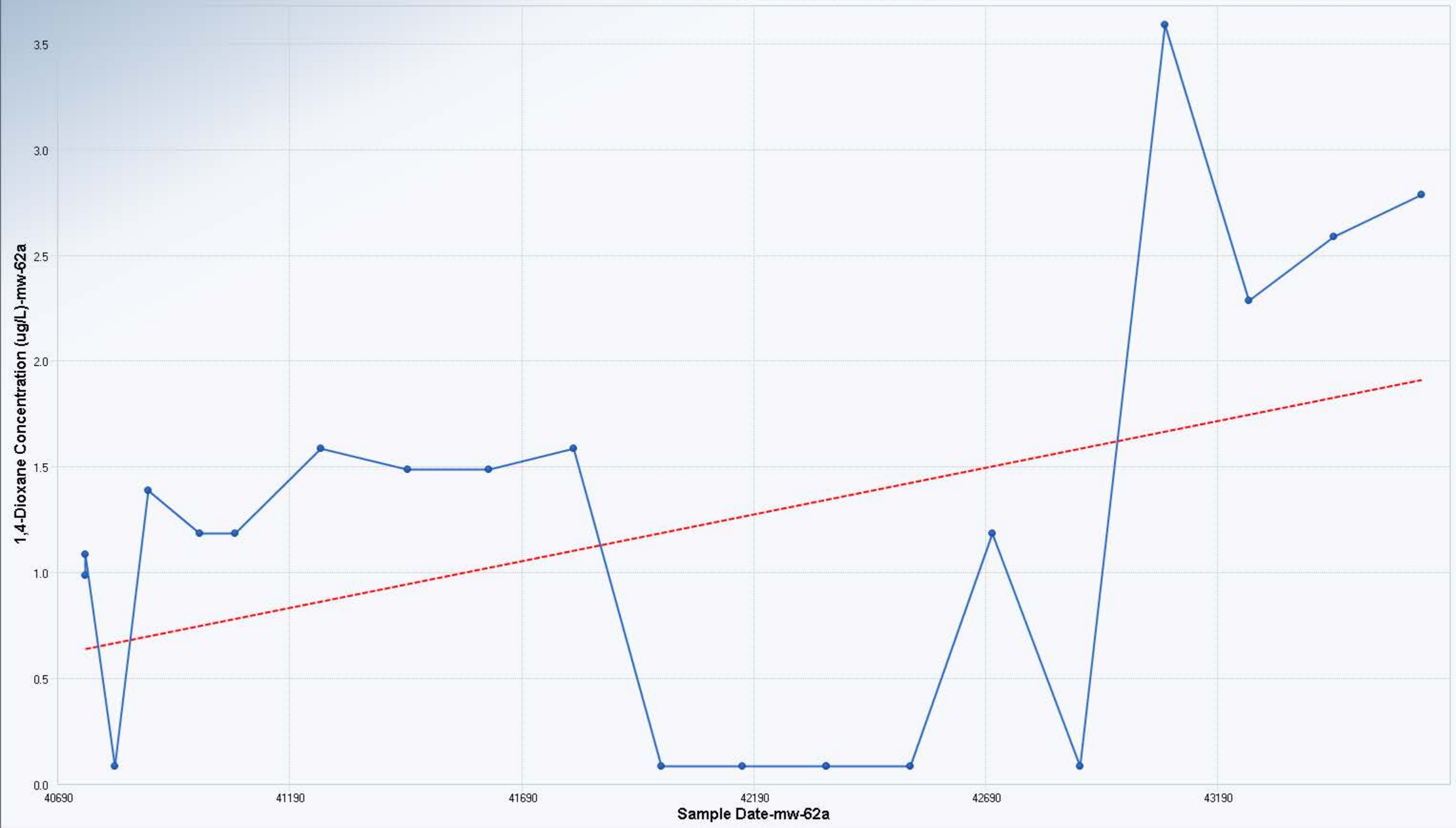
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.5326
Standardized Value of S	0.1734
M-K Test Value (S)	3
Tabulated p-value	0.4870
Approximate p-value	0.4312

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.3522
Standardized Value of S	1.3909
M-K Test Value (S)	46
Tabulated p-value	0.0880
Approximate p-value	0.0821

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0004
Theil-Sen Intercept	-17.3284

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.9242
Standardized Value of S	-4.2826
M-K Test Value (S)	-142
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0041
Theil-Sen Intercept	195.4829

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

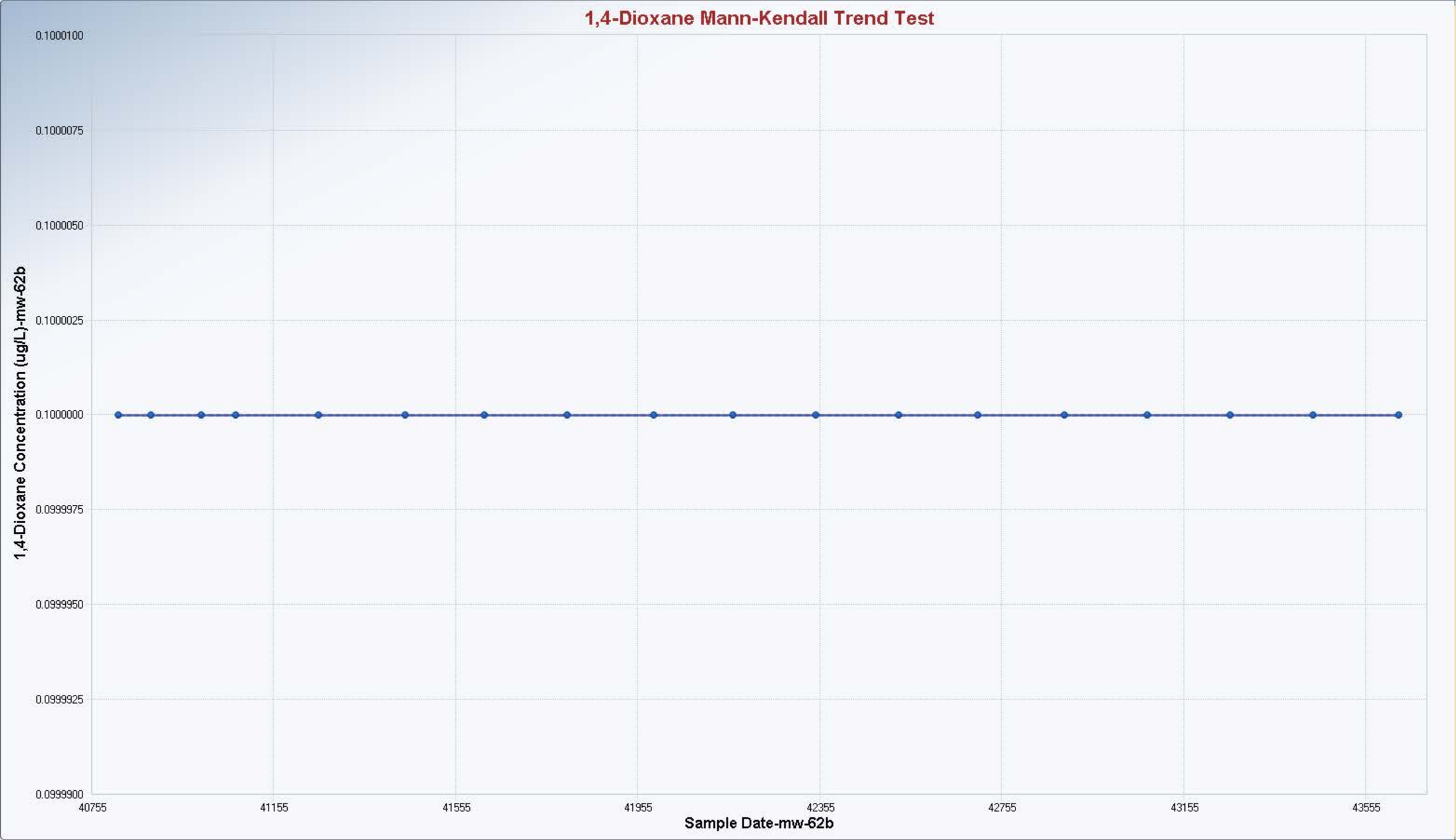
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	33.0706
Standardized Value of S	-3.5681
M-K Test Value (S)	-119
Tabulated p-value	0.0000
Approximate p-value	0.0002

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0011
Theil-Sen Intercept	50.2429

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

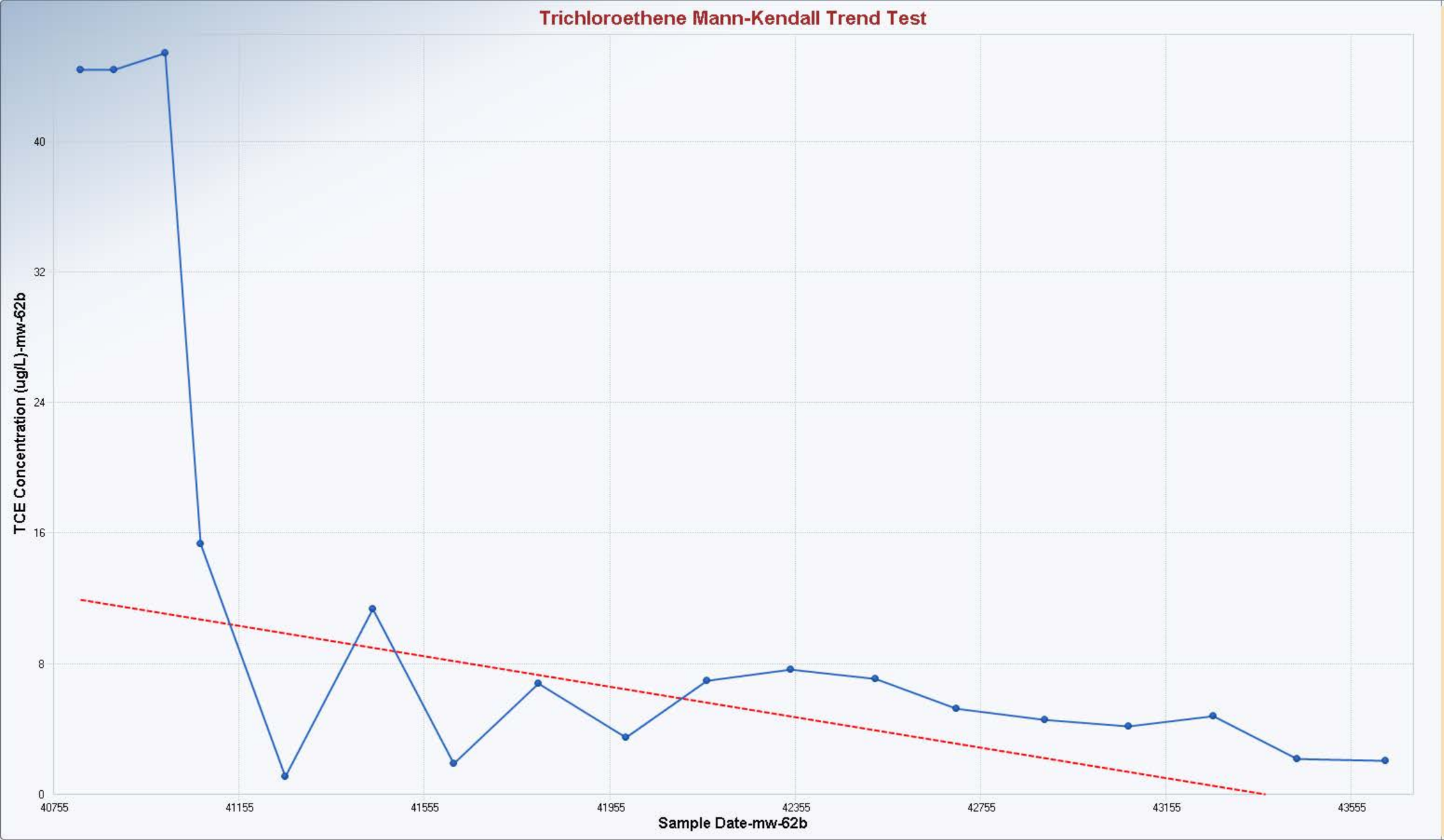
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.4008
Standardized Value of S	-4.5453
M-K Test Value (S)	-121
Tabulated p-value	0.0000
Approximate p-value	0.0000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0235
Theil-Sen Intercept	1,008.4937

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



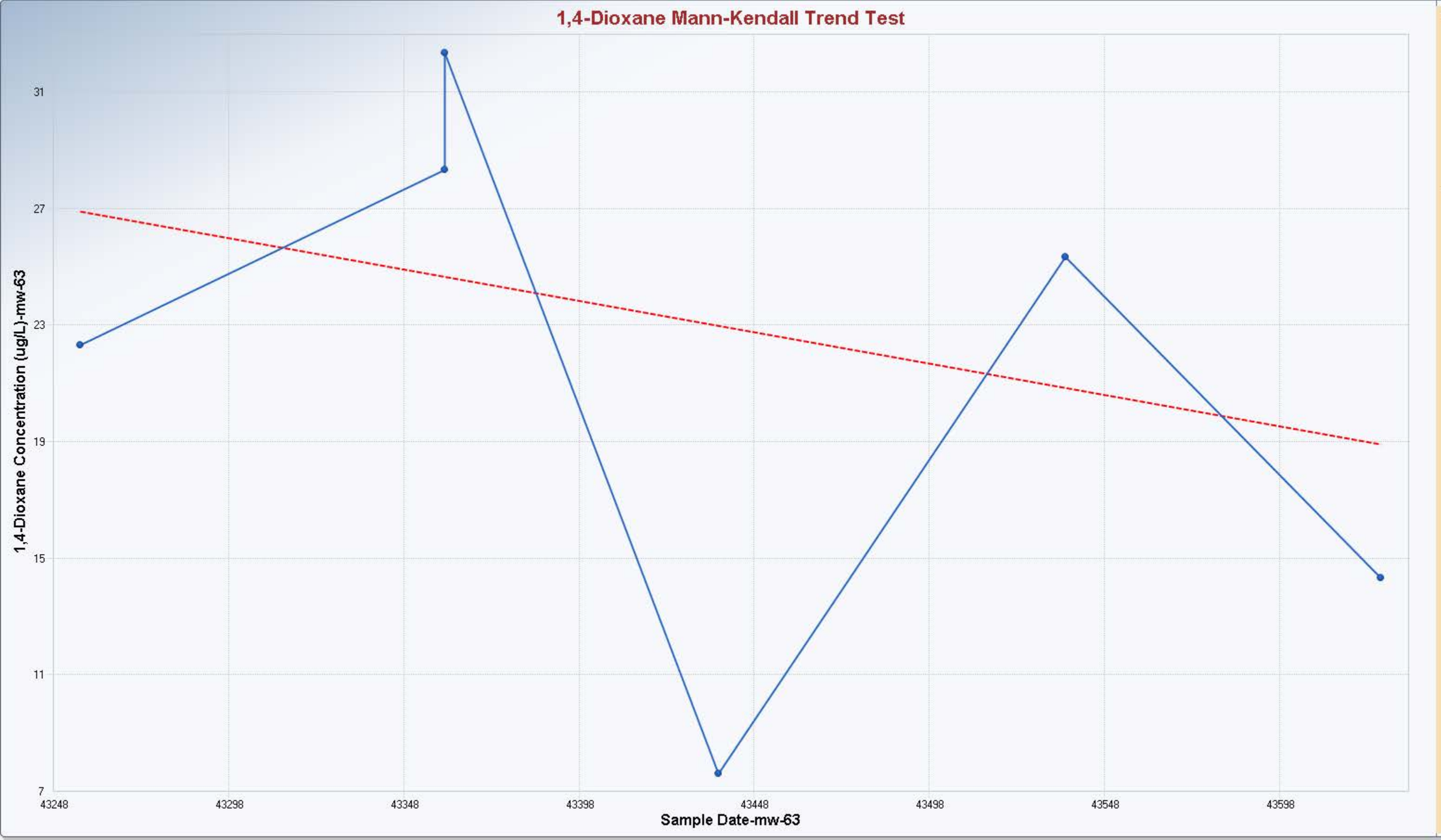
Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.3818
Standardized Value of S	-2.6912
M-K Test Value (S)	-72
Tabulated p-value	0.0030
Approximate p-value	0.0036

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0047
Theil-Sen Intercept	203.1151

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

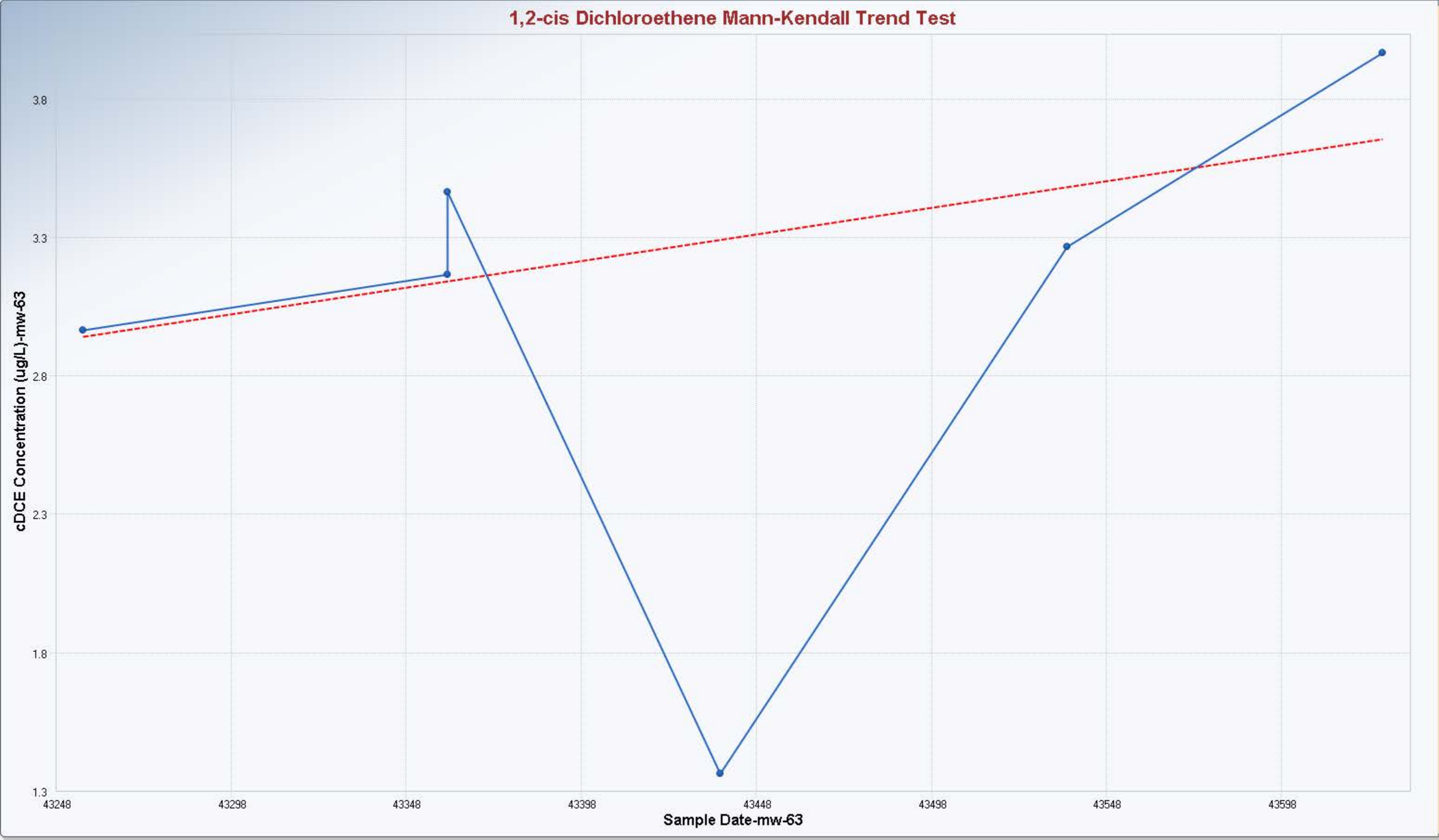
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.3229
Standardized Value of S	-0.3757
M-K Test Value (S)	-3
Tabulated p-value	0.3600
Approximate p-value	0.3536

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0216
Theil-Sen Intercept	959.3275

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.3229
Standardized Value of S	1.1272
M-K Test Value (S)	7
Tabulated p-value	0.1360
Approximate p-value	0.1298

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0019
Theil-Sen Intercept	-80.2096

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

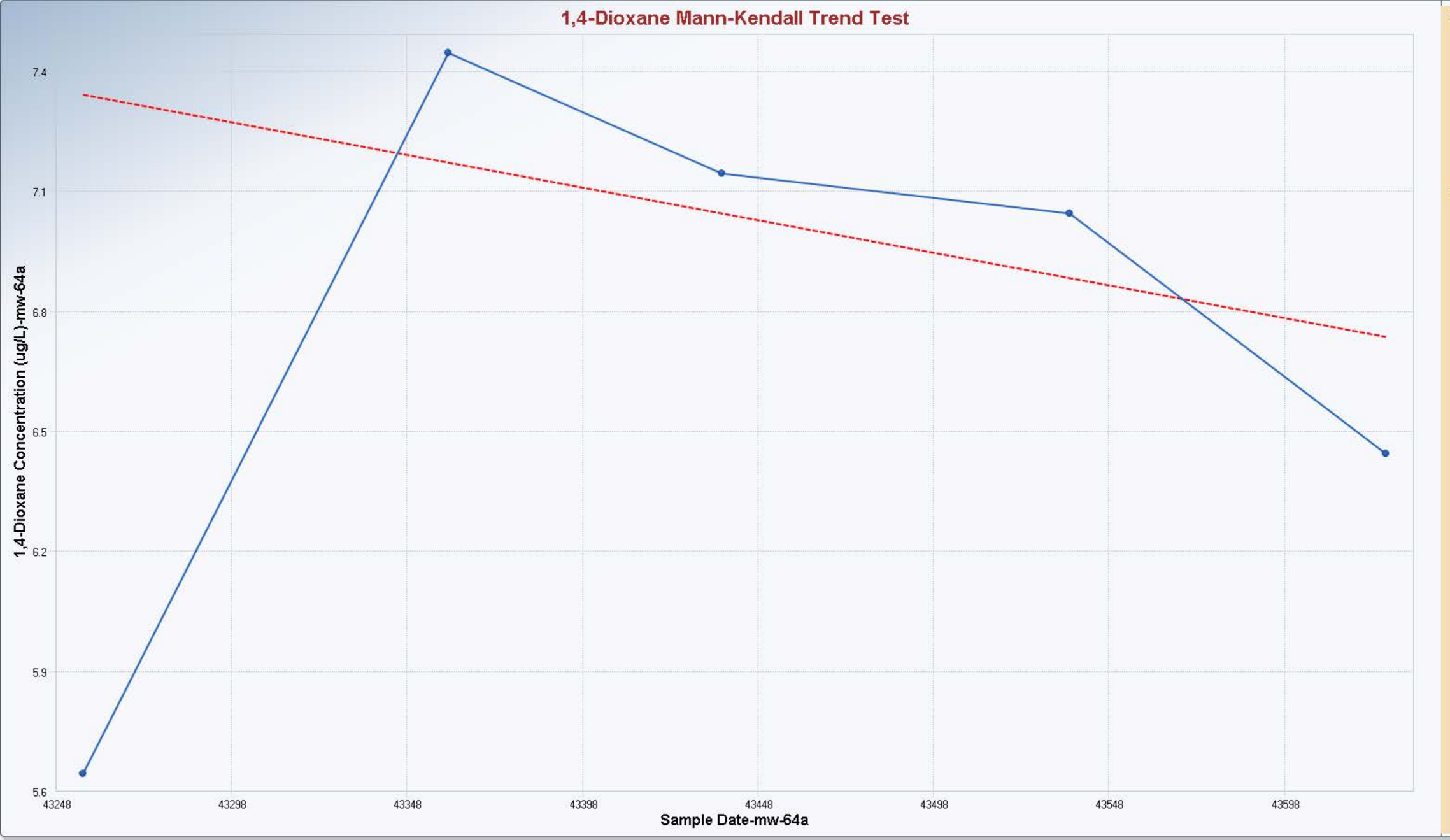
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.2281
Standardized Value of S	0.5738
M-K Test Value (S)	4
Tabulated p-value	0.2350
Approximate p-value	0.2830

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0002
Theil-Sen Intercept	-6.4987

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

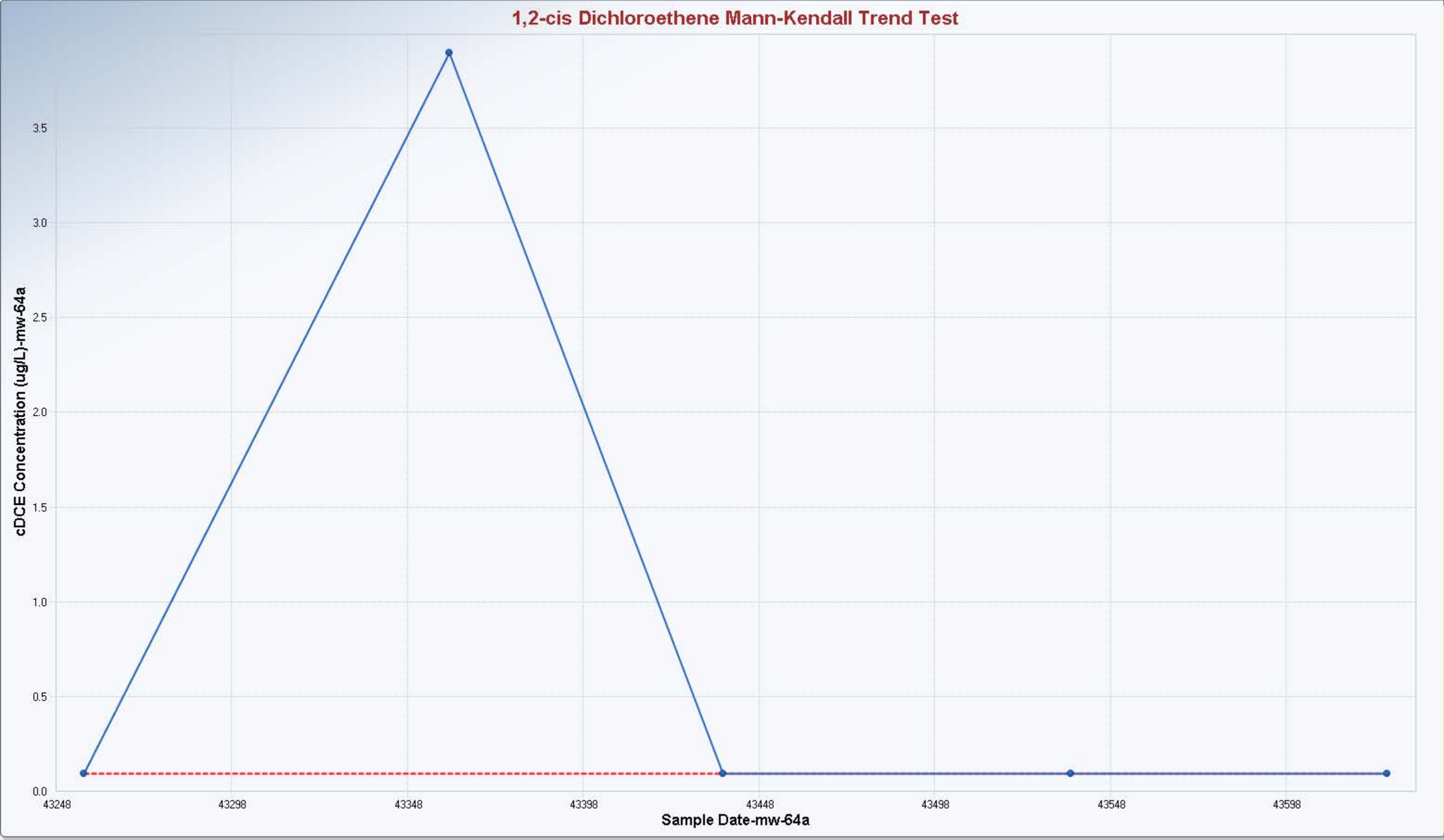
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0825
Standardized Value of S	-0.2449
M-K Test Value (S)	-2
Tabulated p-value	0.4080
Approximate p-value	0.4032

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0016
Theil-Sen Intercept	78.0209

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

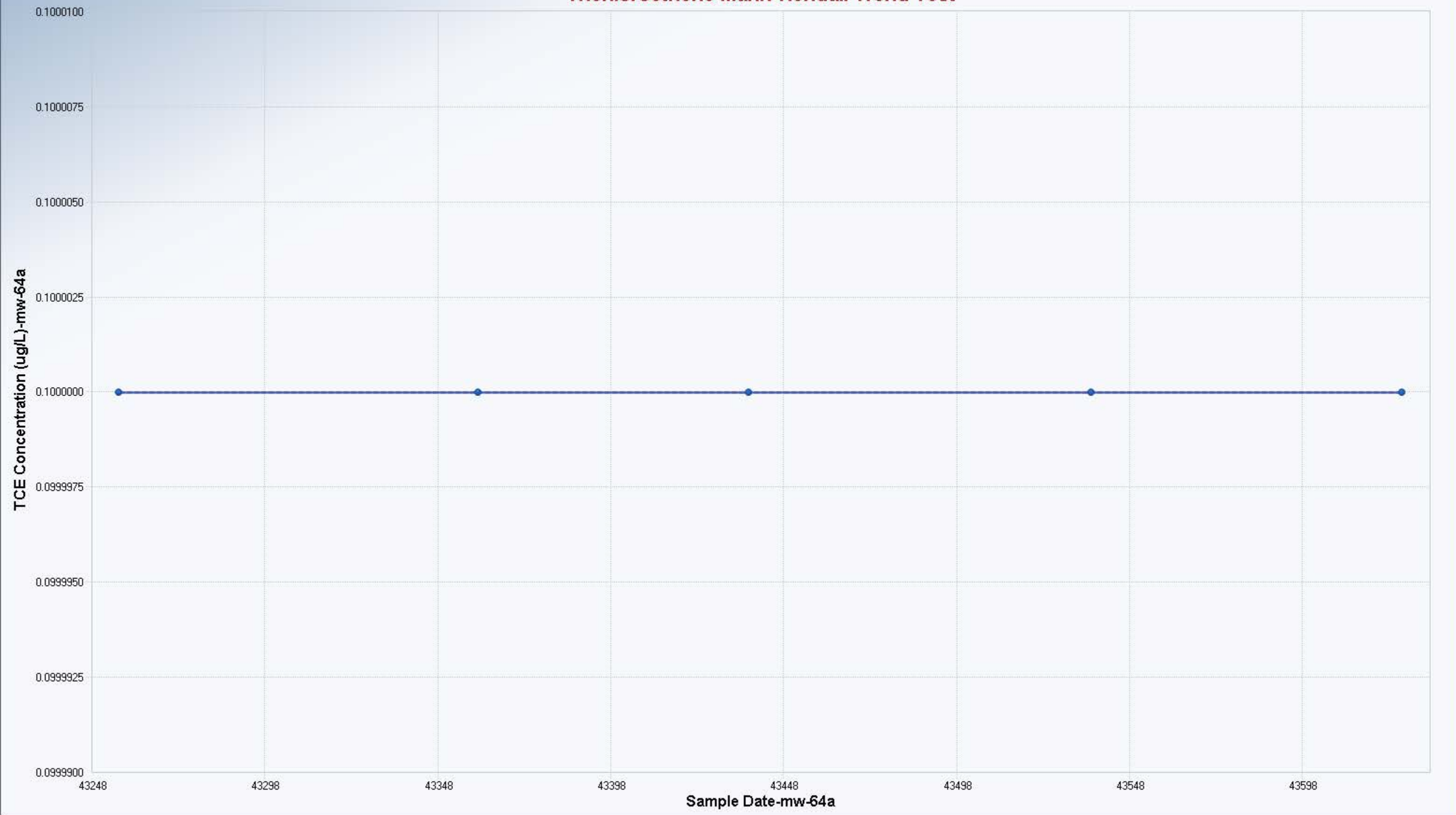
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.8284
Standardized Value of S	-0.3536
M-K Test Value (S)	-2
Tabulated p-value	0.4080
Approximate p-value	0.3618

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5920
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

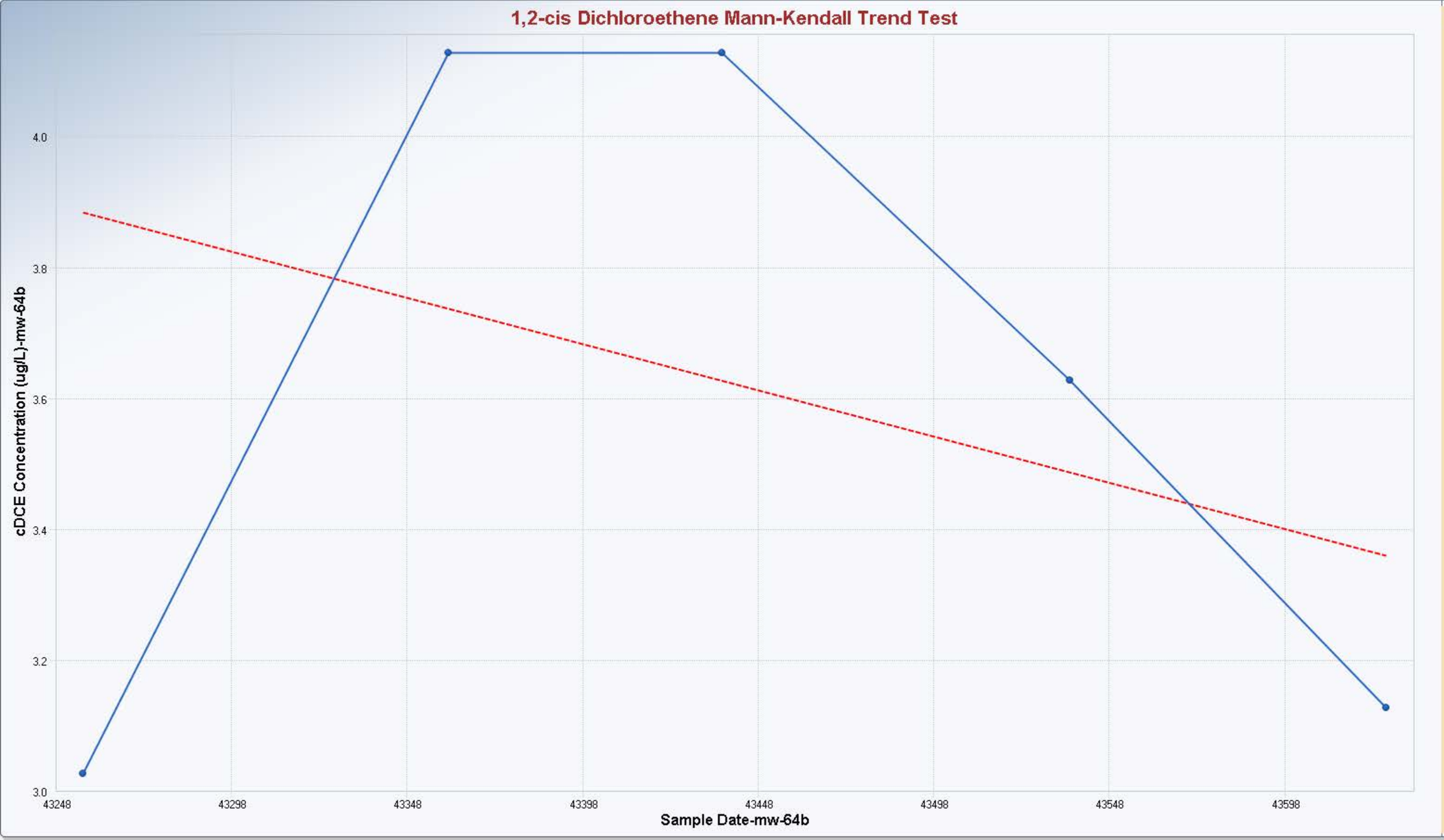
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5920
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	3.9581
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	0.5920
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0014
Theil-Sen Intercept	64.9531

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

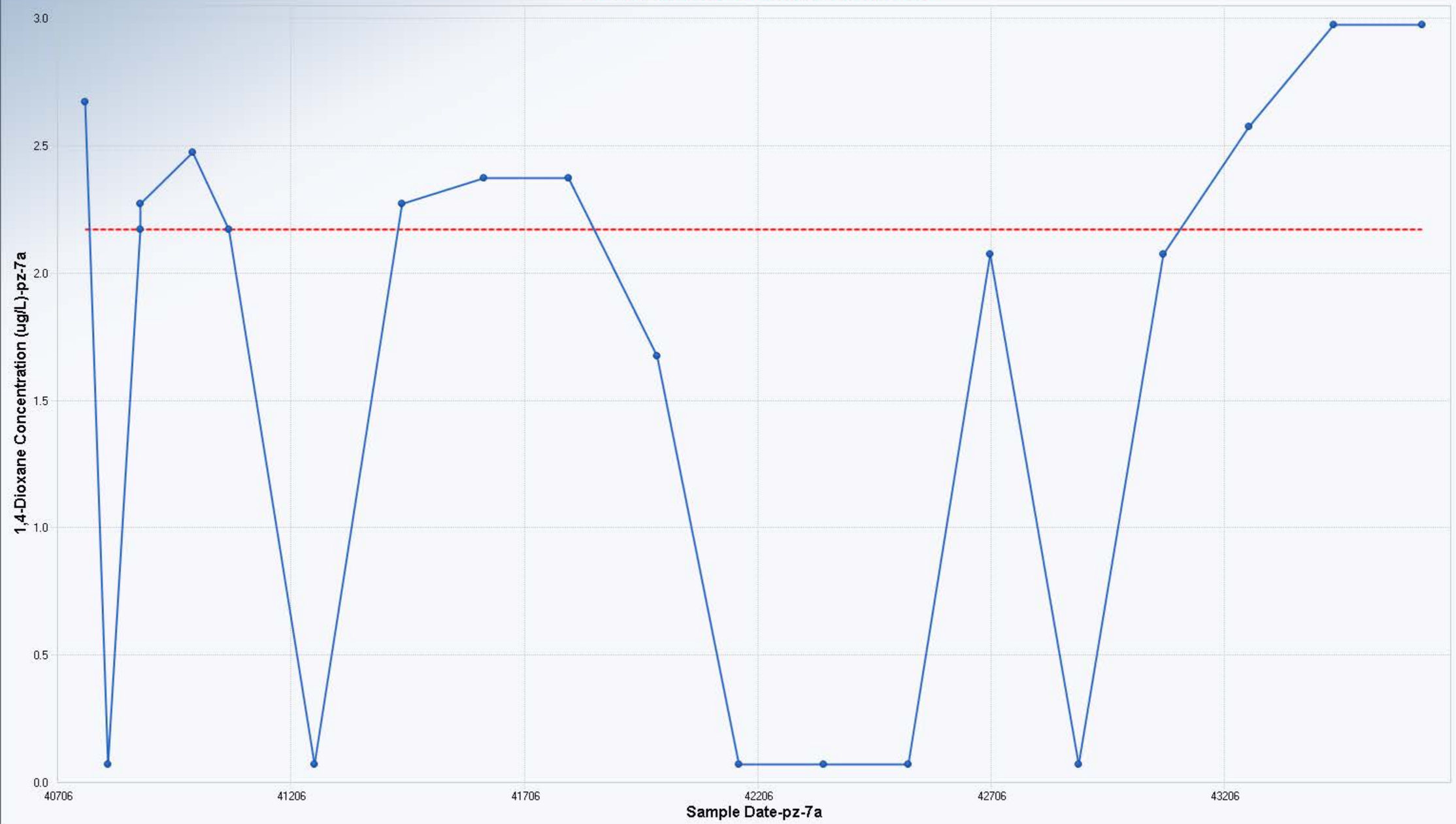
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0825
Standardized Value of S	-1.2247
M-K Test Value (S)	-6
Tabulated p-value	0.1170
Approximate p-value	0.1103

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0006
Theil-Sen Intercept	27.1635

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

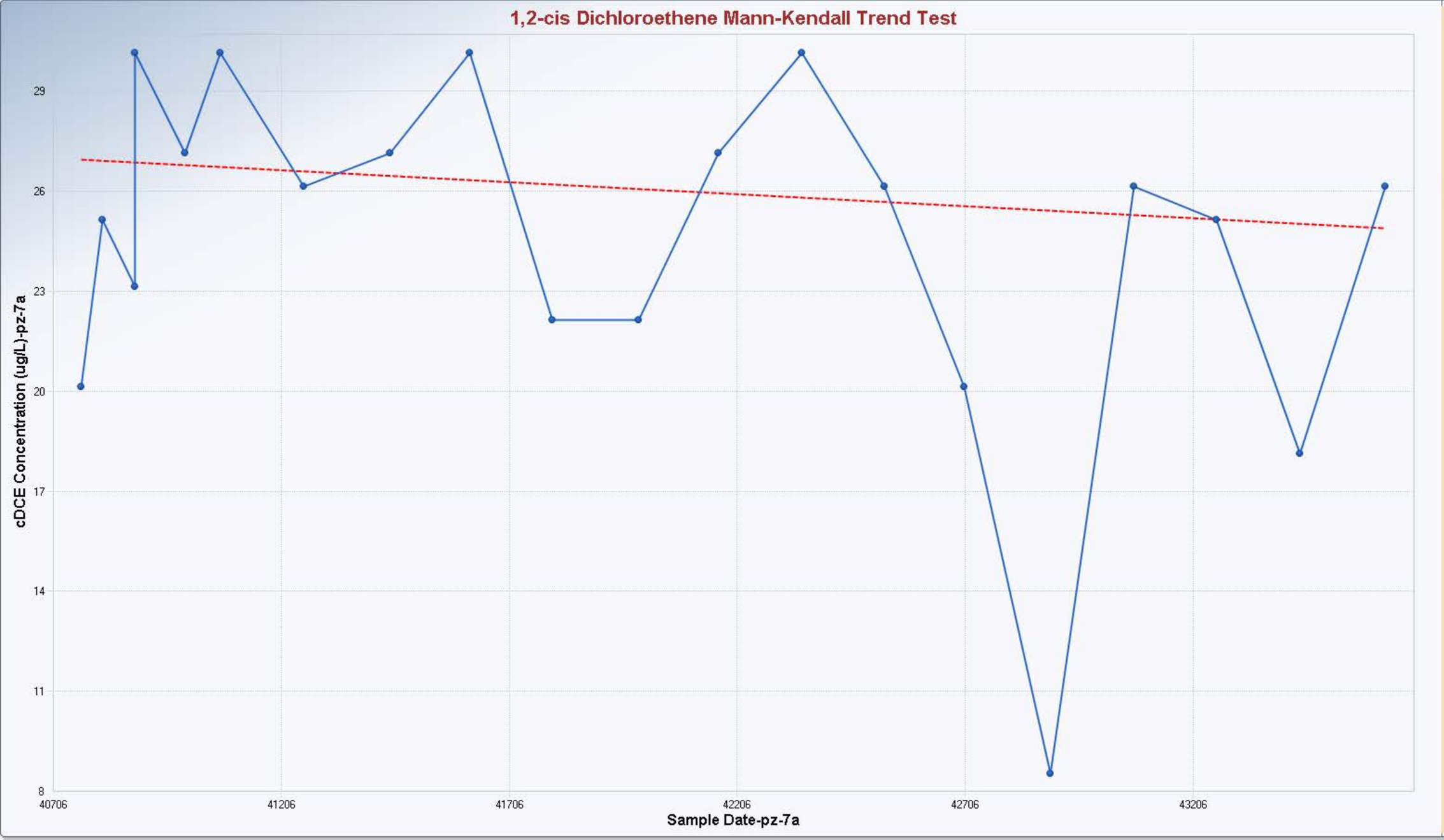
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.2765
Standardized Value of S	0.2973
M-K Test Value (S)	10
Tabulated p-value	0.3870
Approximate p-value	0.3831

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	2.2000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.4302
Standardized Value of S	-1.0187
M-K Test Value (S)	-32
Tabulated p-value	0.1590
Approximate p-value	0.1542

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0007
Theil-Sen Intercept	55.9919

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7463
Standardized Value of S	-3.3500
M-K Test Value (S)	-104
Tabulated p-value	0.0000
Approximate p-value	0.0004

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0012
Theil-Sen Intercept	53.0475

Statistically significant evidence of a decreasing trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	34.3899
Standardized Value of S	0.9596
M-K Test Value (S)	34
Tabulated p-value	0.1710
Approximate p-value	0.1686

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0001
Theil-Sen Intercept	-0.6136

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

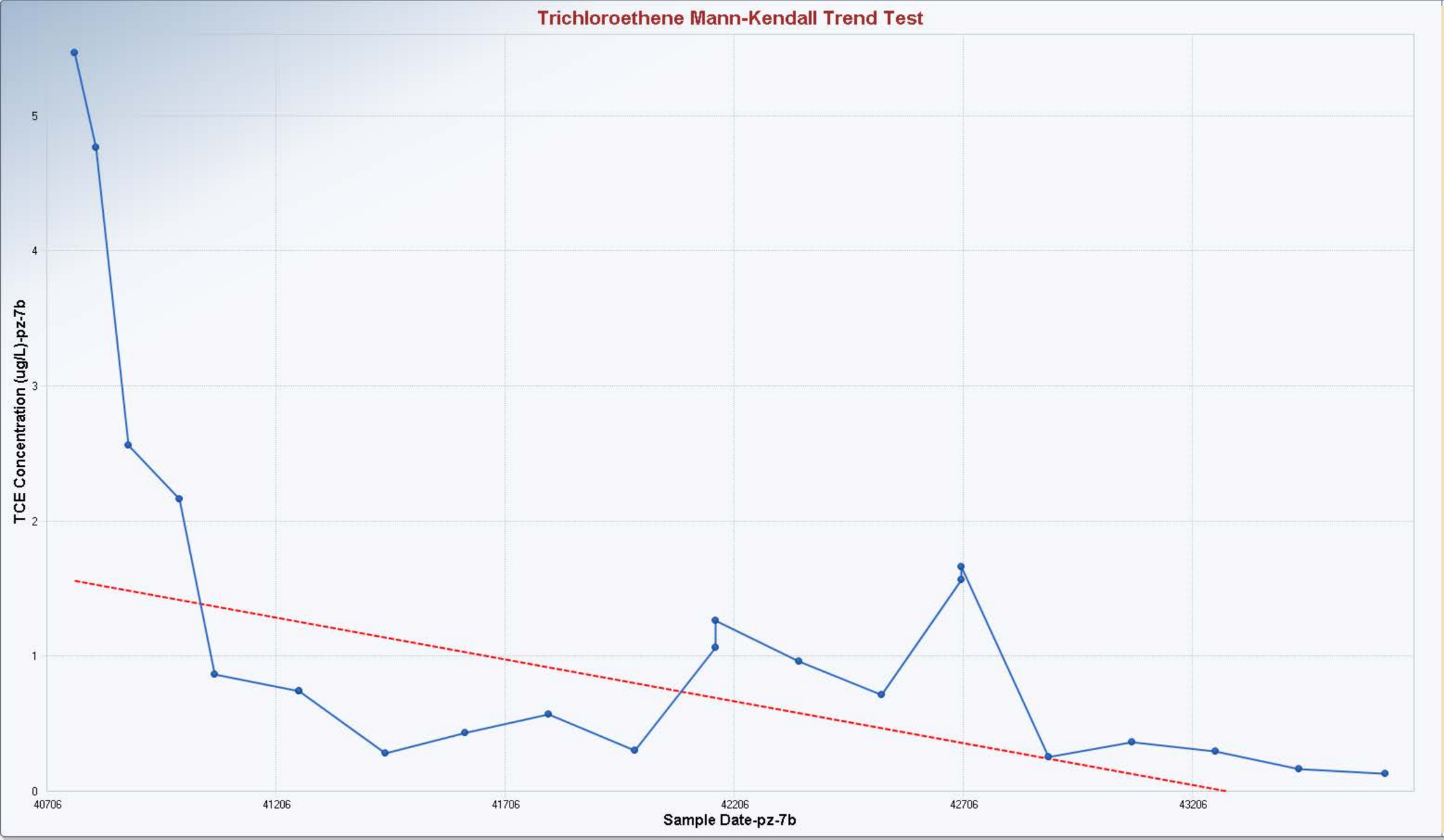
n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.3930
Standardized Value of S	-3.1927
M-K Test Value (S)	-114
Tabulated p-value	0.0000
Approximate p-value	0.0007

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0055
Theil-Sen Intercept	259.1102

Statistically significant evidence of a decreasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



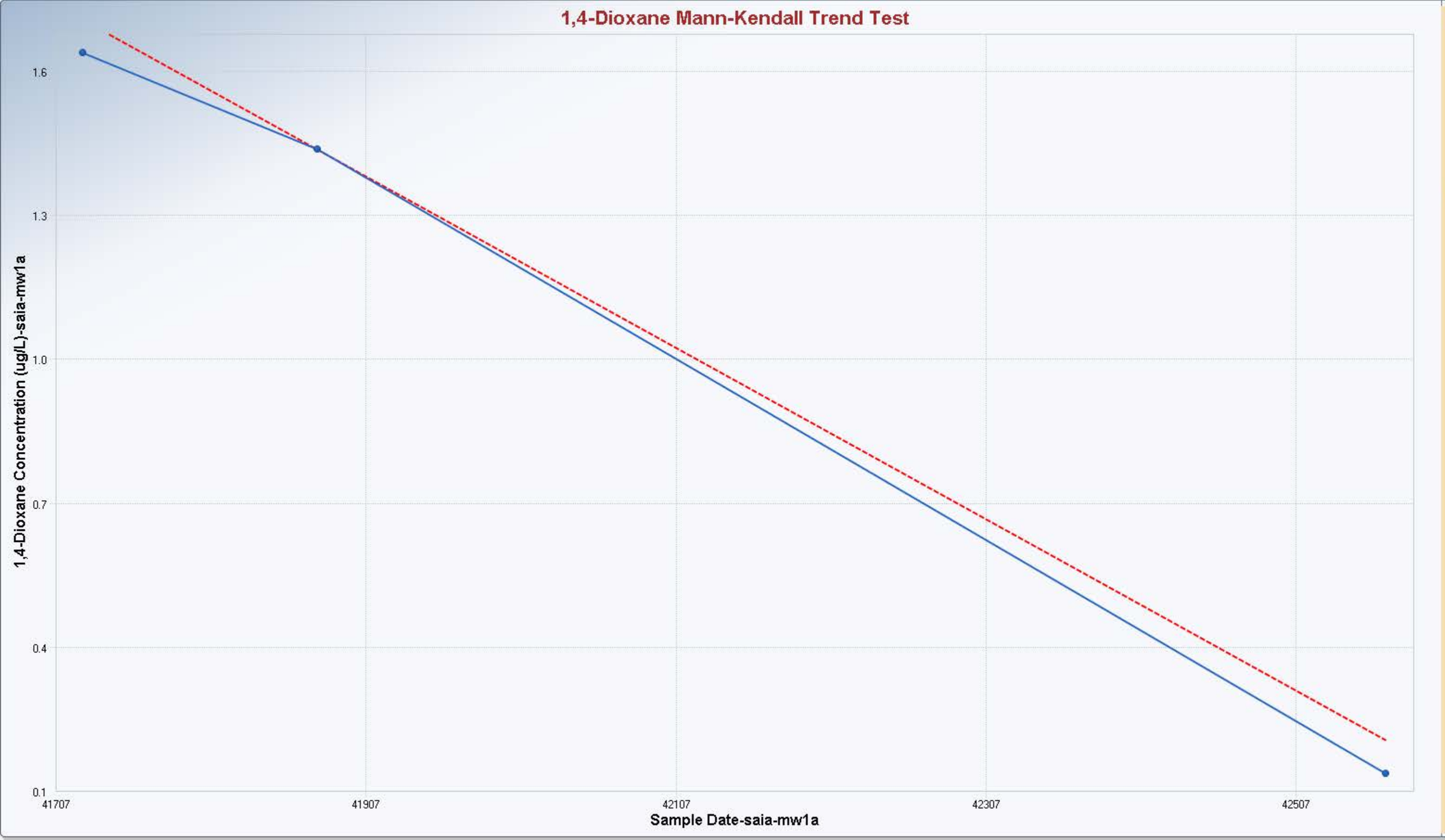
Mann-Kendall Trend Analysis

n	22
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	35.4495
Standardized Value of S	-3.1876
M-K Test Value (S)	-114
Tabulated p-value	0.0000
Approximate p-value	0.0007

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0006
Theil-Sen Intercept	27.2020

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

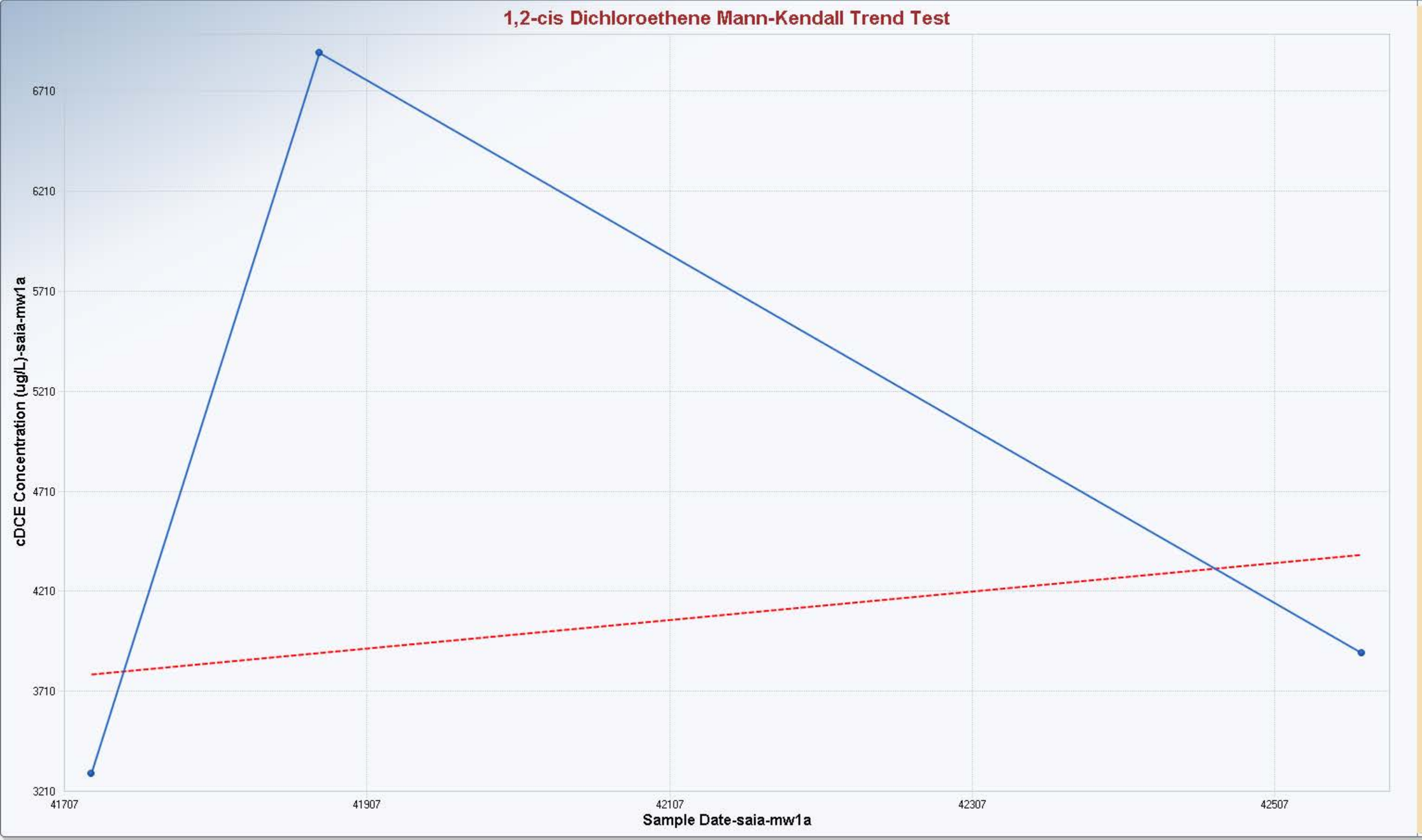
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0018
Theil-Sen Intercept	76.1786

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

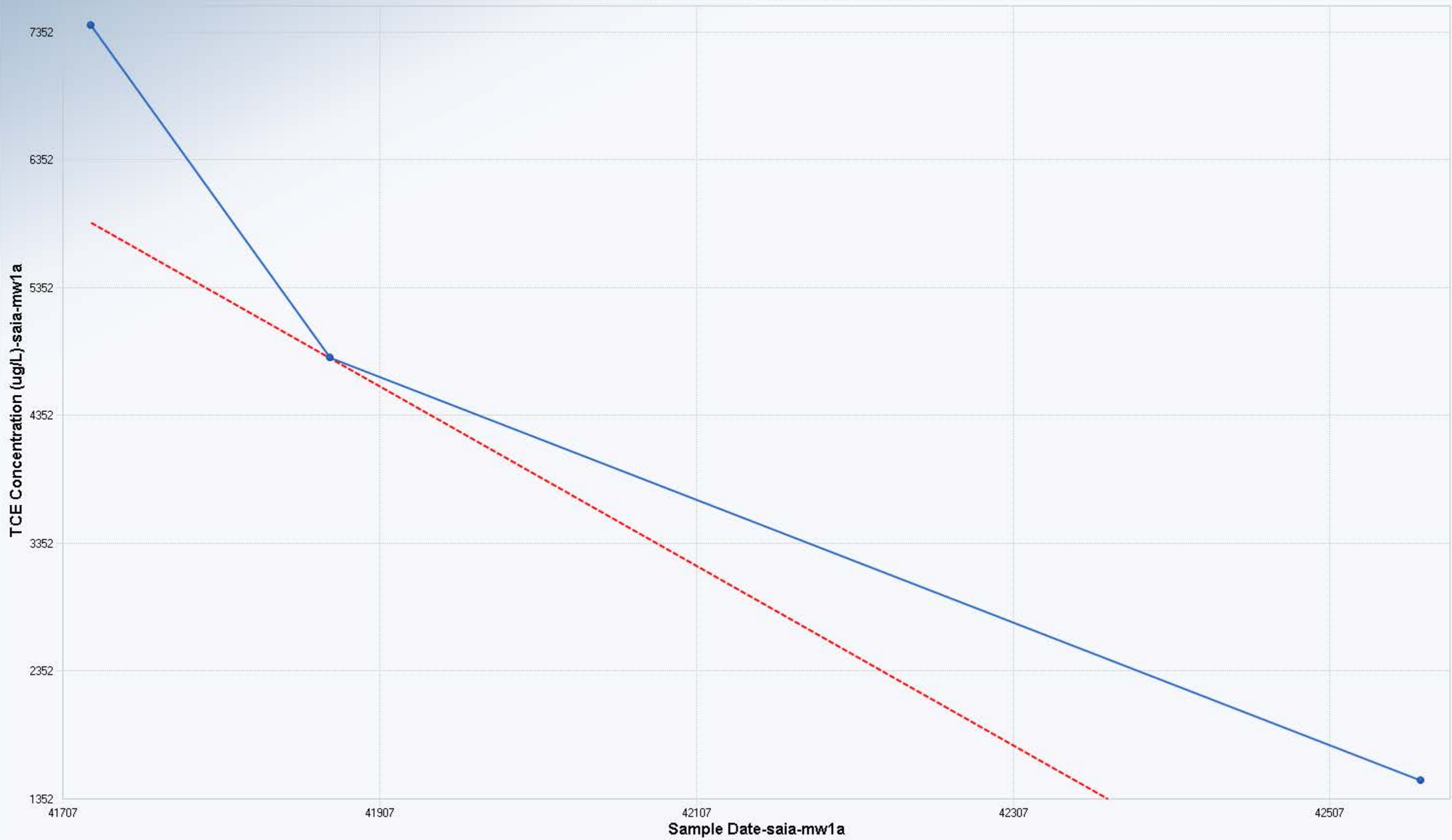
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.7143
Theil-Sen Intercept	-26,011.4286

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



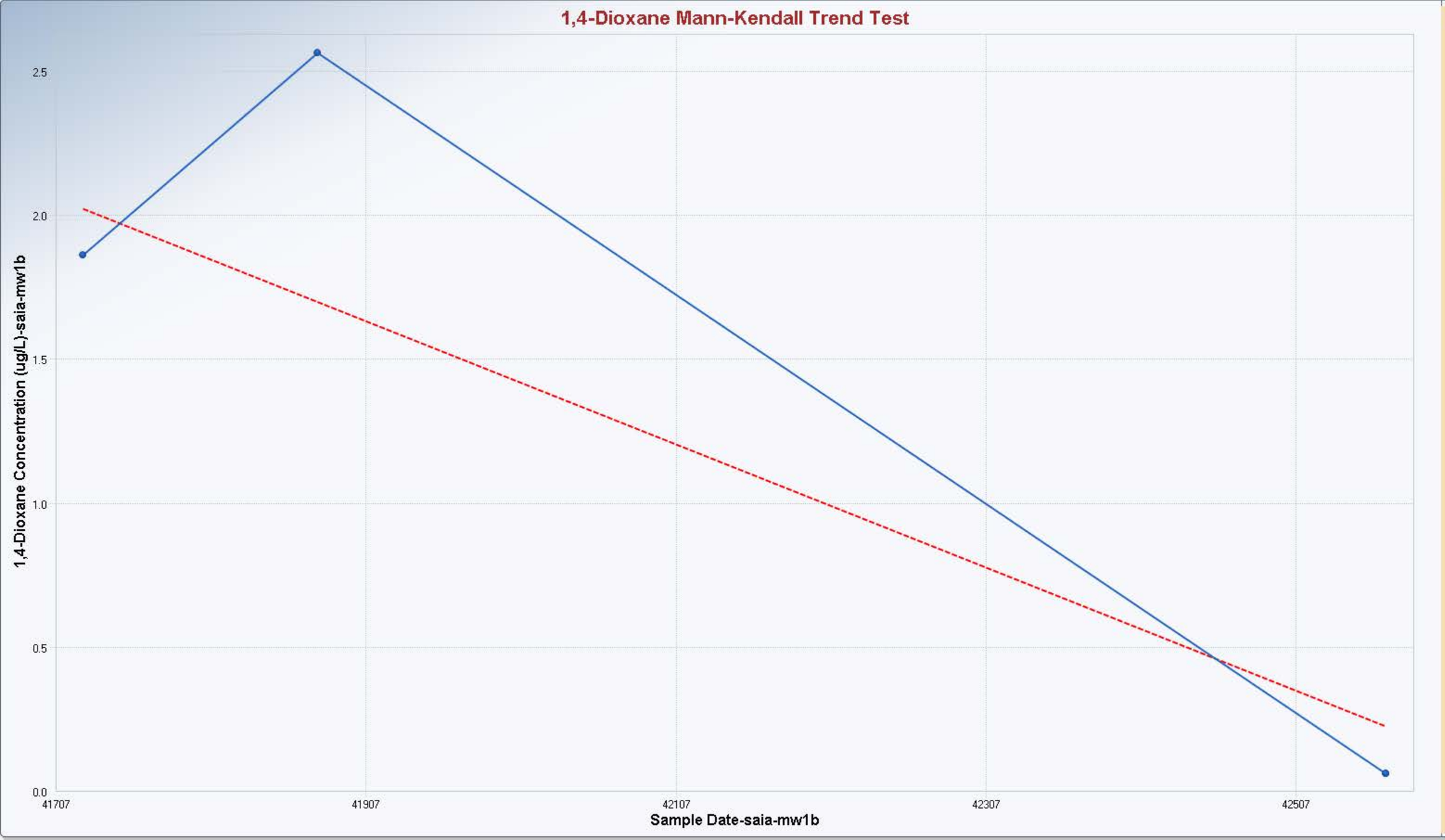
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-7.0238
Theil-Sen Intercept	298,929.0476

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-0.7223
M-K Test Value (S)	-3
Tabulated p-value	0.3750
Approximate p-value	0.2351

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0021
Theil-Sen Intercept	91.4725

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.0190
M-K Test Value (S)	-4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0527
Theil-Sen Intercept	2,257.1988

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

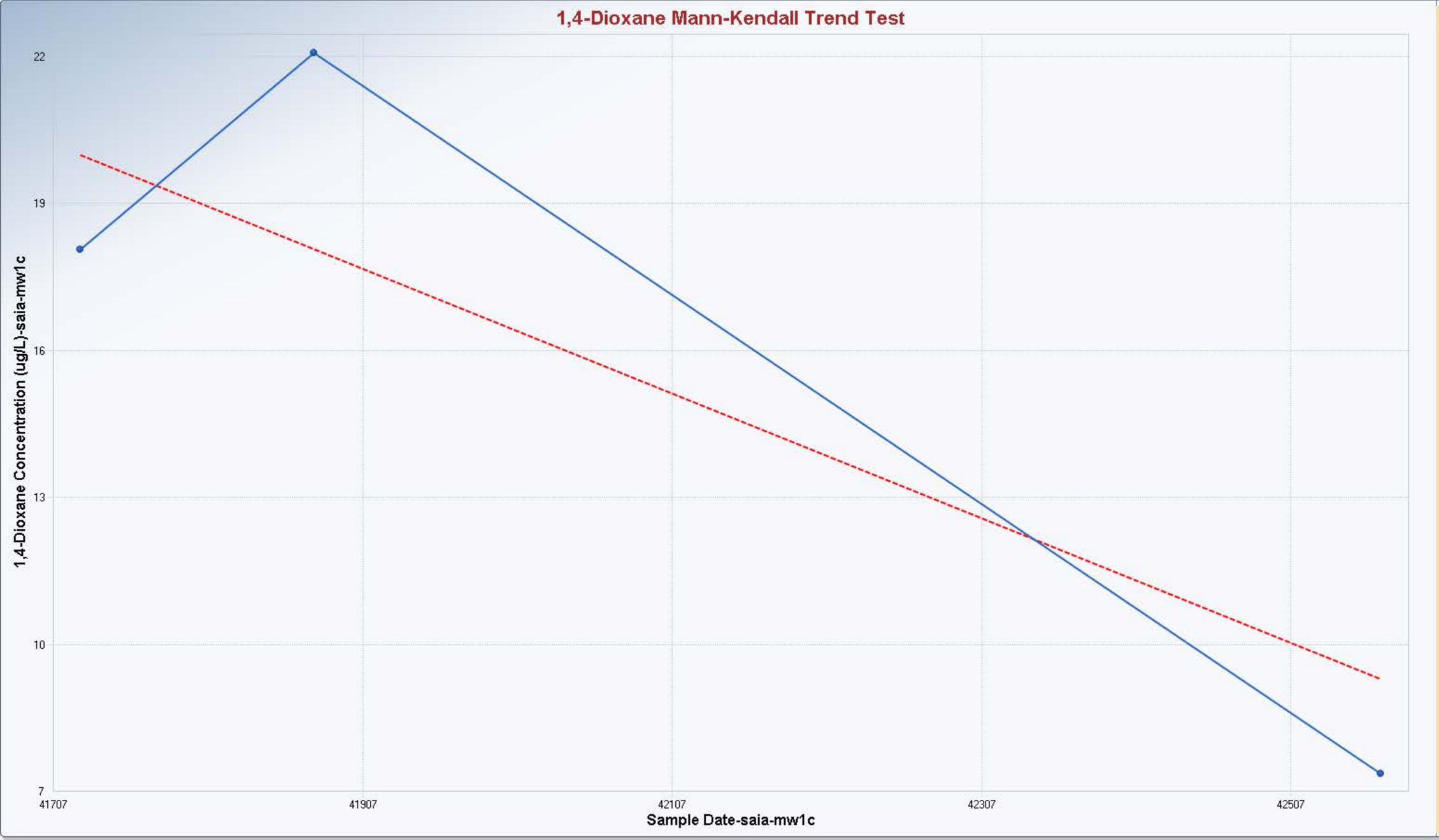
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.0190
M-K Test Value (S)	-4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0121
Theil-Sen Intercept	515.3146

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

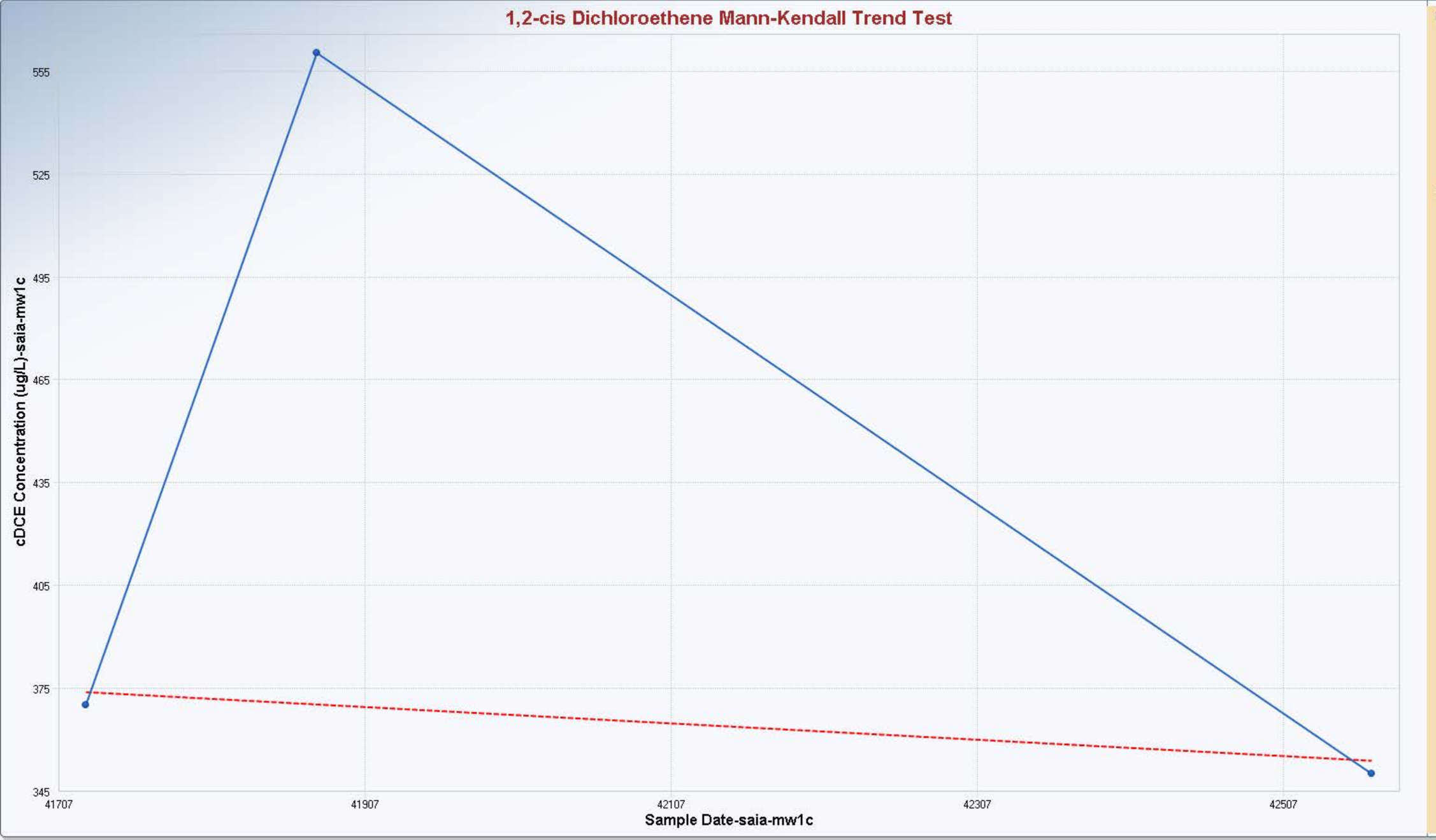
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0127
Theil-Sen Intercept	551.4205

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0238
Theil-Sen Intercept	1,367.0476

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

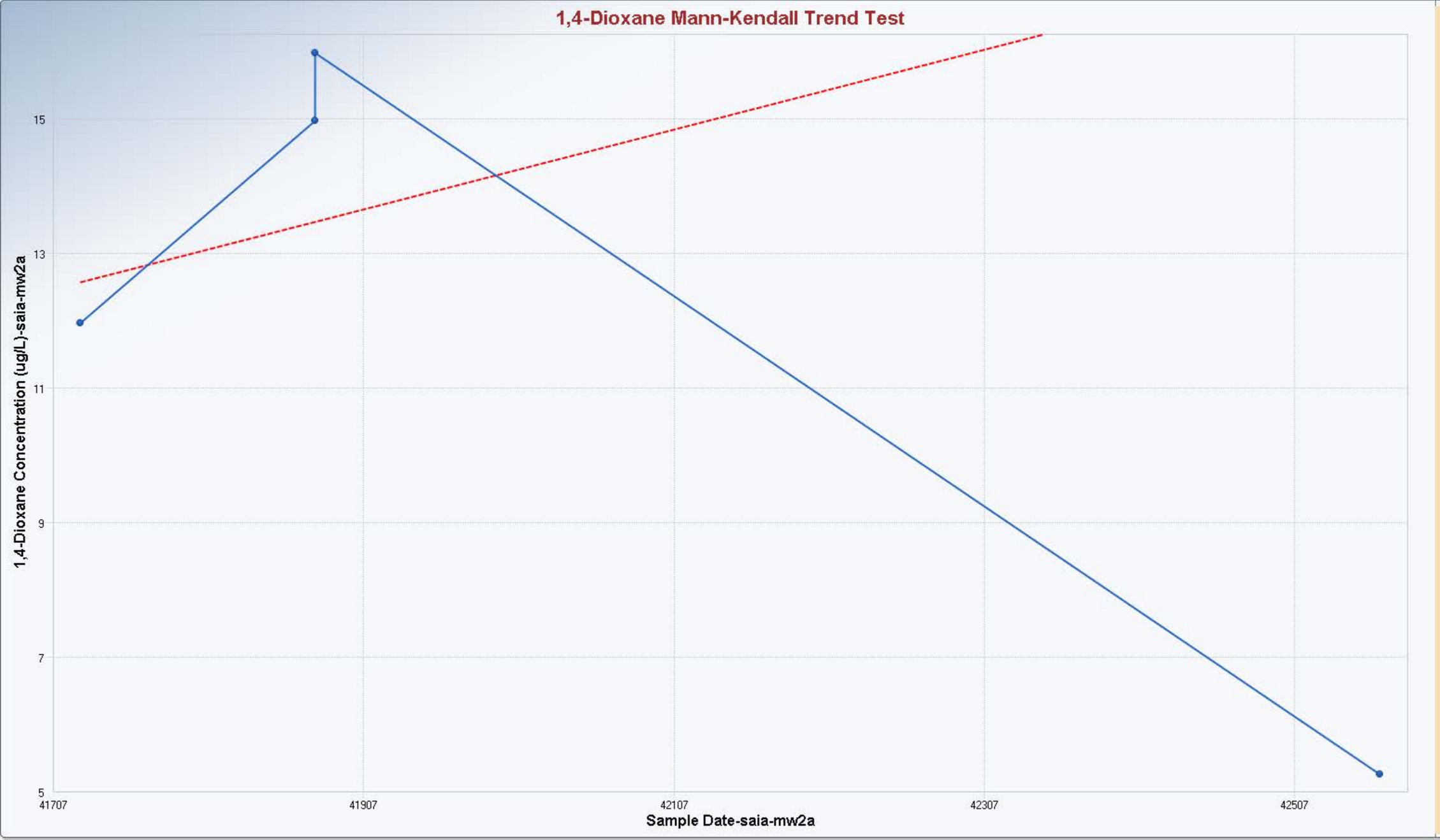
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.4948
Theil-Sen Intercept	20,928.6495

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

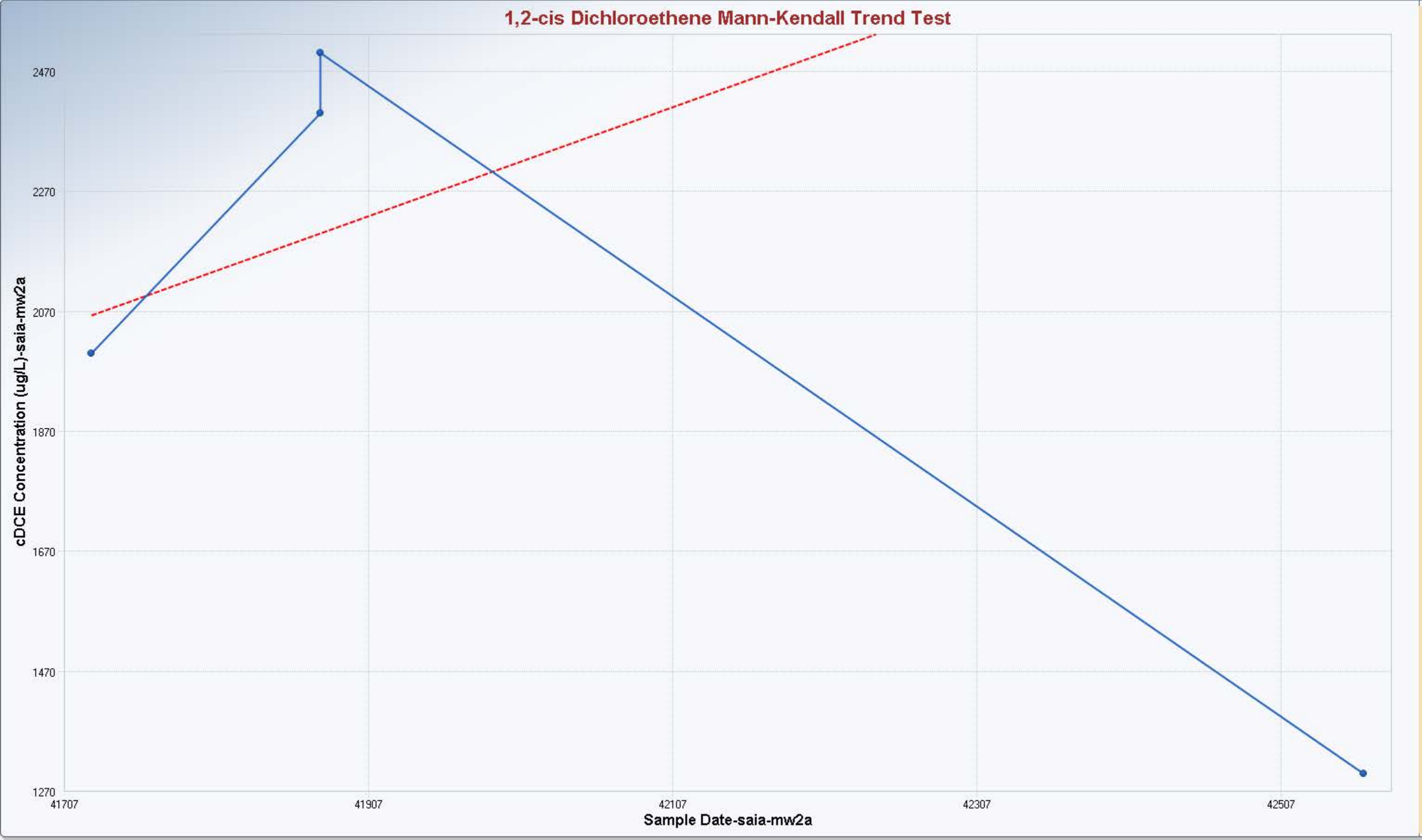
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0059
Theil-Sen Intercept	-234.8827

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.9063
Theil-Sen Intercept	-35,754.0285

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

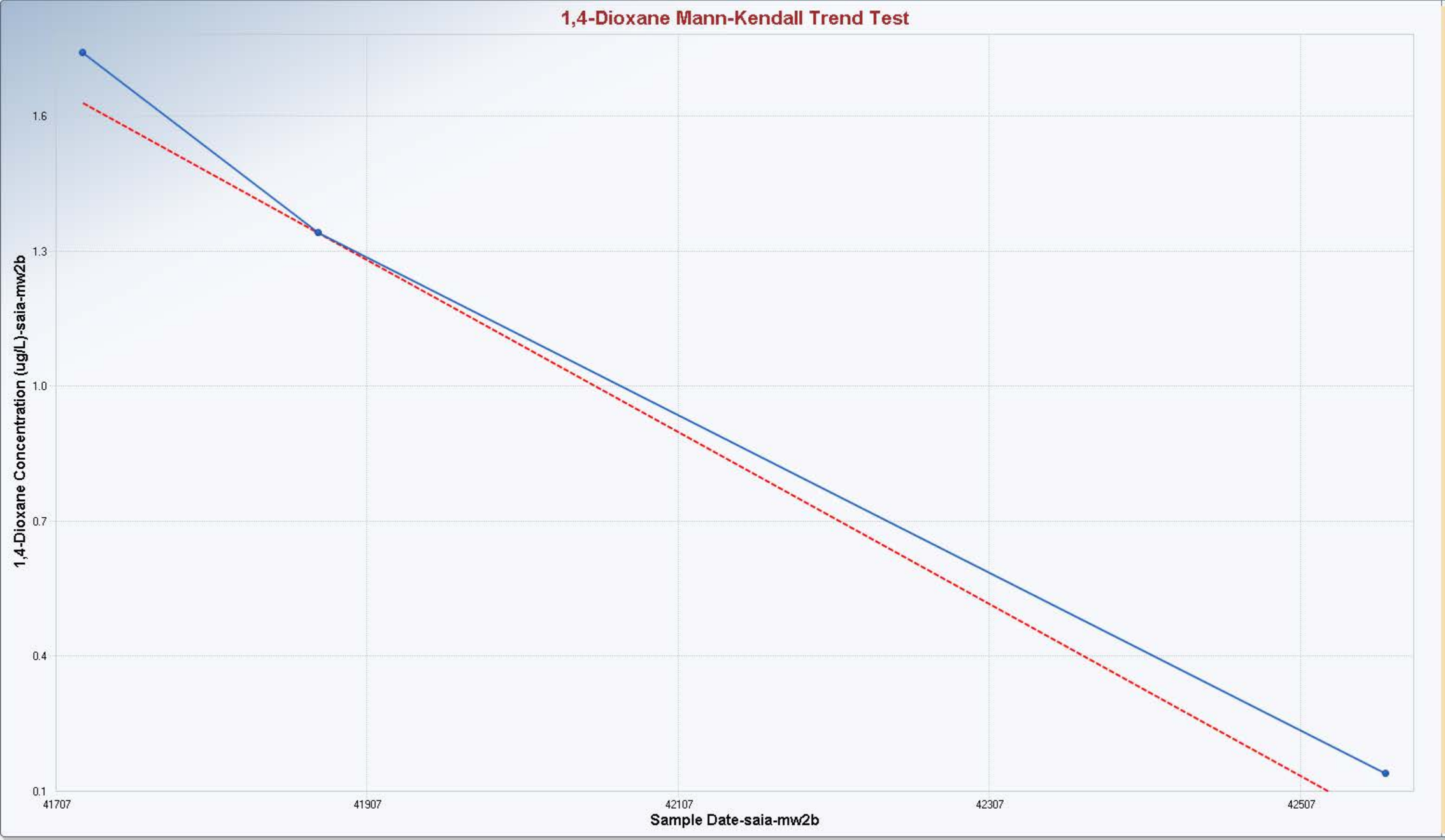
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	0.6250
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-1.1708
Theil-Sen Intercept	50,230.4421

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0019
Theil-Sen Intercept	81.3497

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0705
Theil-Sen Intercept	3,002.8327

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

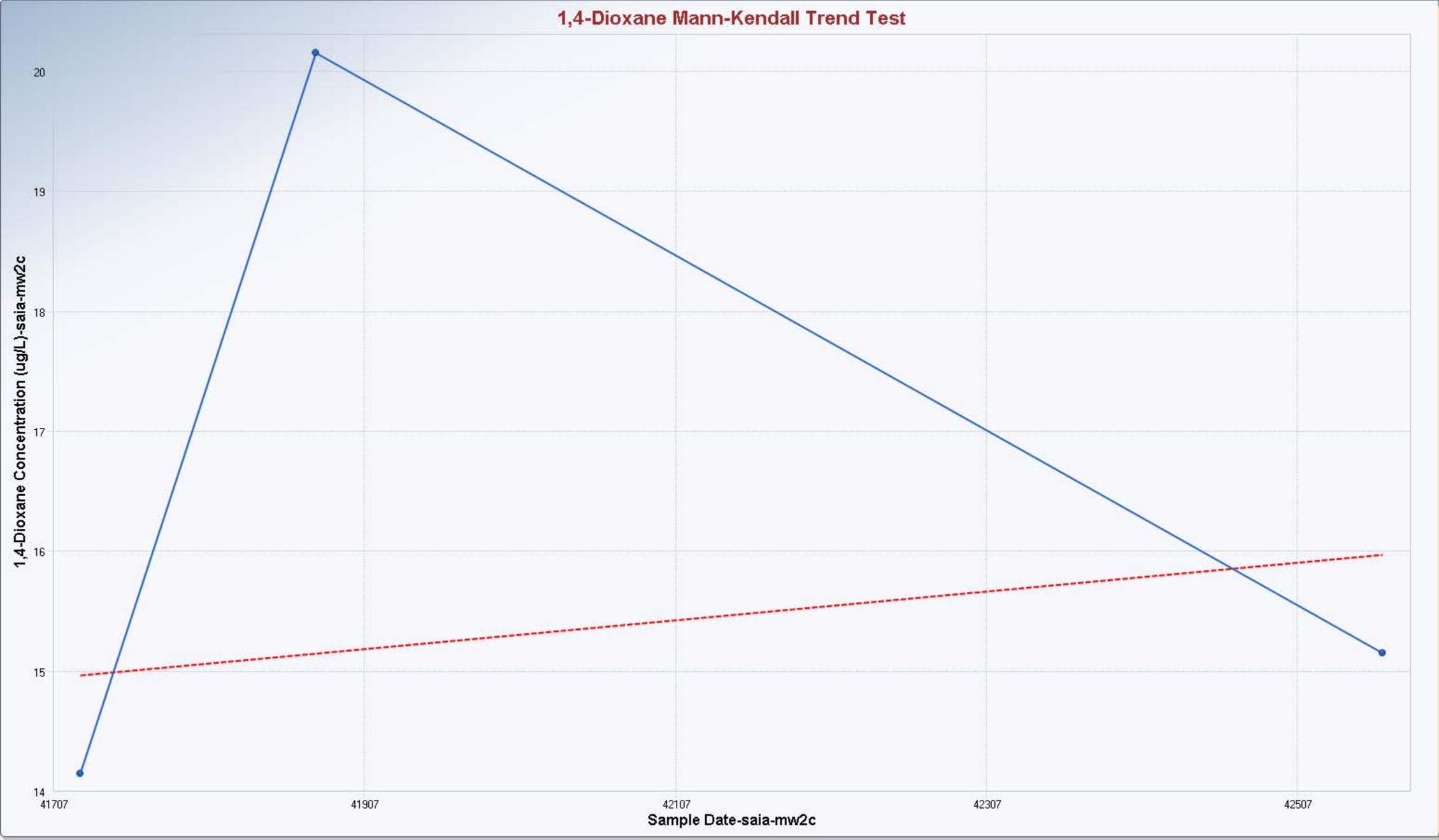
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0074
Theil-Sen Intercept	314.4935

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

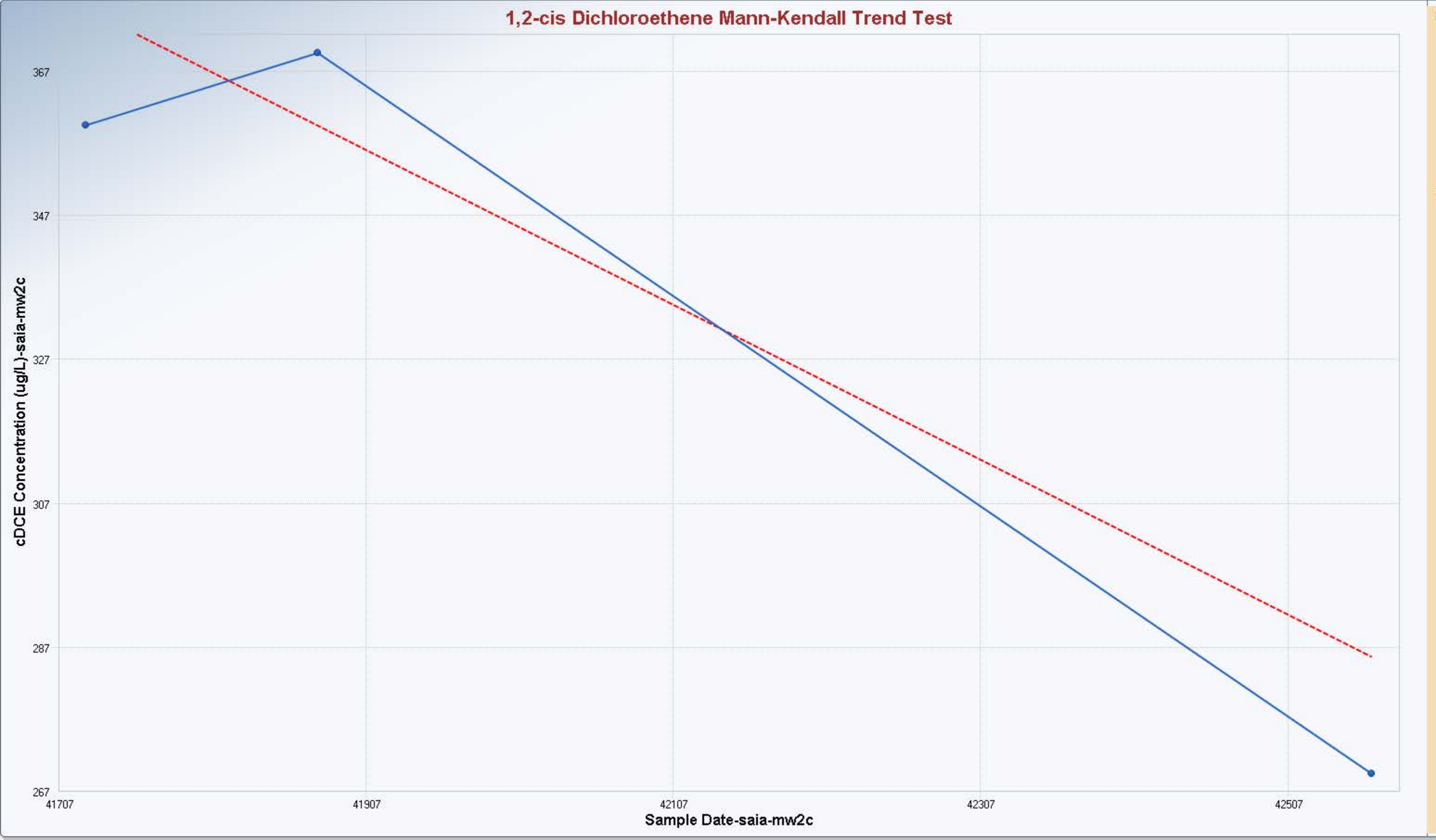
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0012
Theil-Sen Intercept	-35.0311

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.1075
Theil-Sen Intercept	4,862.7957

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

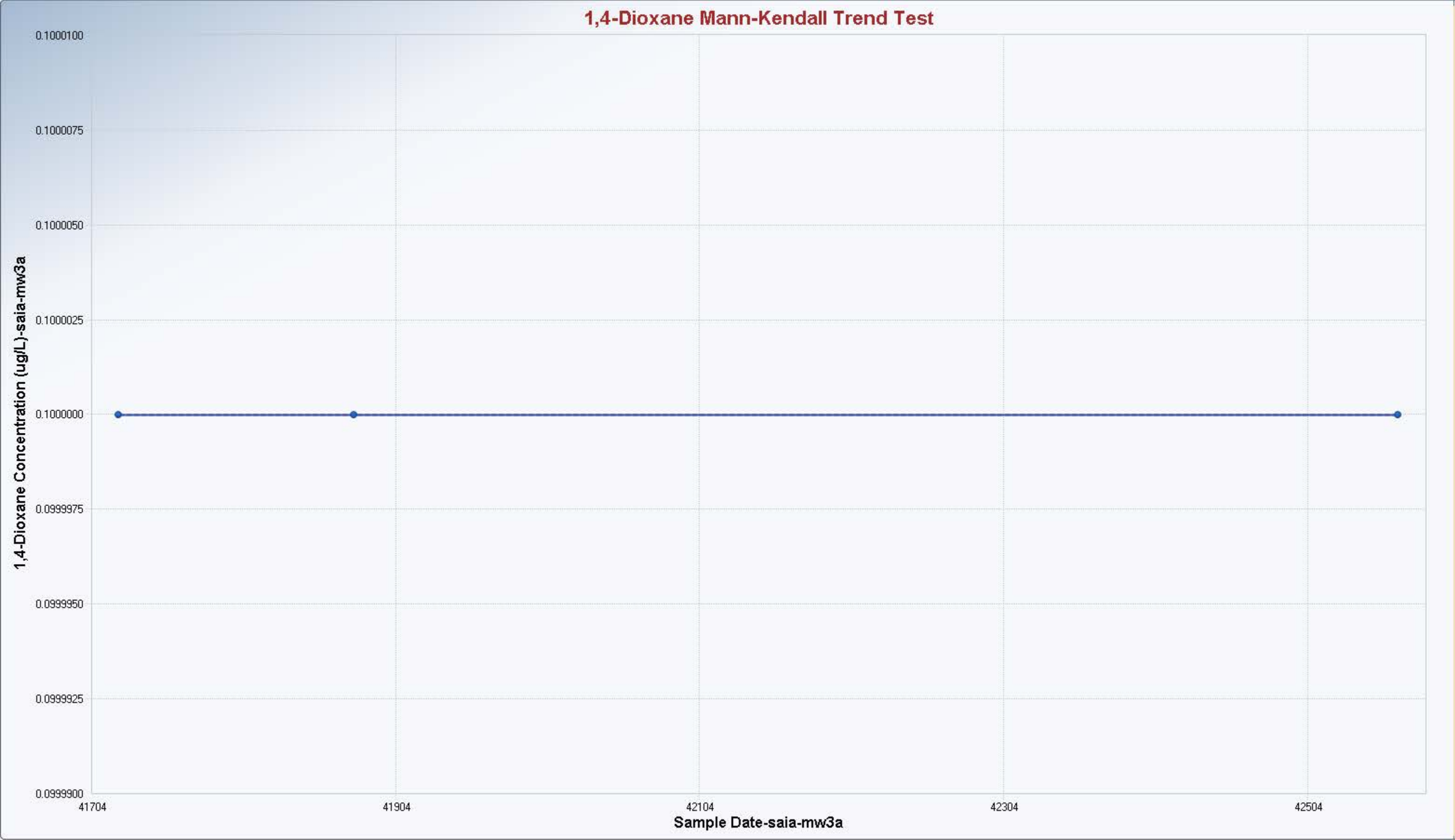
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.3050
Theil-Sen Intercept	12,972.9305

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

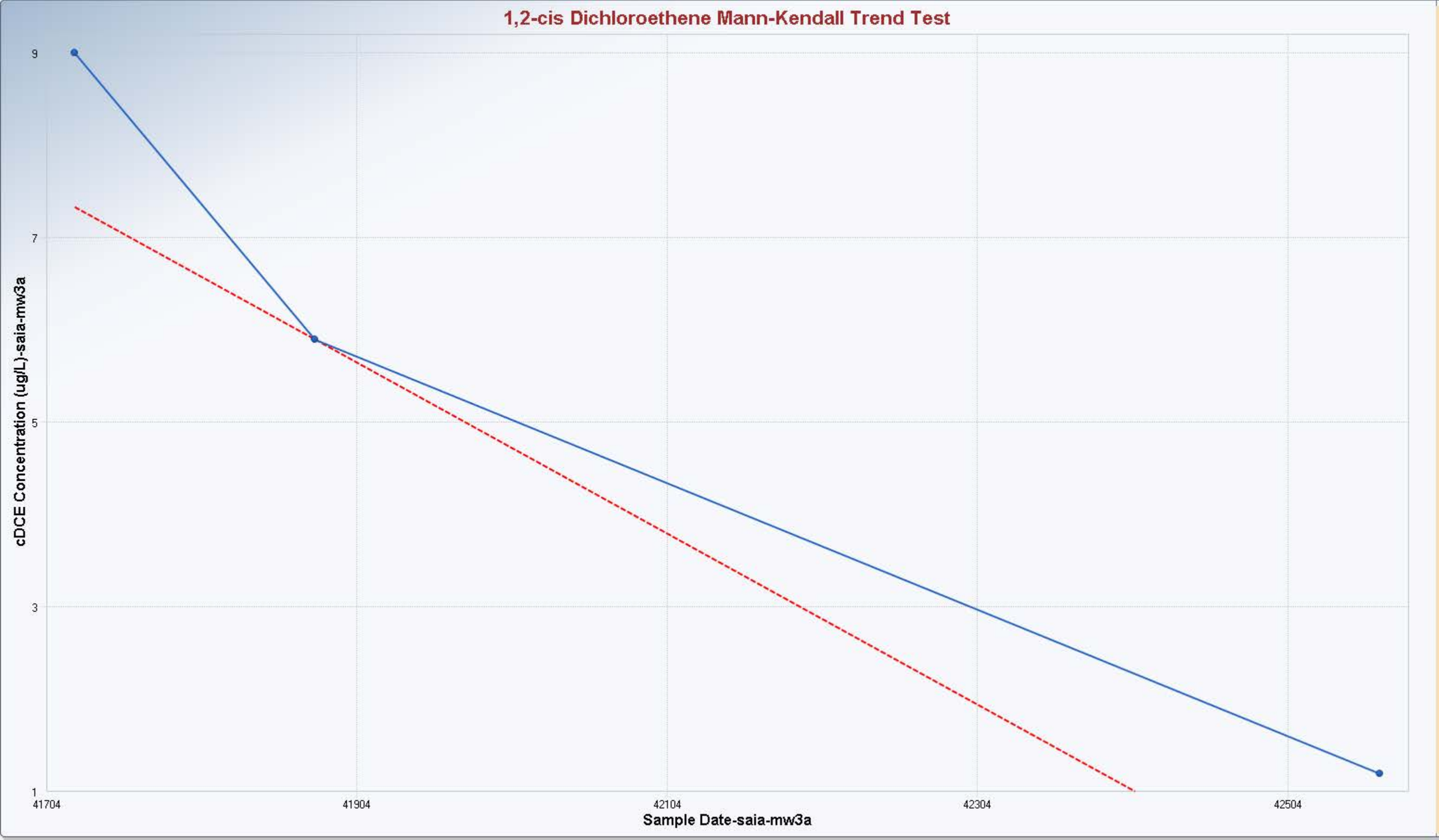
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0093
Theil-Sen Intercept	393.7342

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

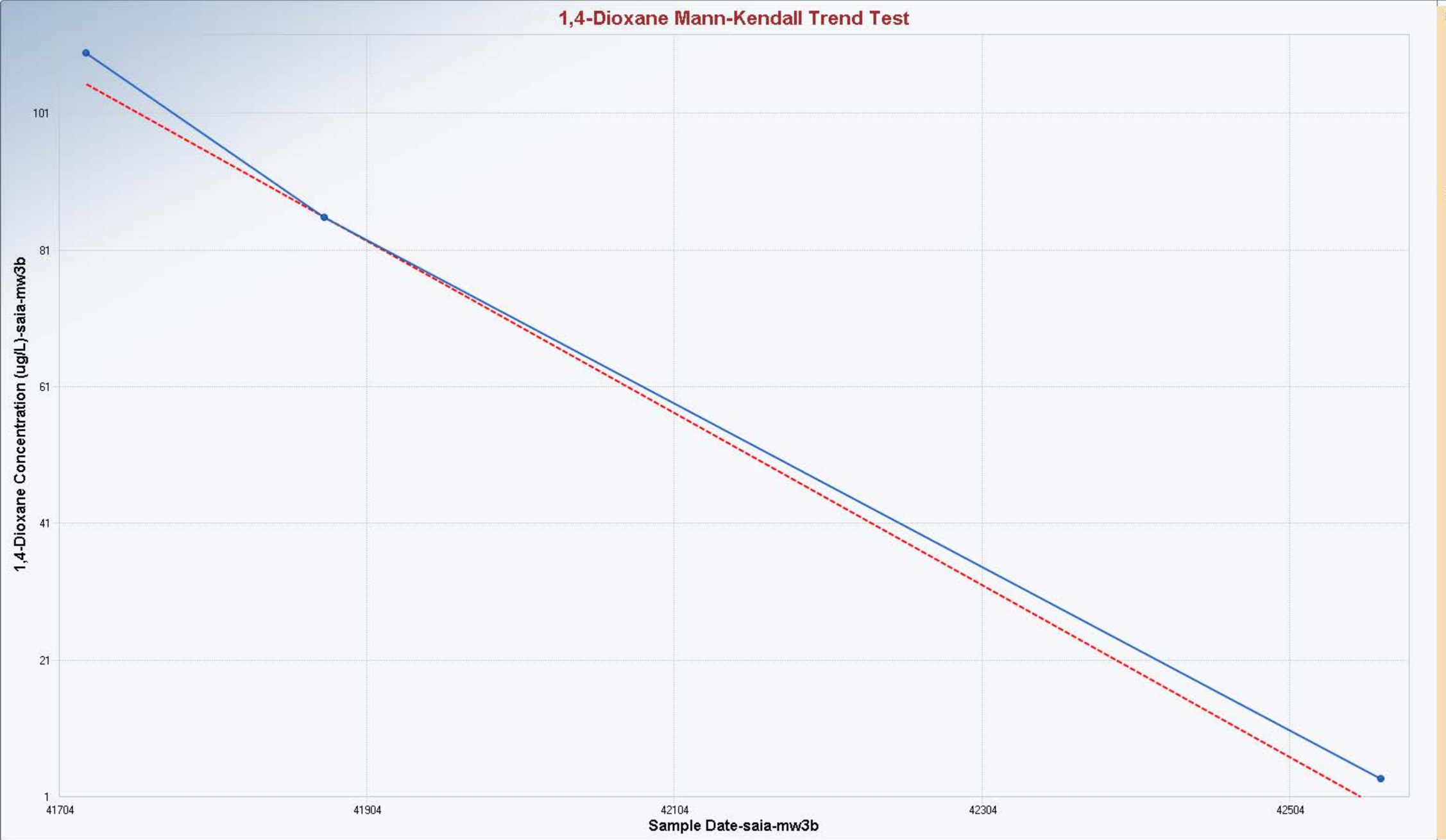
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0106
Theil-Sen Intercept	446.7402

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



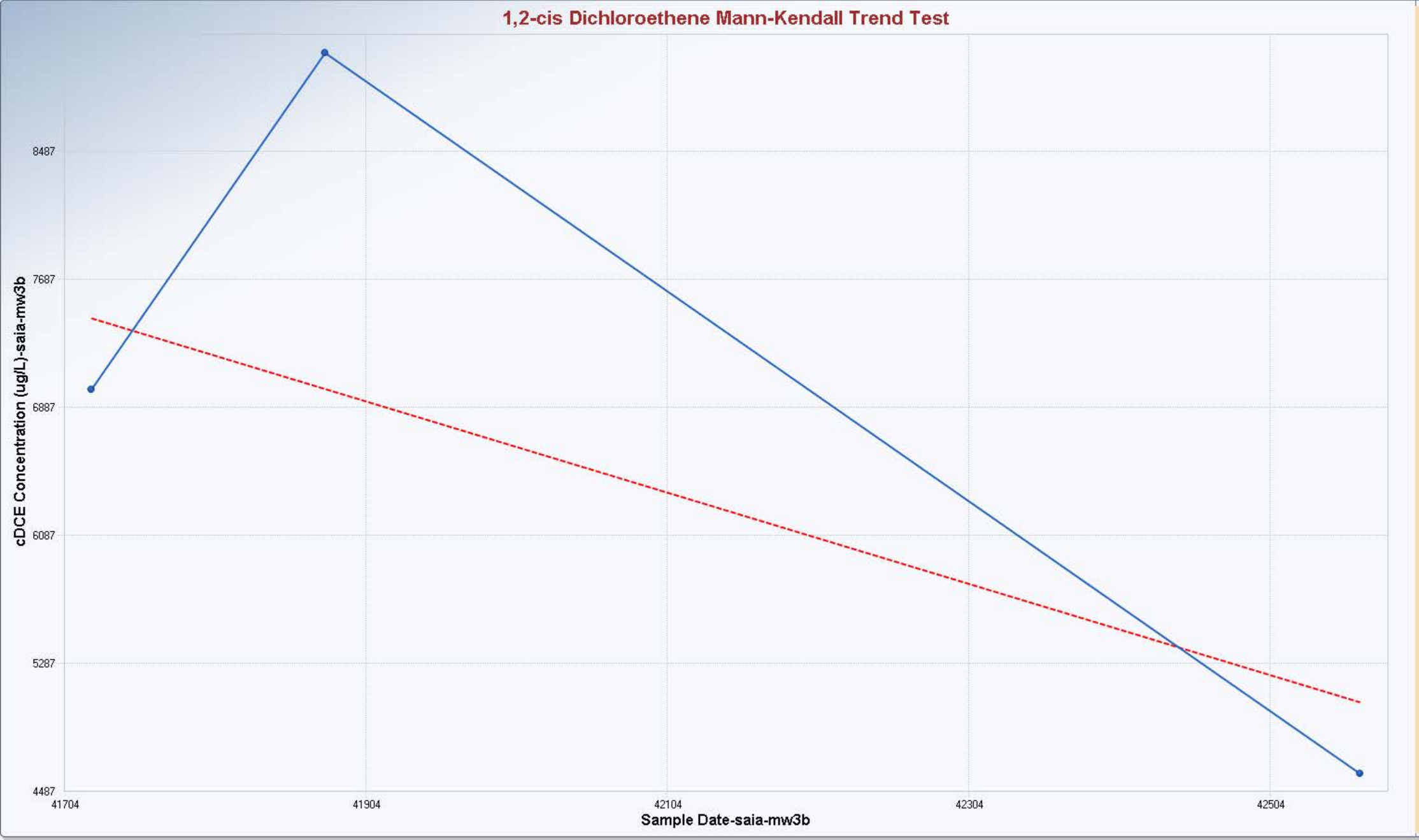
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.1260
Theil-Sen Intercept	5,362.8999

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-2.8504
Theil-Sen Intercept	126,364.3705

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

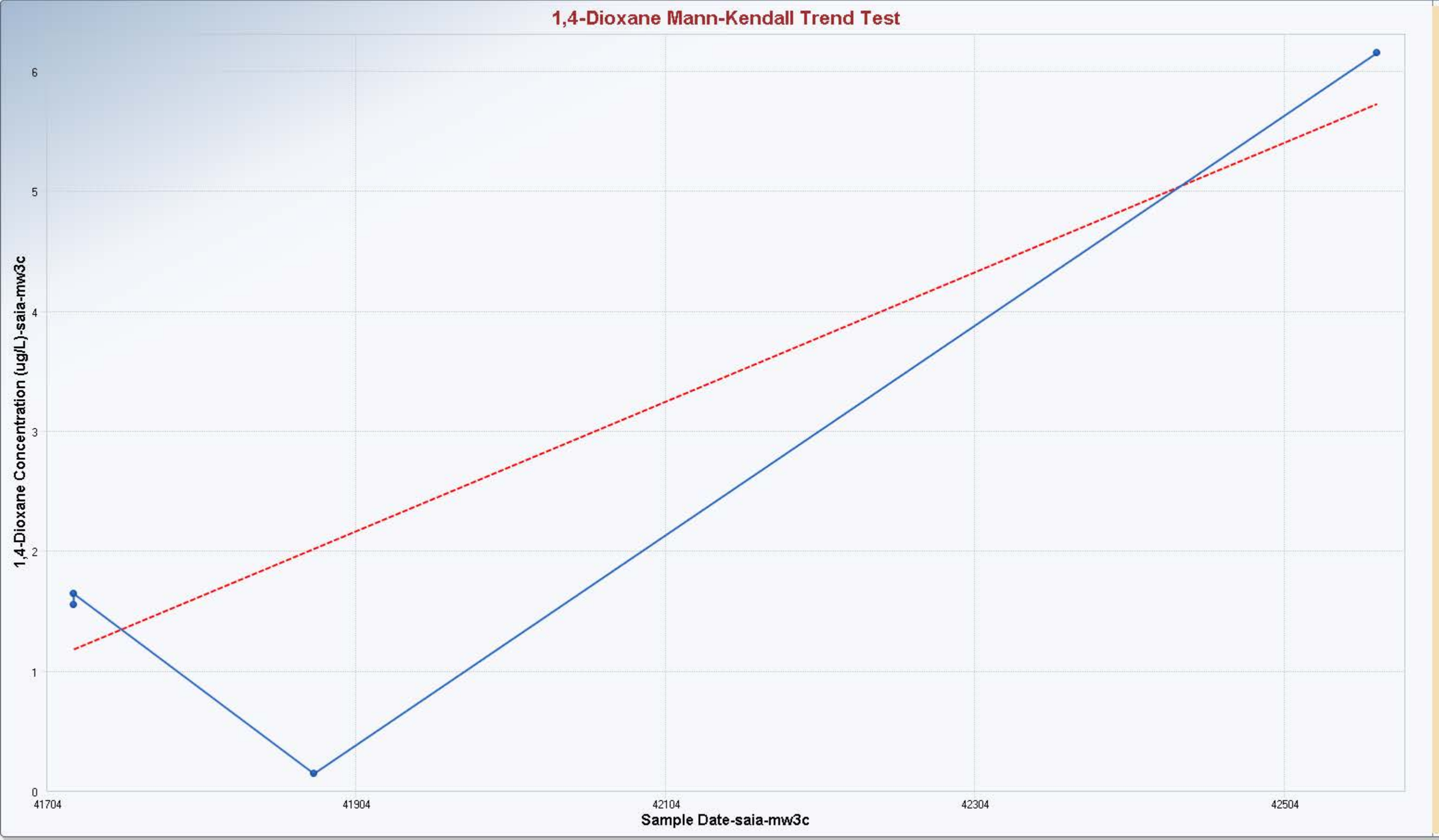
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-3.8005
Theil-Sen Intercept	165,752.4941

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

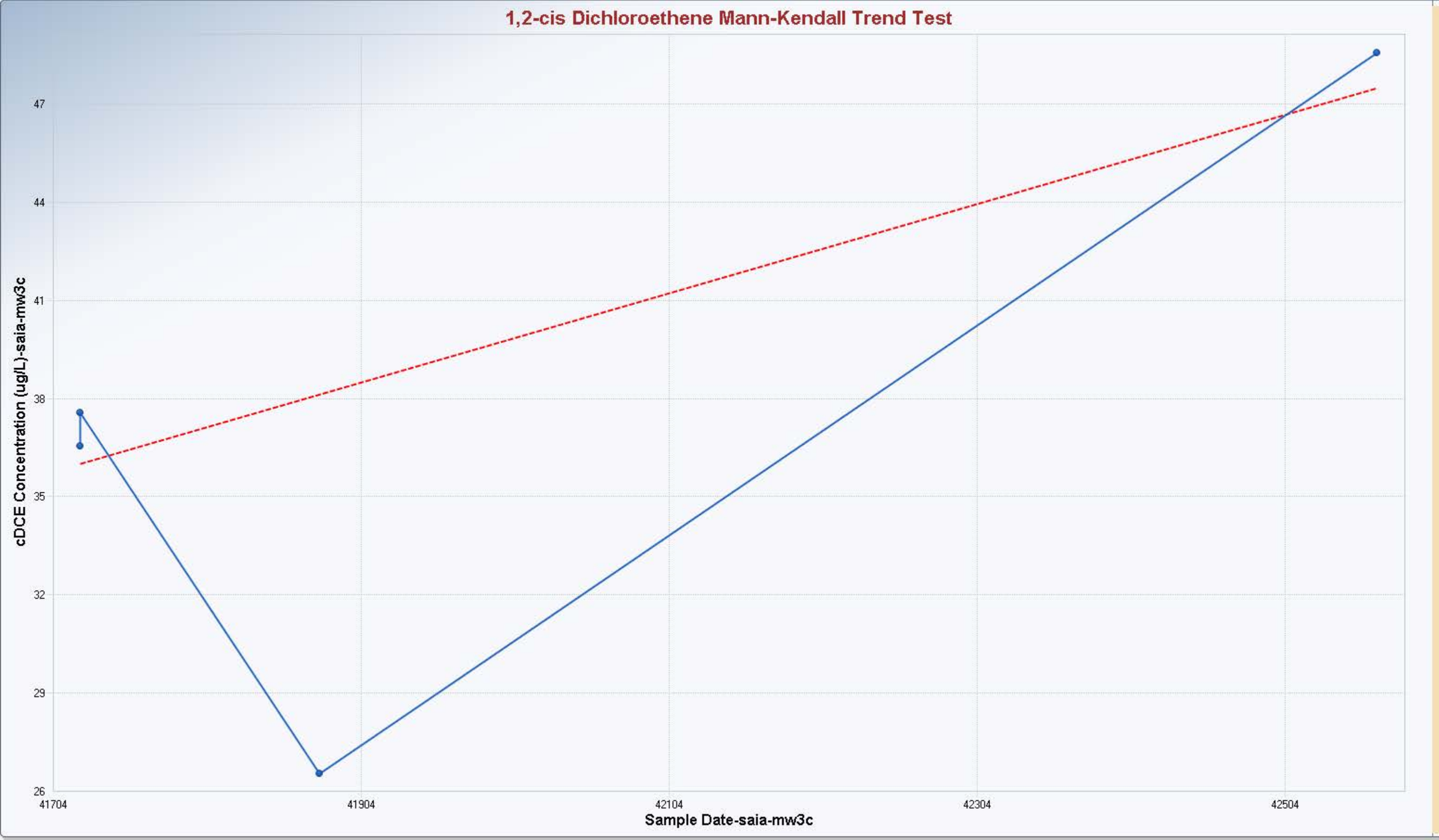
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	0.3397
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3670

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0054
Theil-Sen Intercept	-224.3262

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

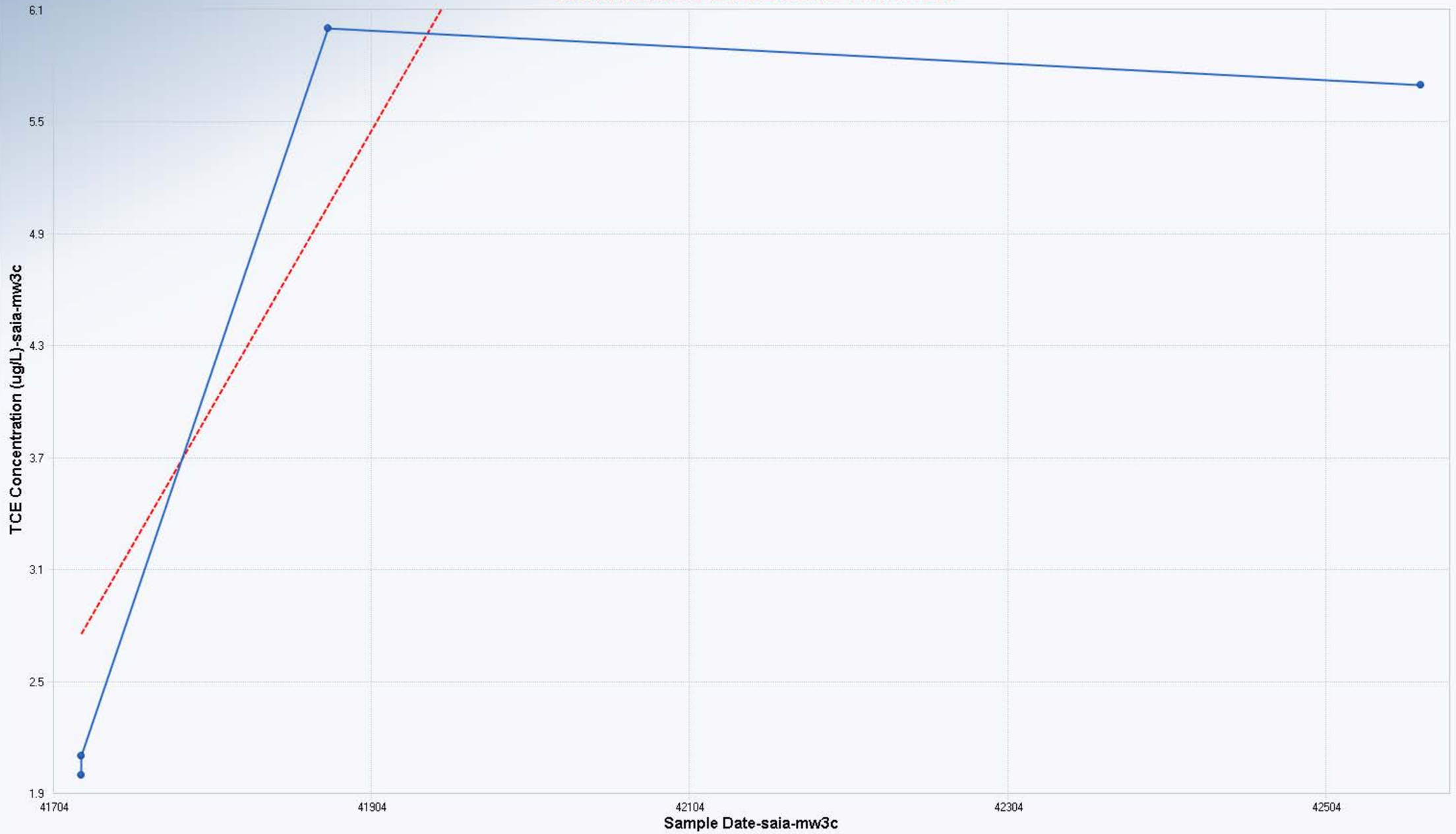
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	0.3397
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3670

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0137
Theil-Sen Intercept	-533.3958

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

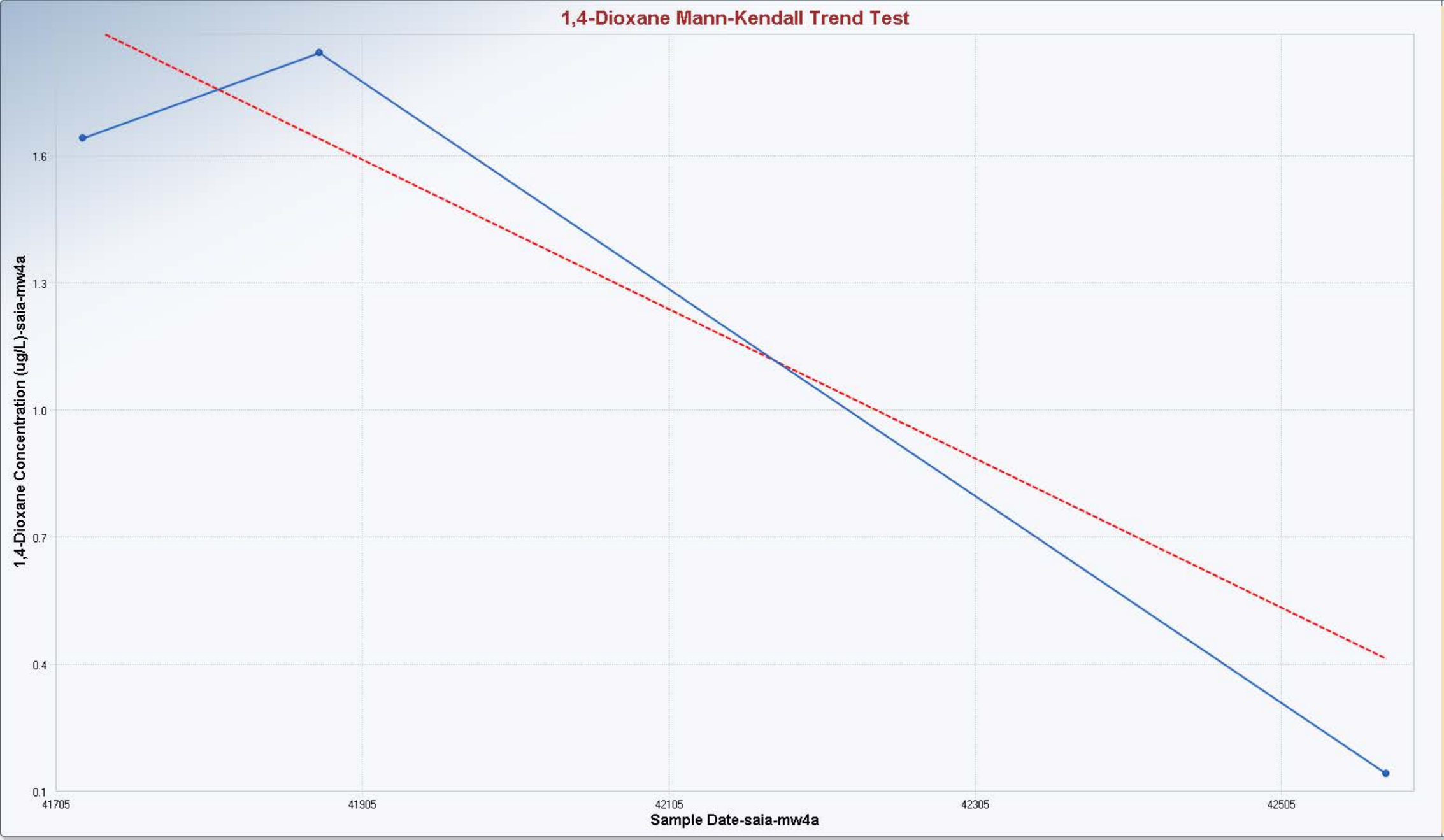
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	1.0190
M-K Test Value (S)	4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0148
Theil-Sen Intercept	-613.8044

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0018
Theil-Sen Intercept	75.5006

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0053
Theil-Sen Intercept	224.3924

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

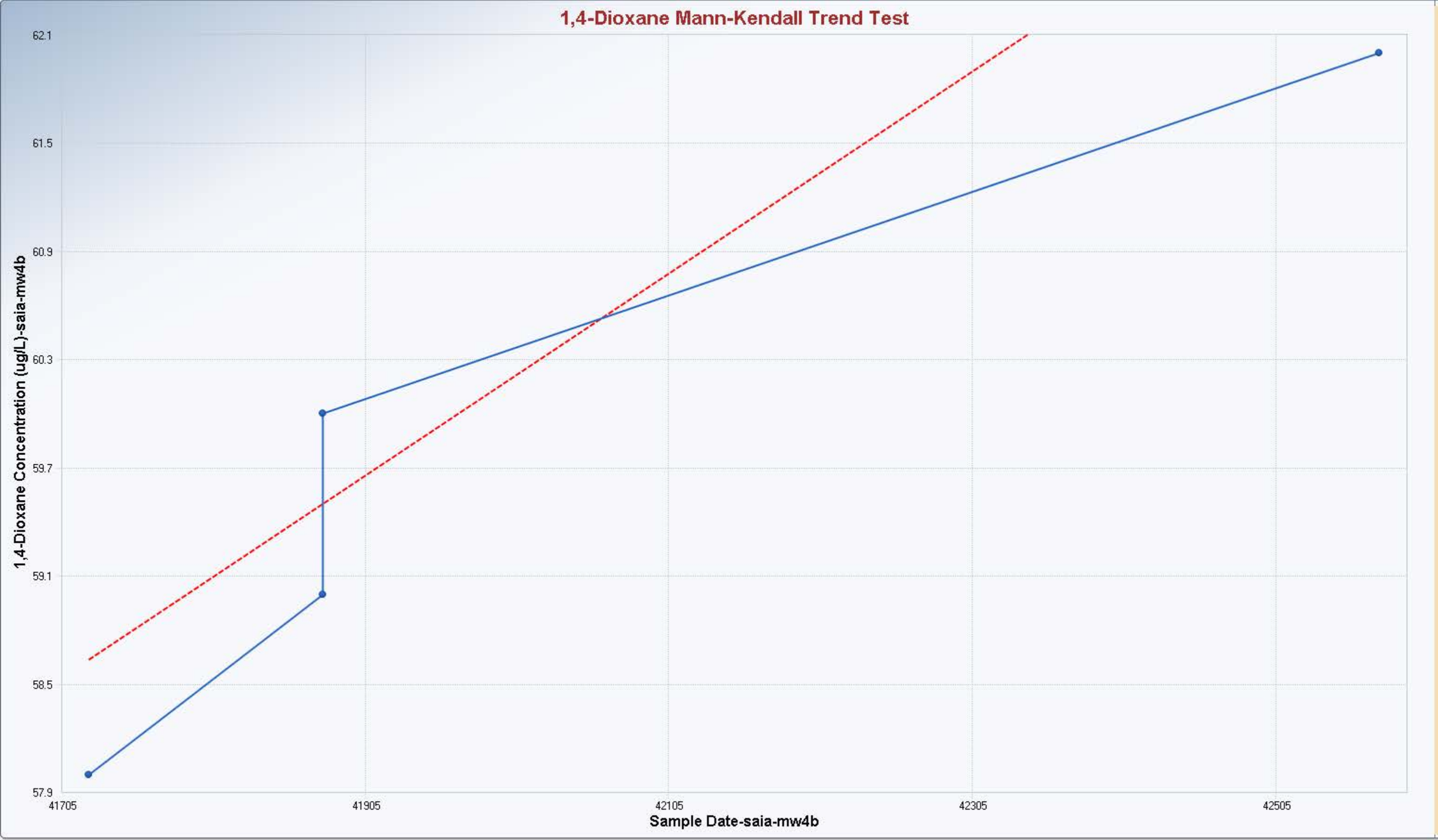
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	21.3748

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

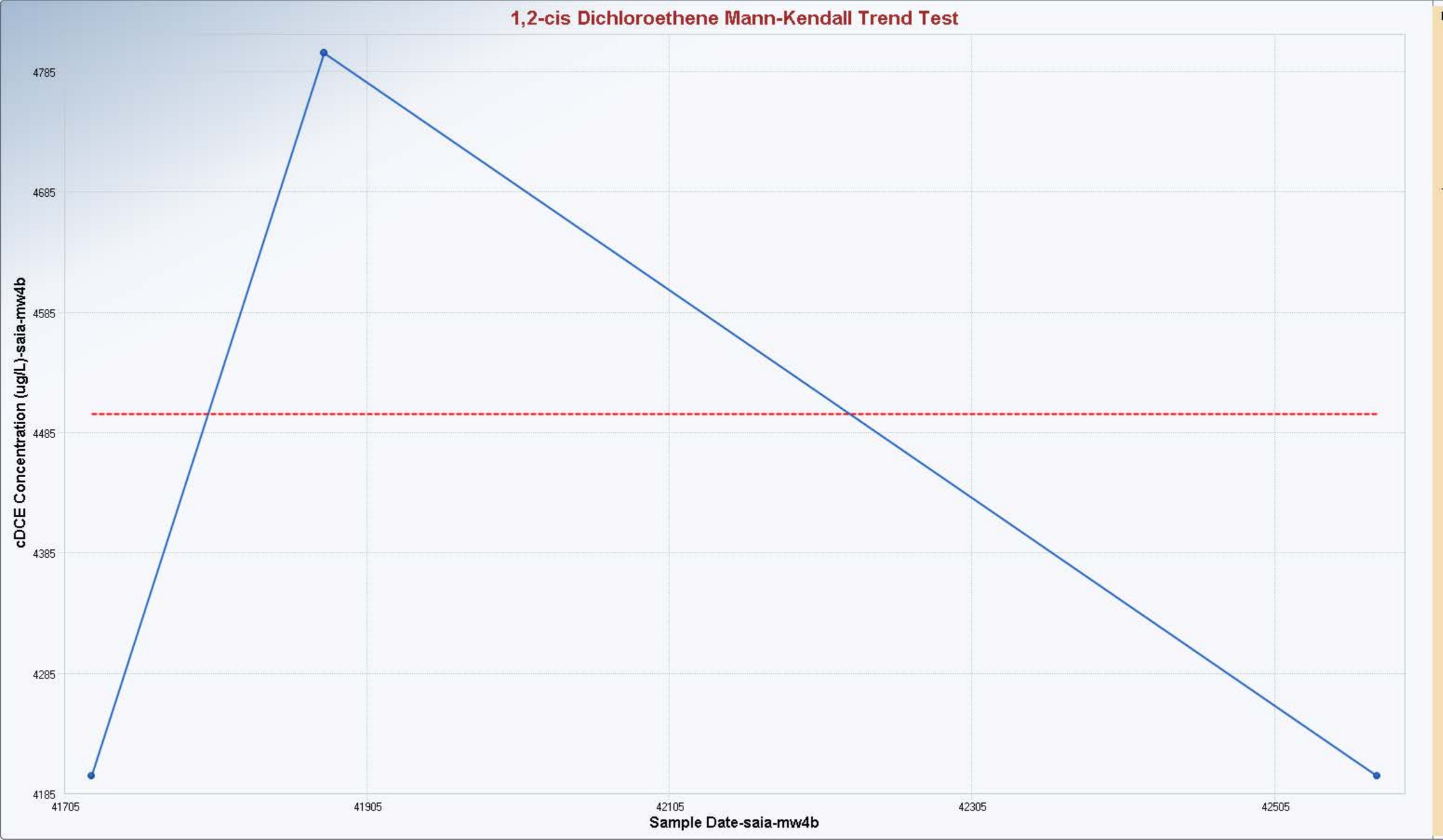
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	1.6984
M-K Test Value (S)	6
Tabulated p-value	0.0420
Approximate p-value	0.0447

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0056
Theil-Sen Intercept	-174.9984

Statistically significant evidence of an increasing trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

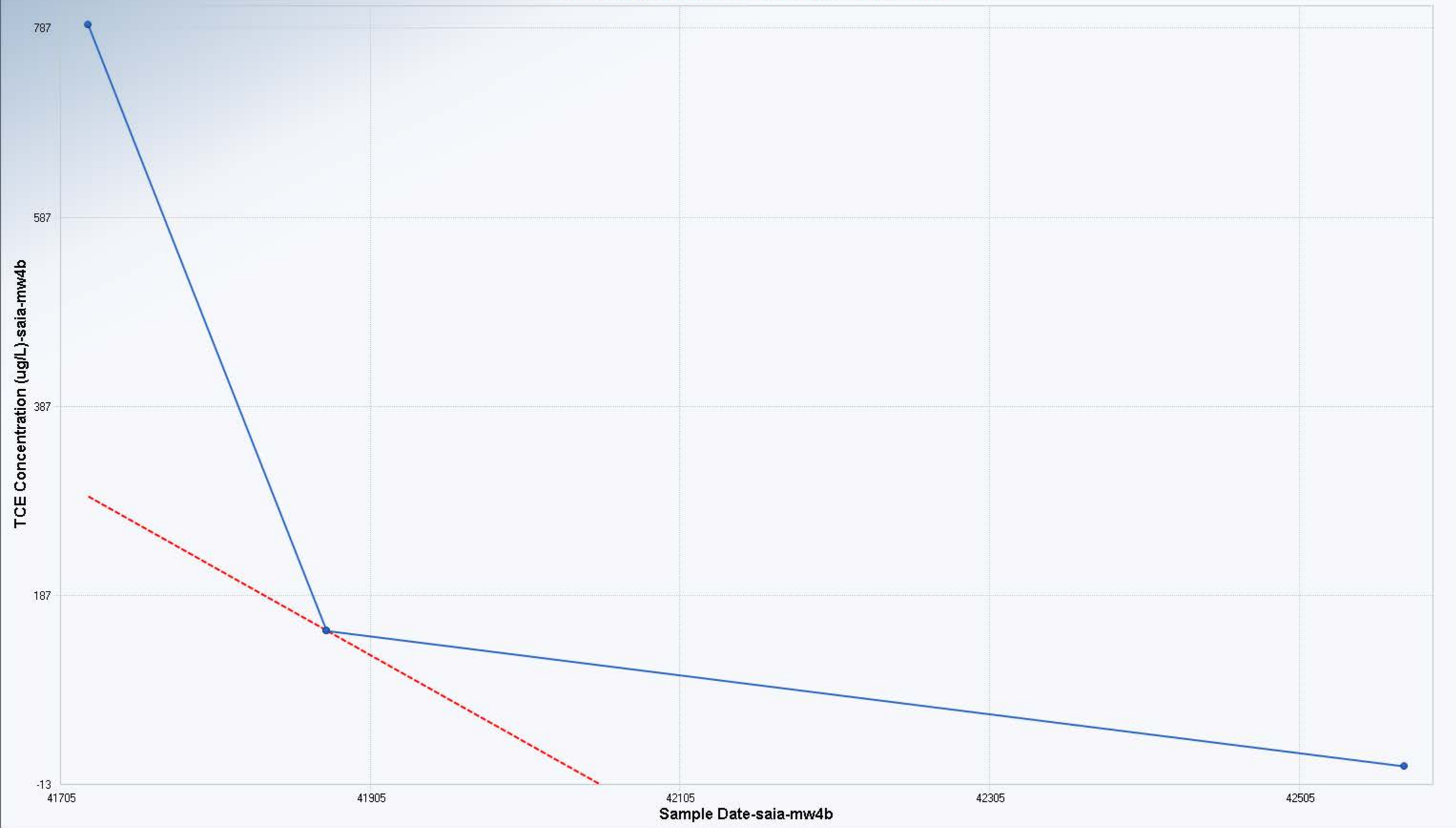
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.5820
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	4,500.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

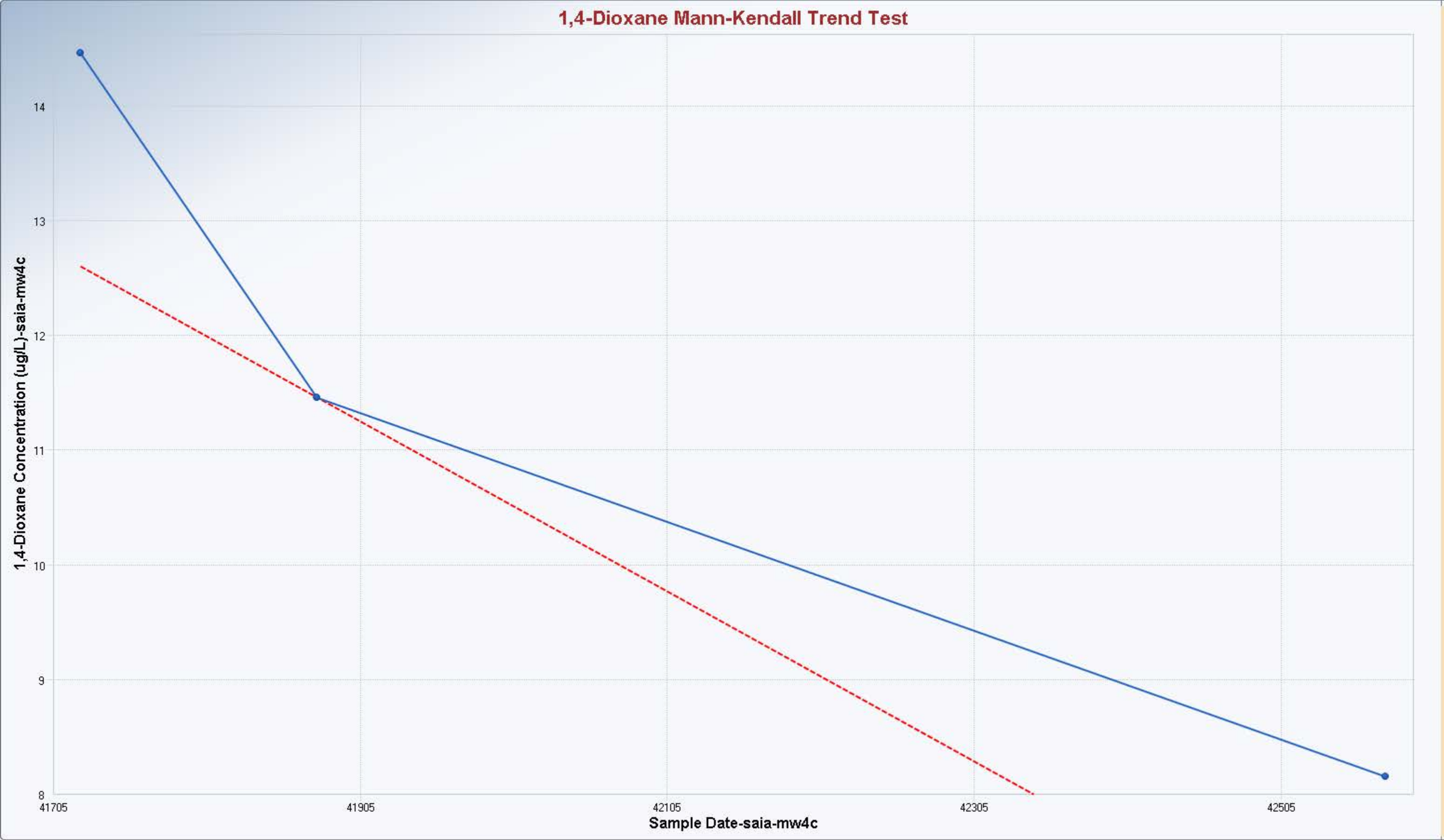
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-1.4446
M-K Test Value (S)	-5
Tabulated p-value	0.1670
Approximate p-value	0.0743

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.9216
Theil-Sen Intercept	38,745.8139

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



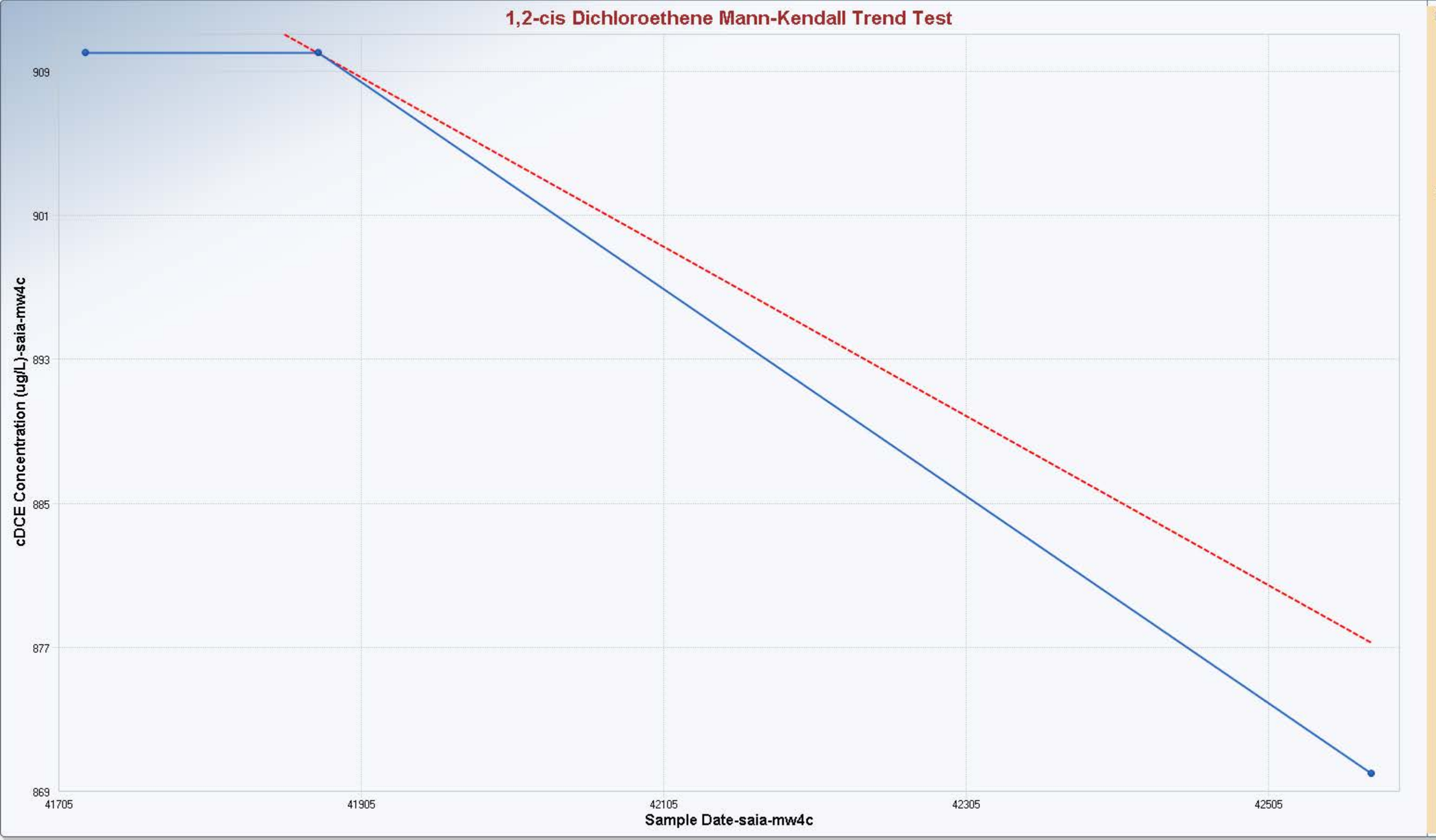
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0074
Theil-Sen Intercept	321.3825

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

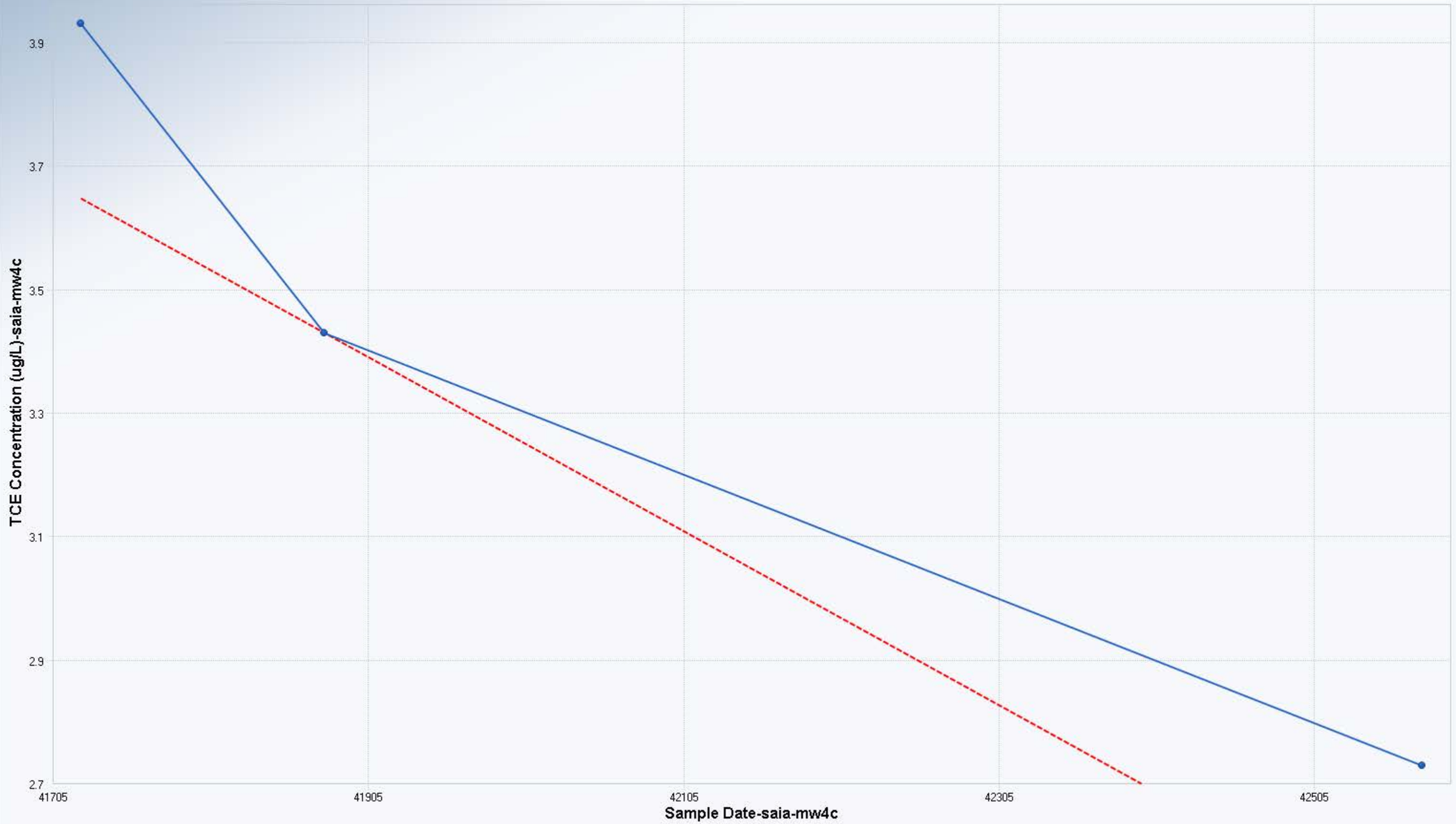
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	-0.6124
M-K Test Value (S)	-2
Tabulated p-value	
Approximate p-value	0.2701

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0471
Theil-Sen Intercept	2,880.6824

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

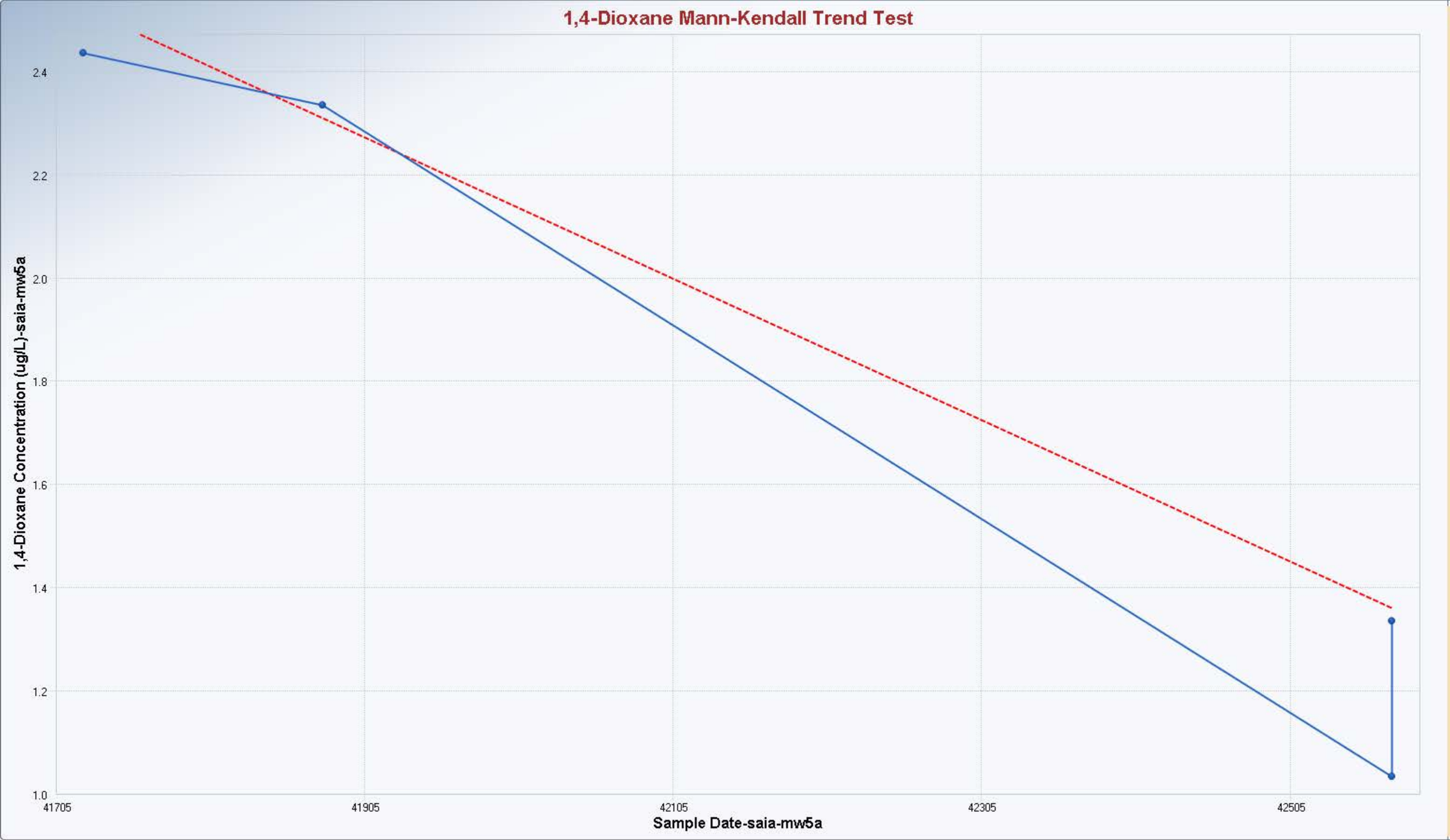
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0014
Theil-Sen Intercept	62.5205

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.0190
M-K Test Value (S)	-4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0014
Theil-Sen Intercept	59.6512

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-1.0190
M-K Test Value (S)	-4
Tabulated p-value	0.1670
Approximate p-value	0.1541

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.3715
Theil-Sen Intercept	16,054.8084

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

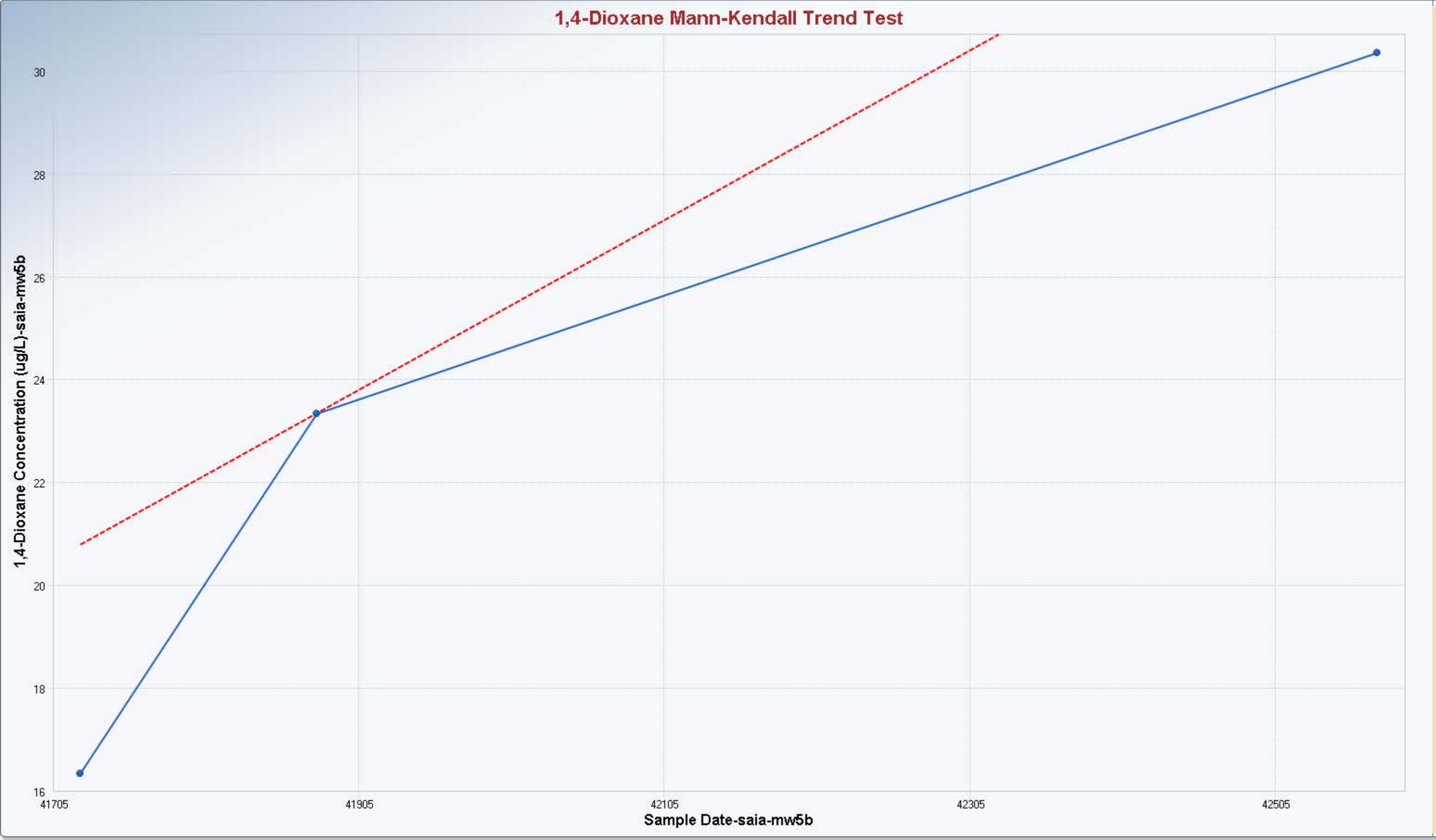
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	-0.3397
M-K Test Value (S)	-2
Tabulated p-value	0.3750
Approximate p-value	0.3670

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0006
Theil-Sen Intercept	28.9362

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

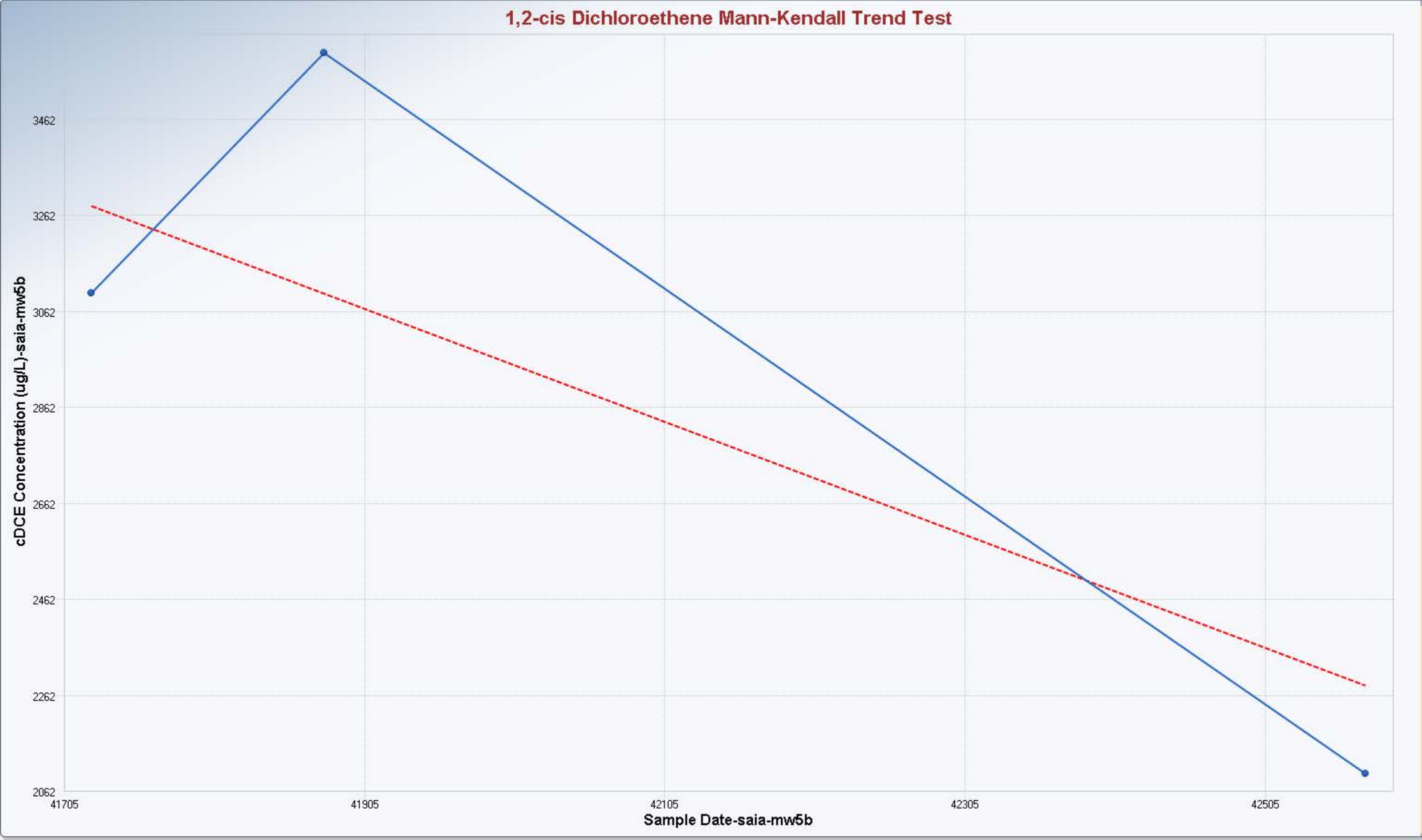
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0165
Theil-Sen Intercept	-667.5677

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-1.1779
Theil-Sen Intercept	52,426.2662

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

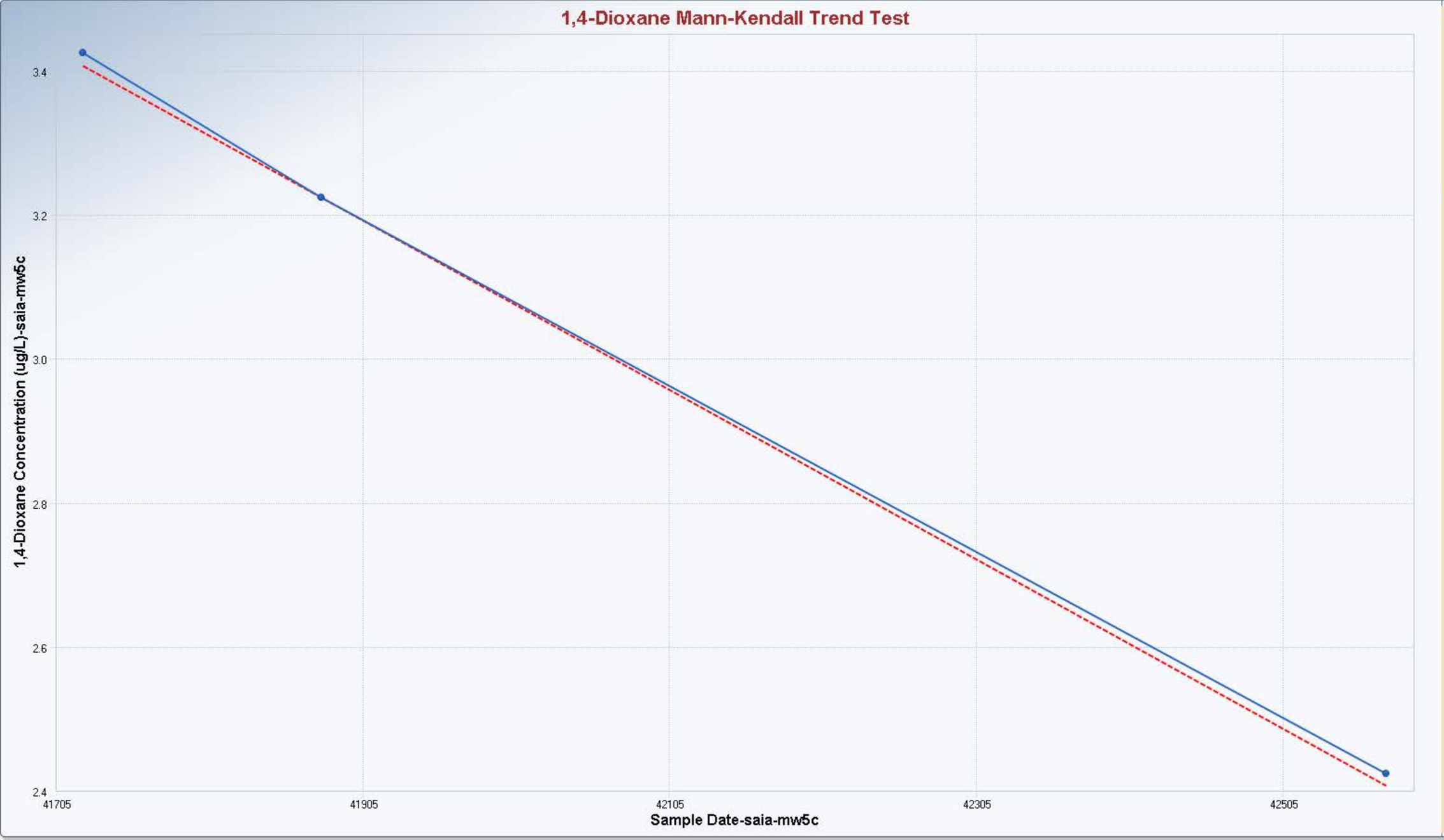
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.4441
Theil-Sen Intercept	18,695.0024

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

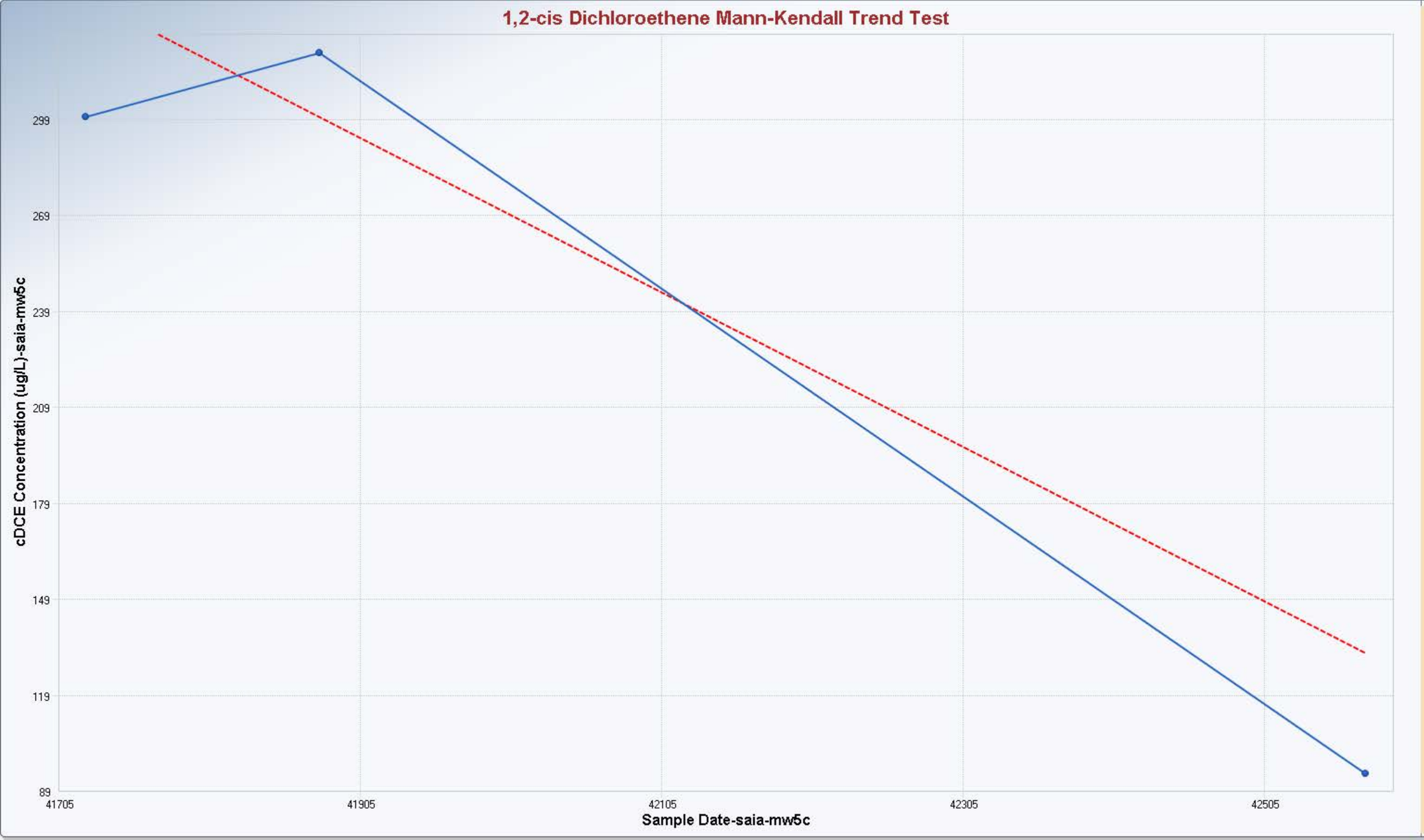
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0012
Theil-Sen Intercept	52.5263

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.2415
Theil-Sen Intercept	10,411.8846

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

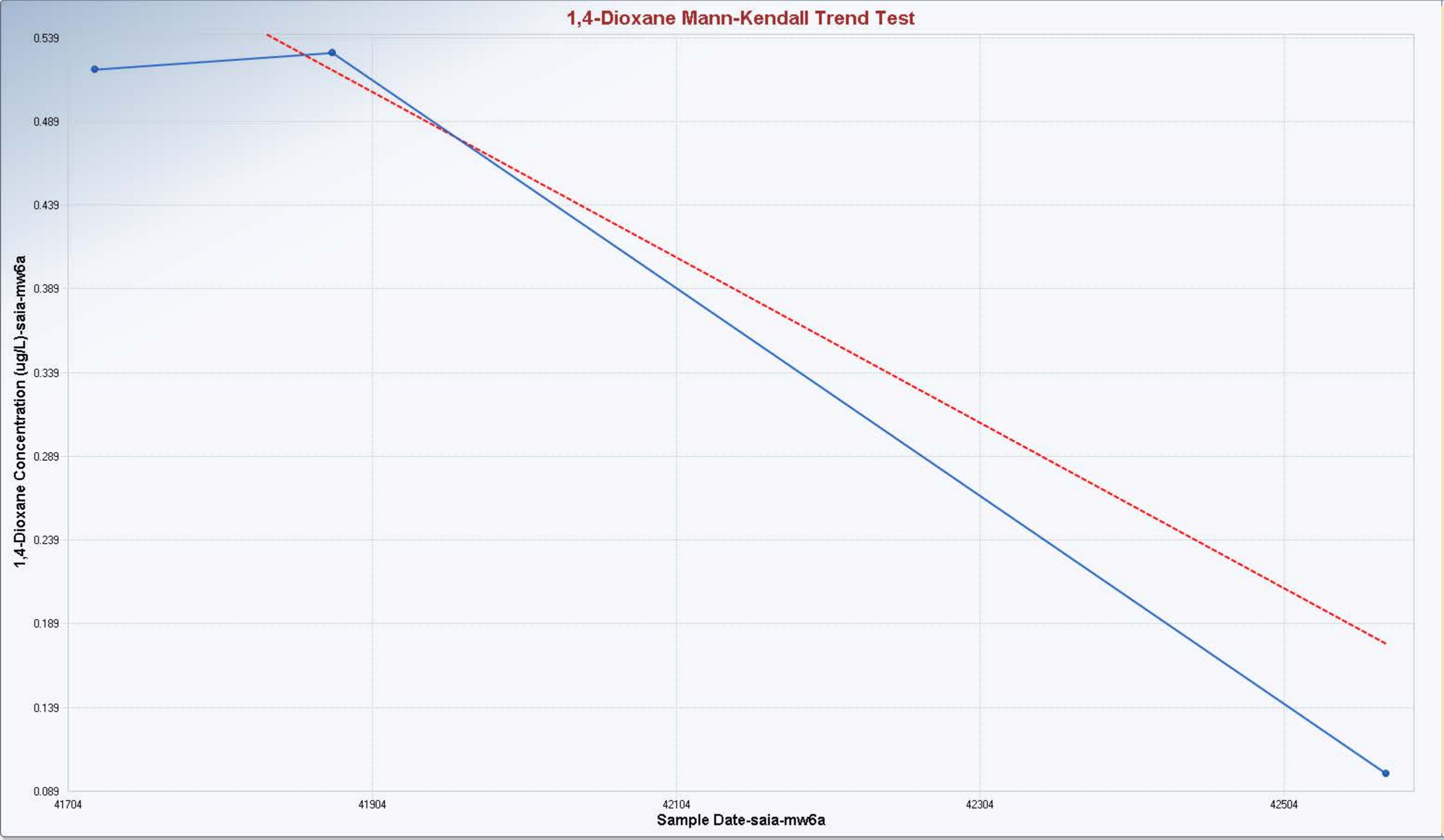
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0058
Theil-Sen Intercept	246.4987

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

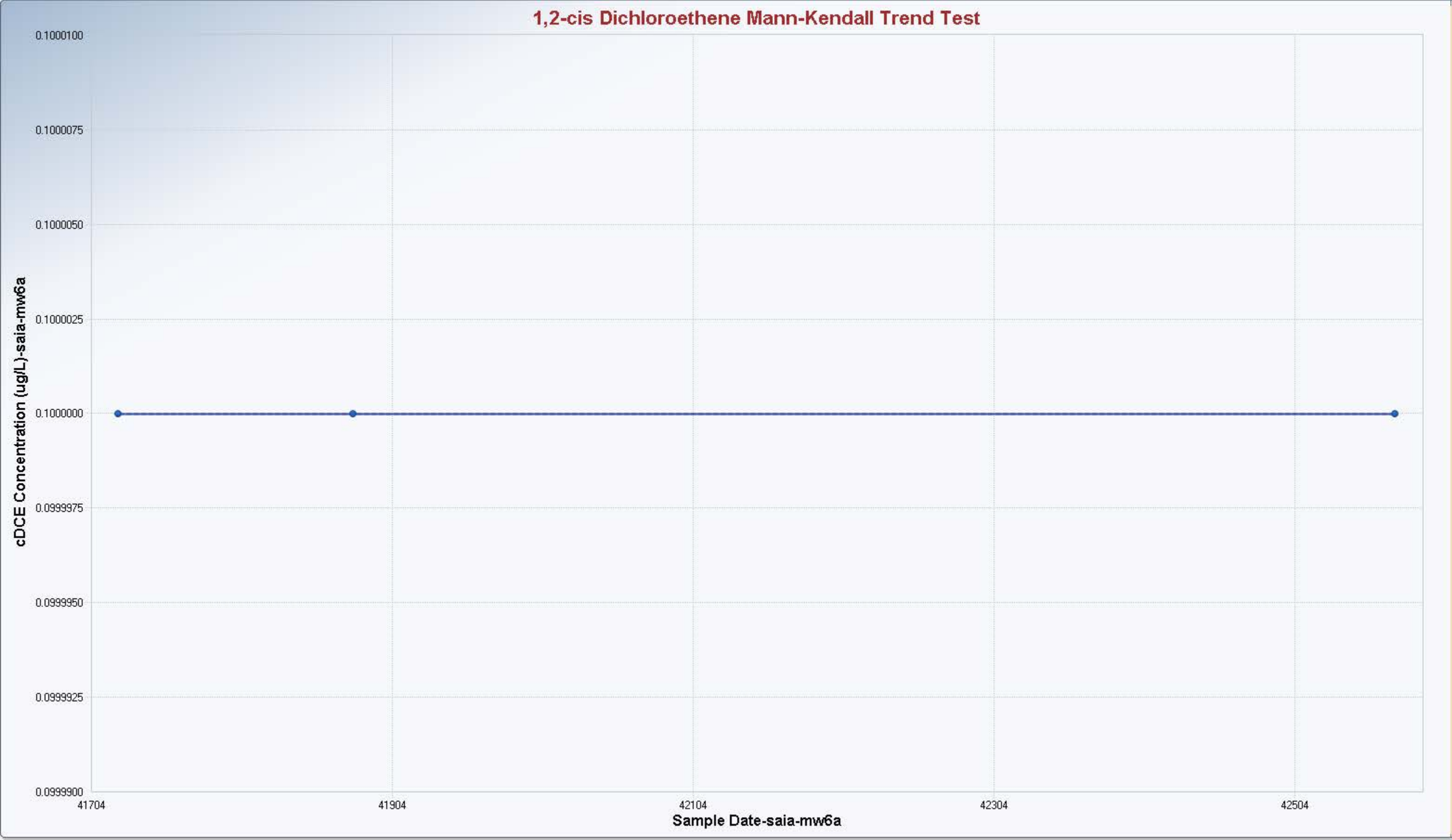
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	21.2370

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

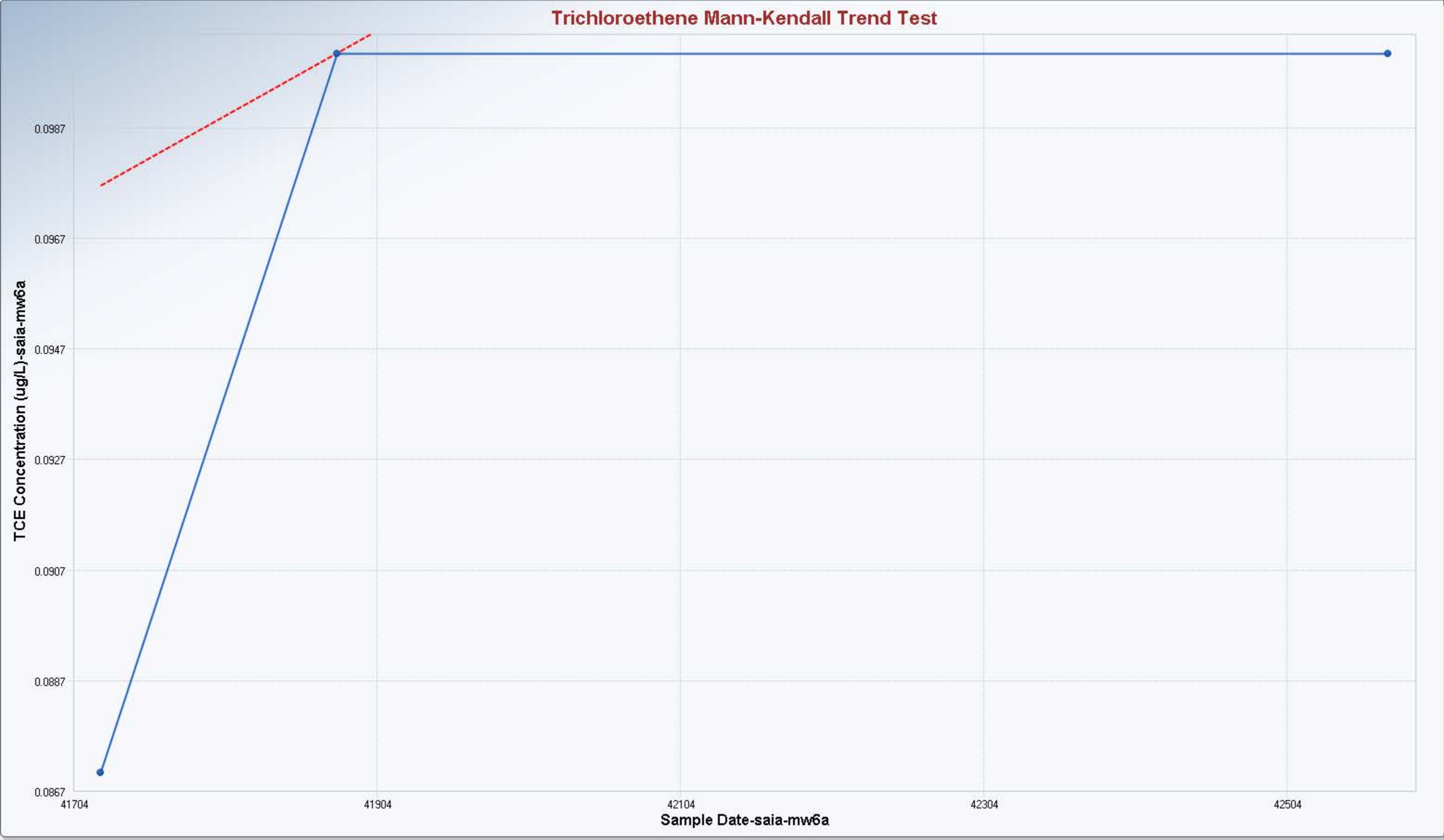
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	0.6124
M-K Test Value (S)	2
Tabulated p-value	
Approximate p-value	0.2701

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	-0.5412

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

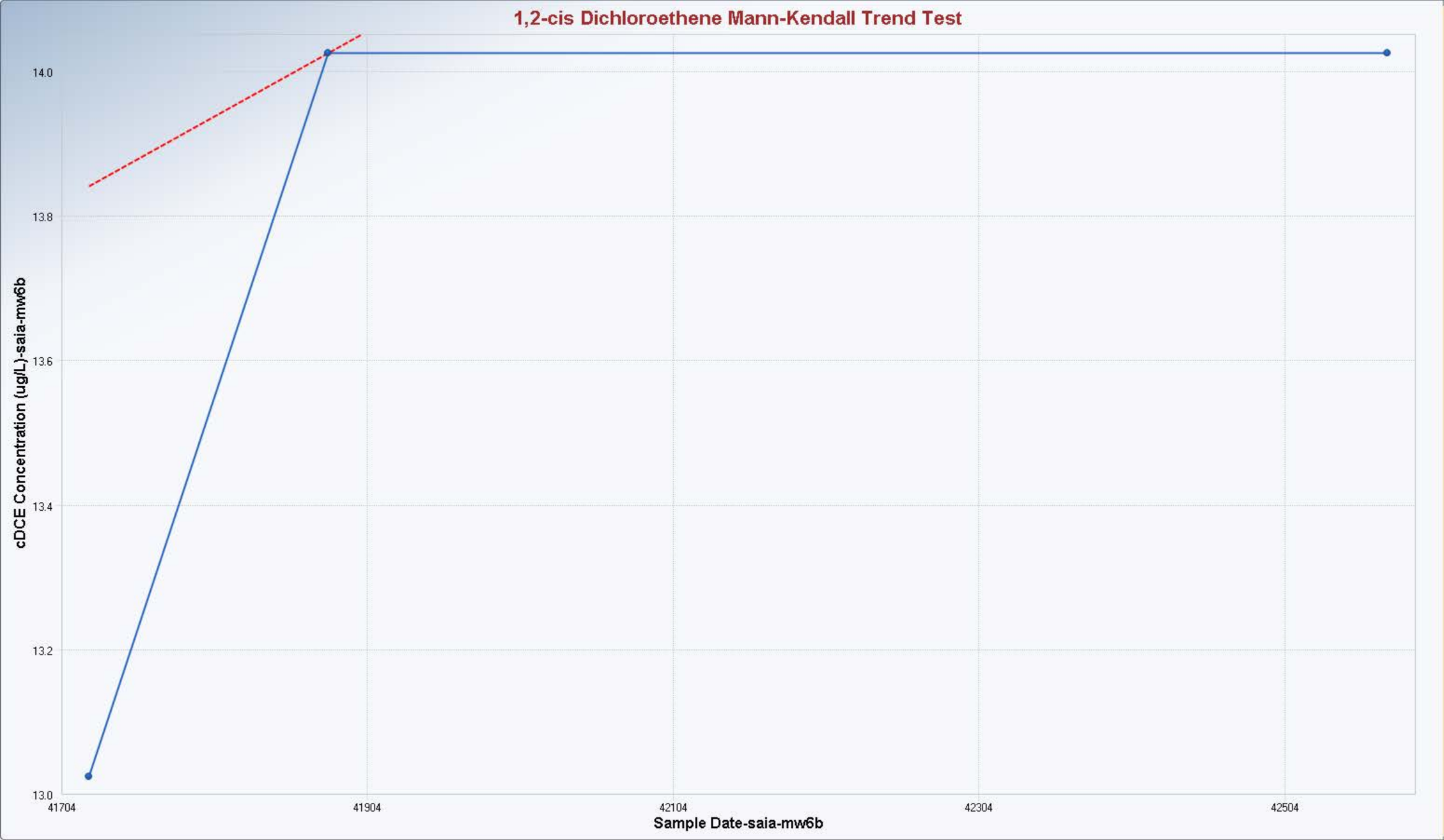
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

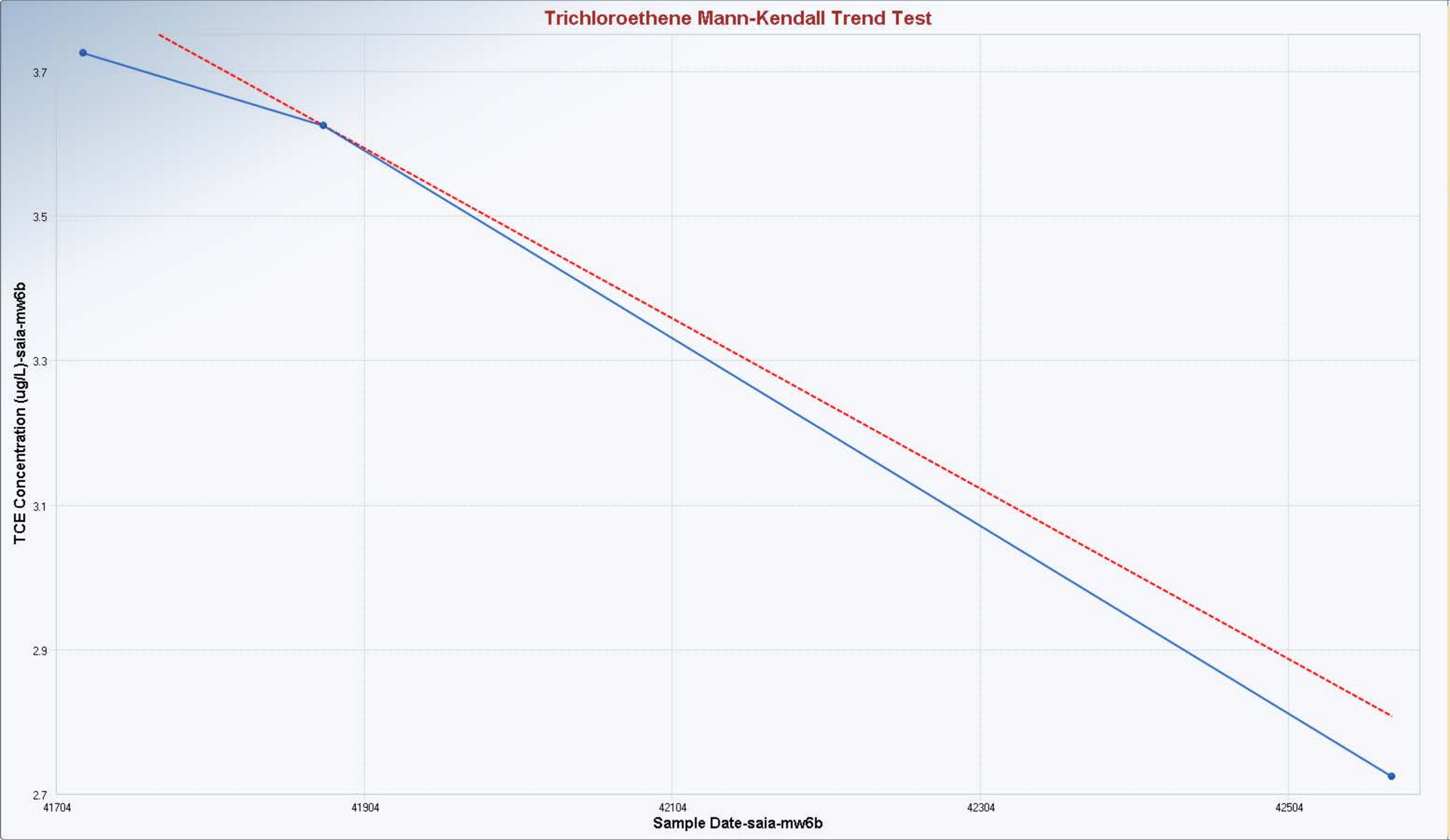
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	0.6124
M-K Test Value (S)	2
Tabulated p-value	
Approximate p-value	0.2701

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0012
Theil-Sen Intercept	-35.3263

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



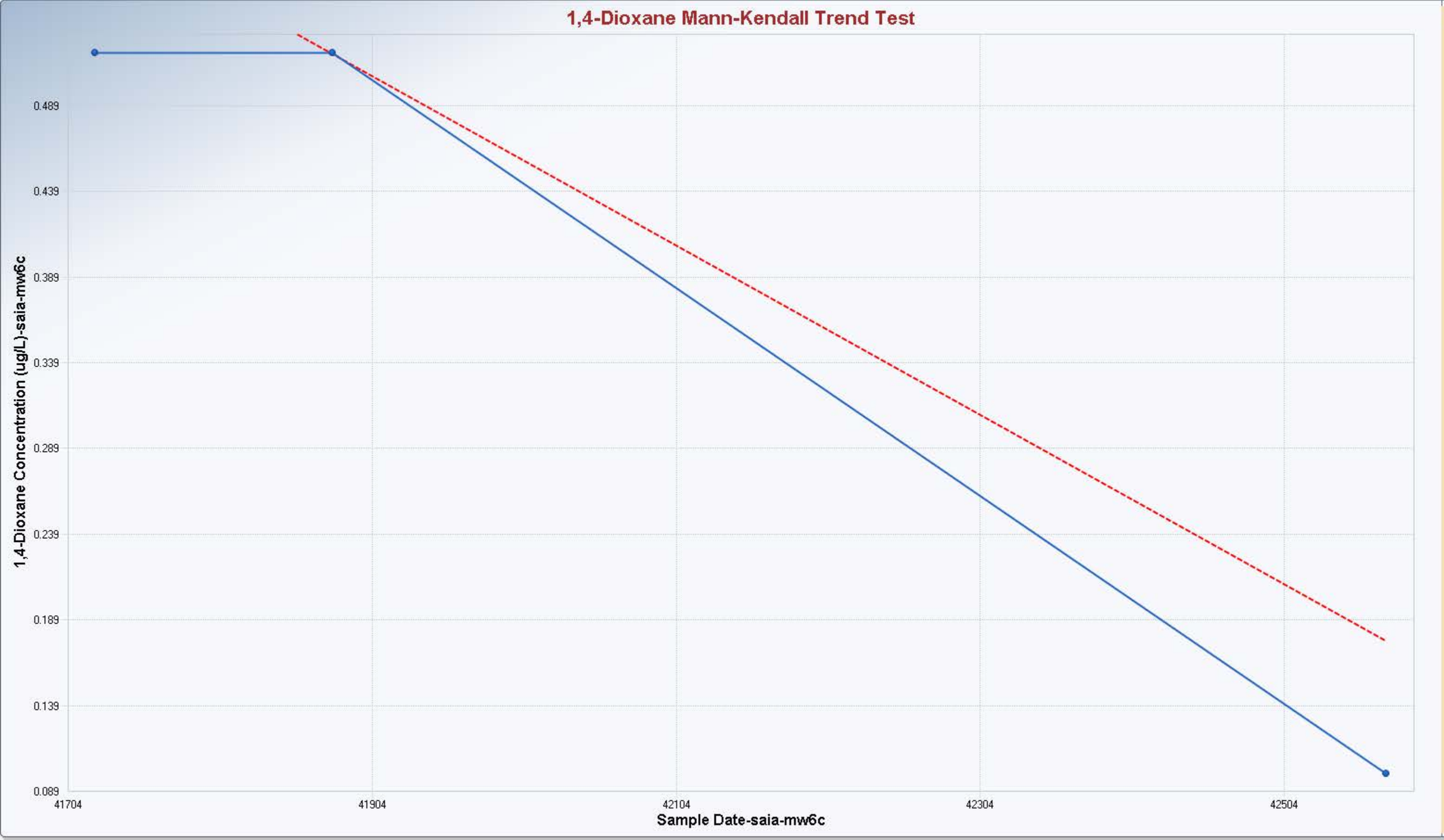
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	-1.0445
M-K Test Value (S)	-3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0012
Theil-Sen Intercept	52.9263

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	-0.6124
M-K Test Value (S)	-2
Tabulated p-value	
Approximate p-value	0.2701

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0005
Theil-Sen Intercept	21.2370

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,2-cis Dichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

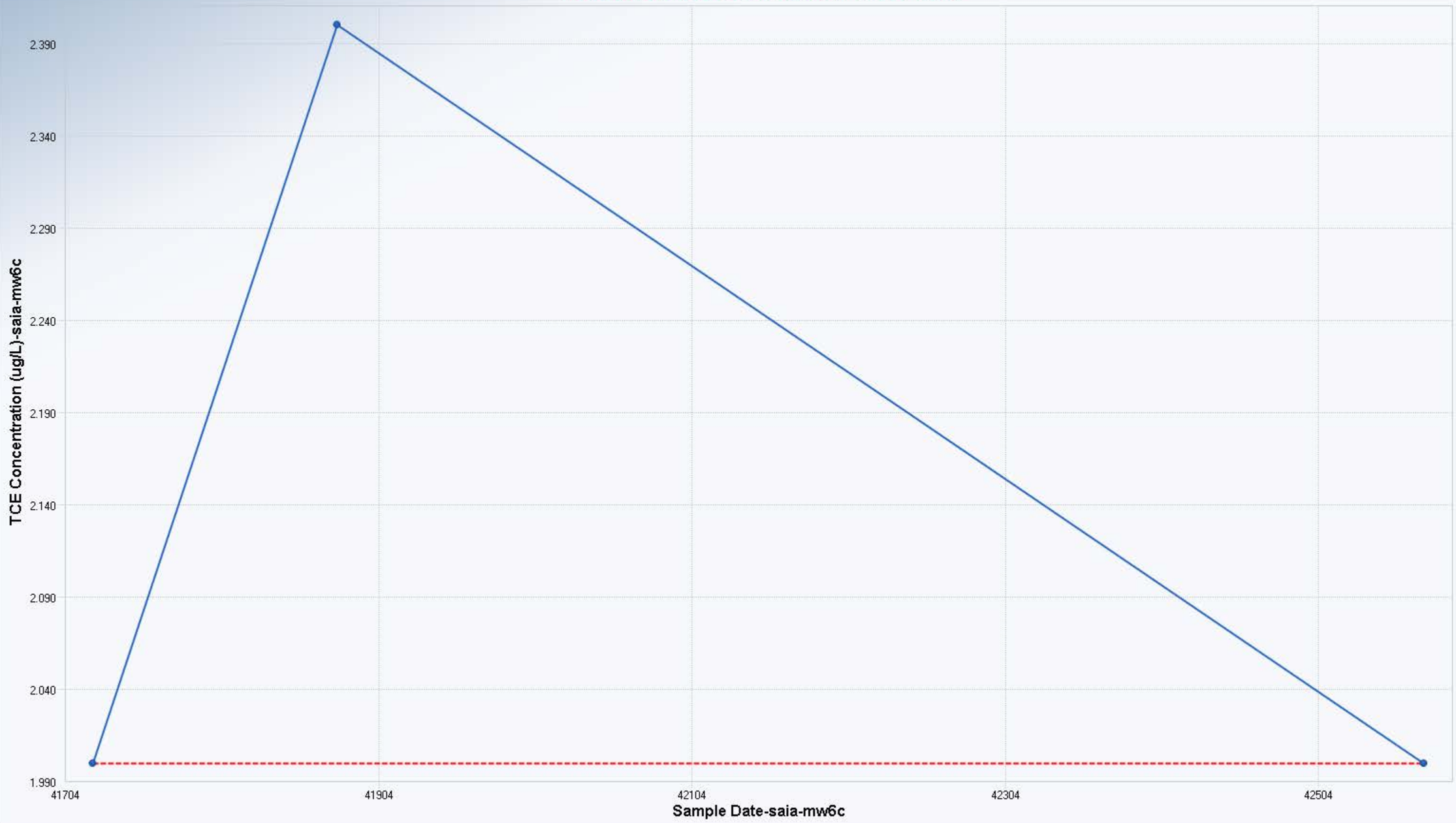
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	17.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

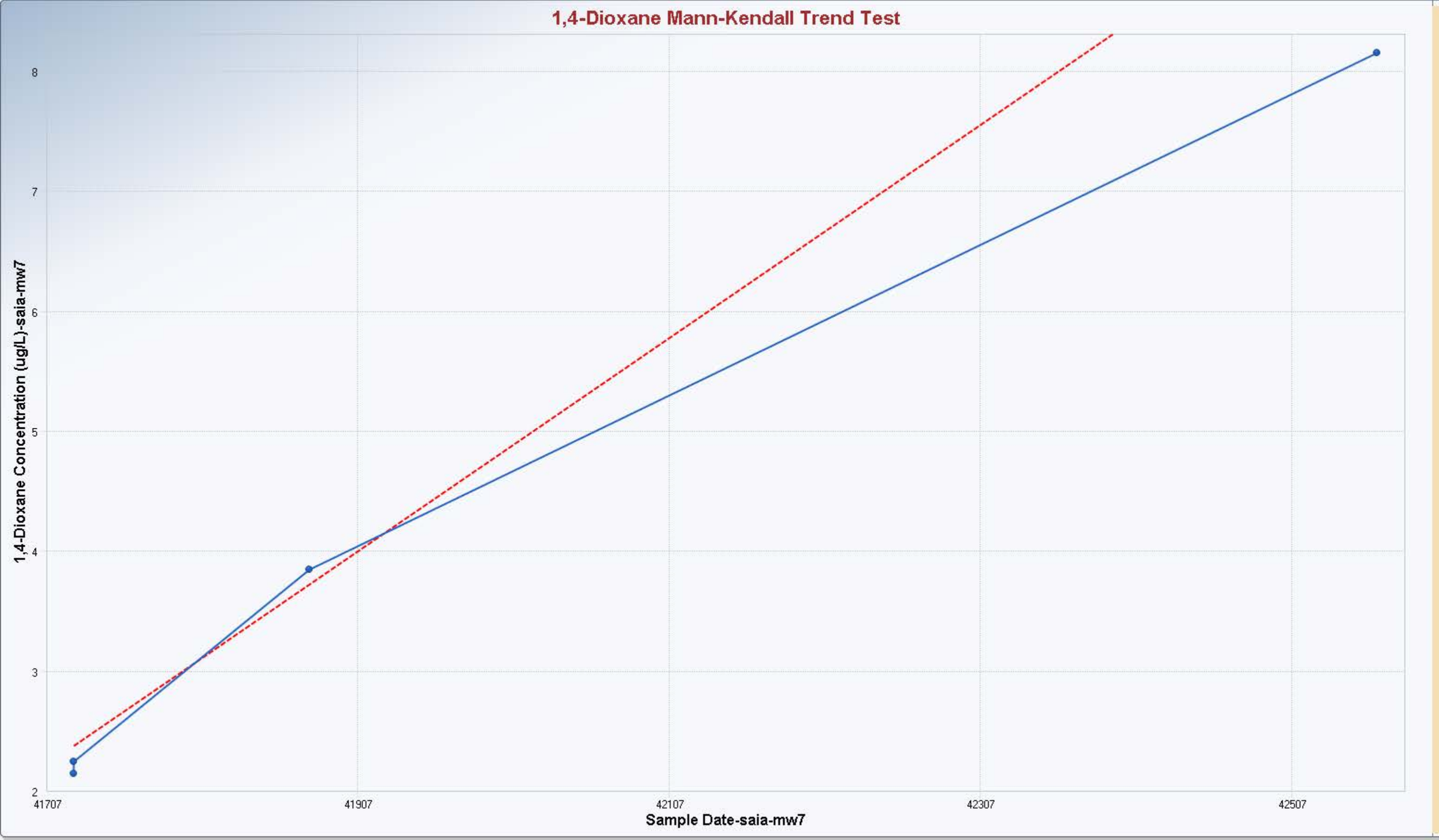
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	2.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	1.6984
M-K Test Value (S)	6
Tabulated p-value	0.0420
Approximate p-value	0.0447

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0089
Theil-Sen Intercept	-368.4822

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	1.6984
M-K Test Value (S)	6
Tabulated p-value	0.0420
Approximate p-value	0.0447

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.1665
Theil-Sen Intercept	-6,922.8046

Statistically significant evidence of an increasing trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test

Mann-Kendall Trend Analysis

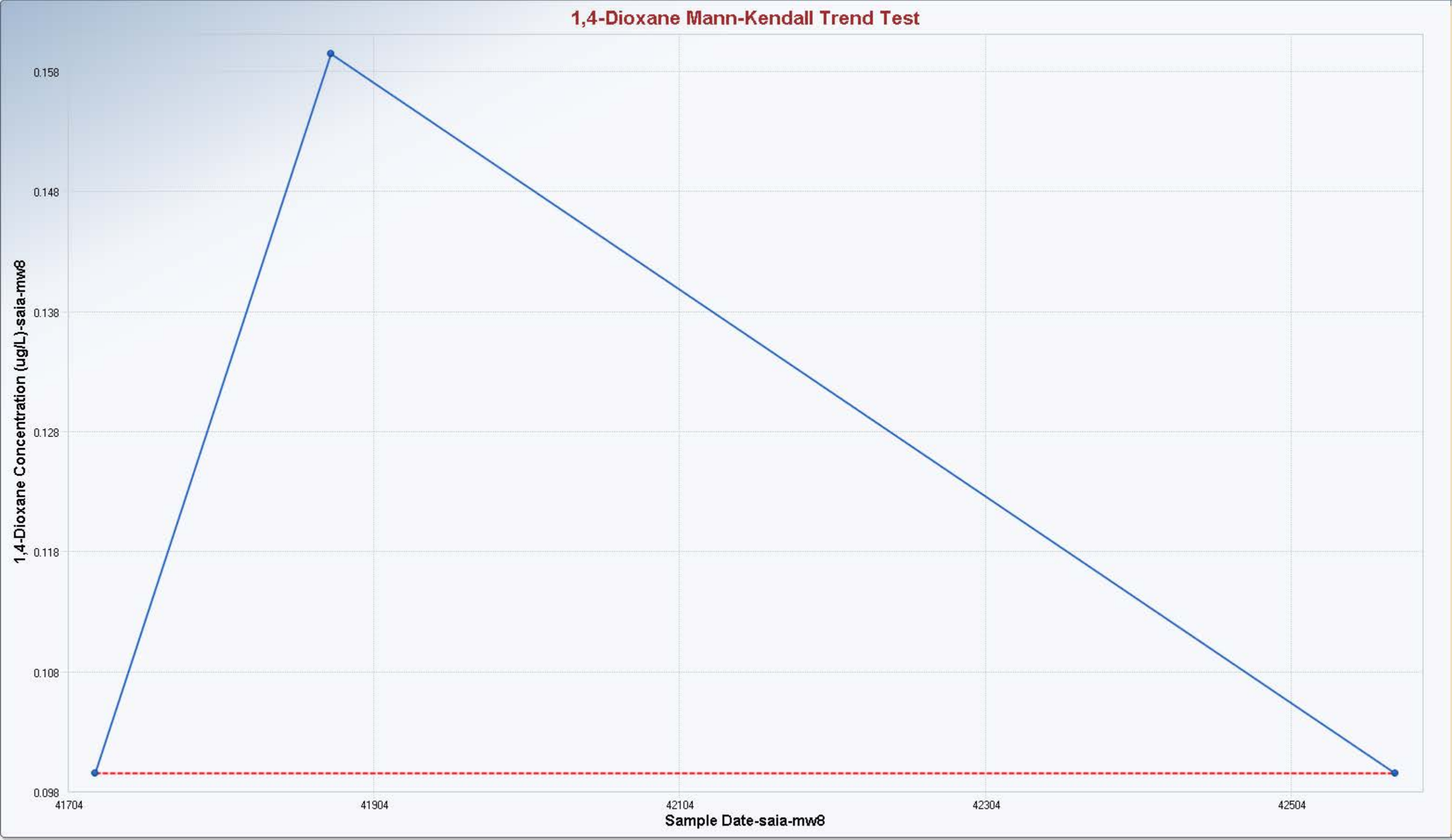
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-0.7223
M-K Test Value (S)	-3
Tabulated p-value	0.3750
Approximate p-value	0.2351

Theil-Sen Trend Line (Red)

Theil-Sen Slope	-0.0040
Theil-Sen Intercept	188.3118

Insufficient statistical evidence of a significant trend at the specified level of significance.

1,4-Dioxane Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Analysis

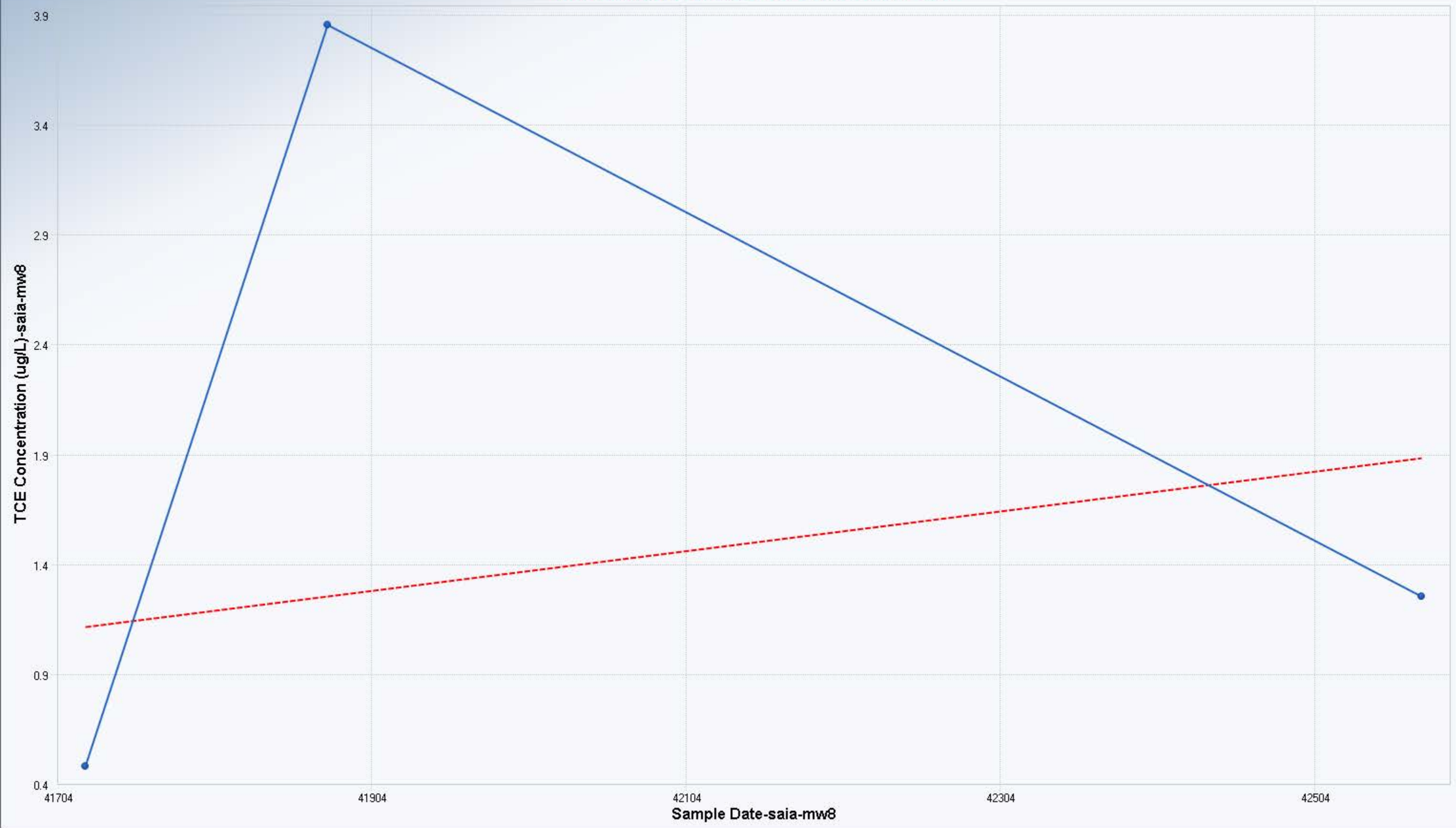
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0016
Theil-Sen Intercept	-65.5943

Insufficient statistical evidence of a significant trend at the specified level of significance.

Trichloroethene Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

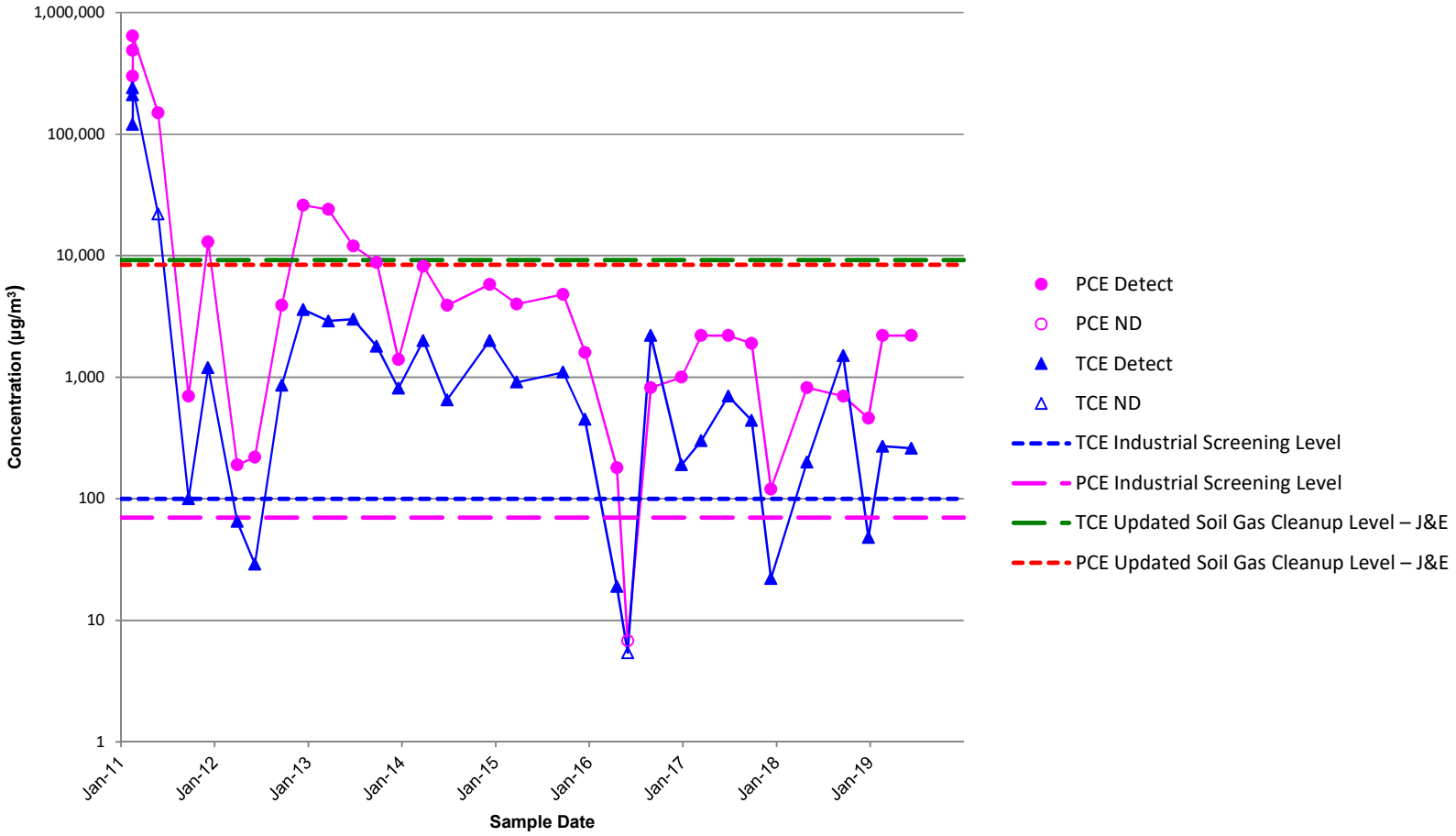
Theil-Sen Trend Line (Red)

Theil-Sen Slope	0.0009
Theil-Sen Intercept	-36.6347

Insufficient statistical evidence of a significant trend at the specified level of significance.

APPENDIX H

Vapor Concentration Trend Plots



EXPLANATION

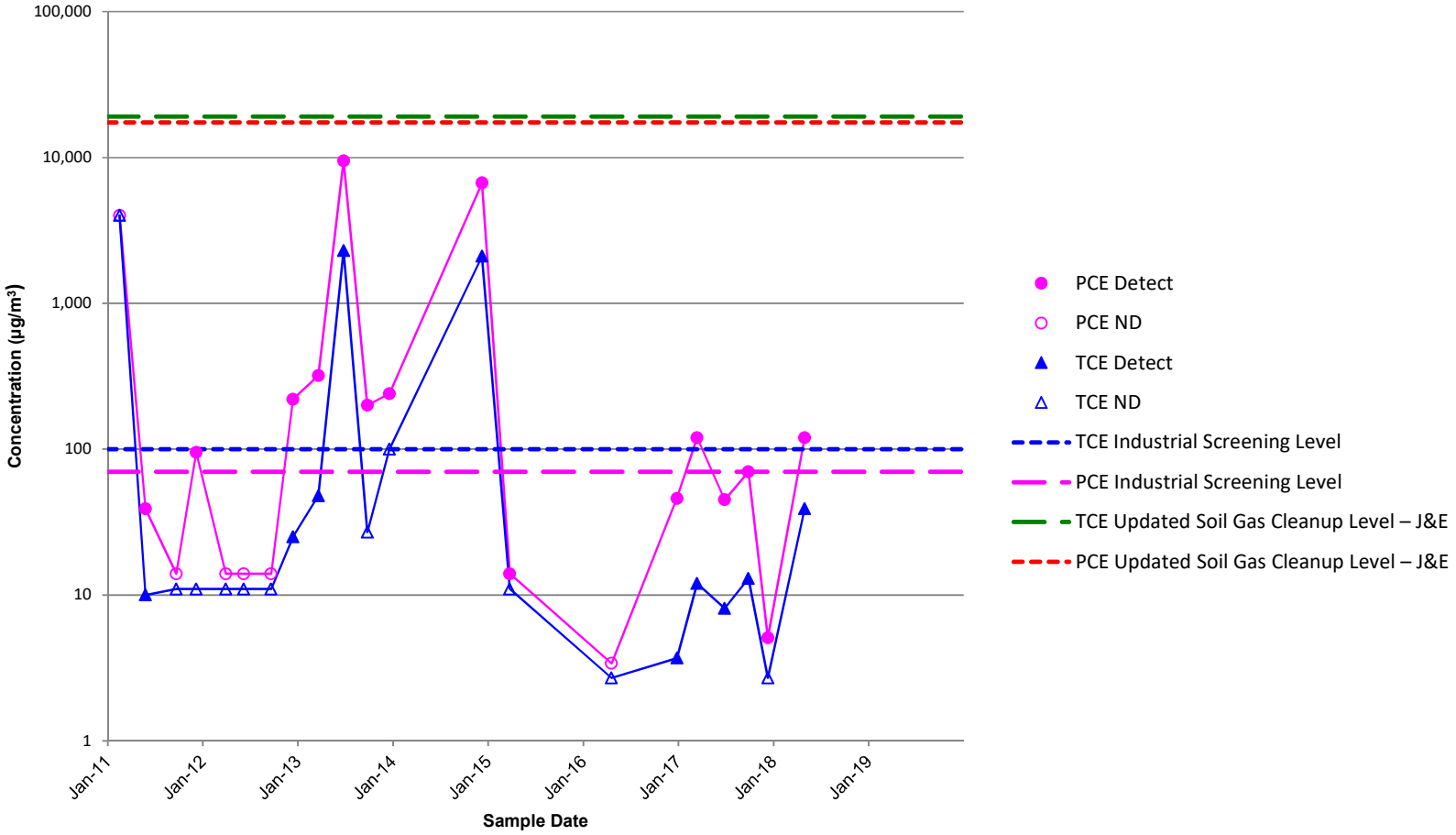
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-5A

August 2019 **Figure H-1**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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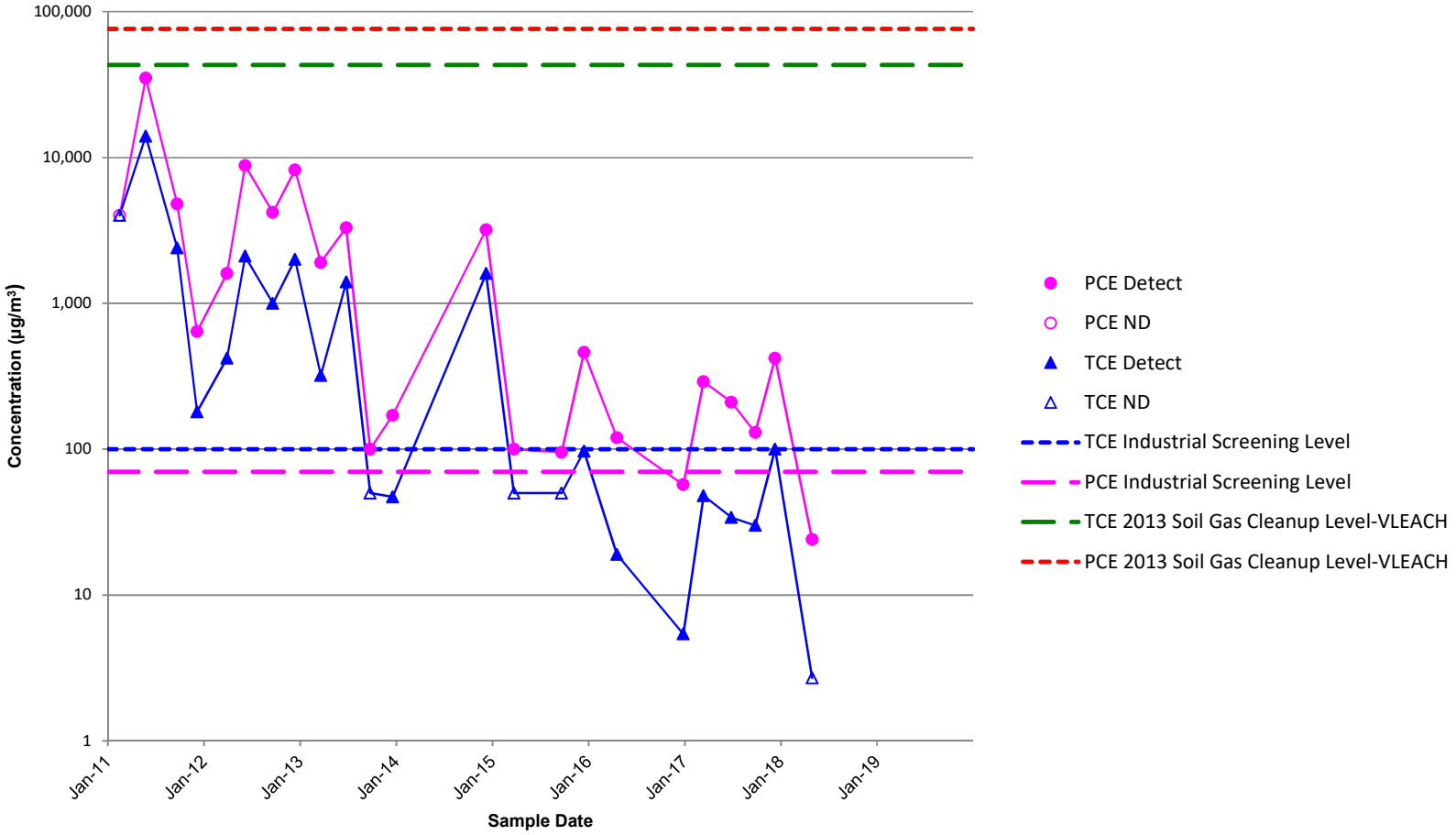
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-5B

August 2019 **Figure H-2**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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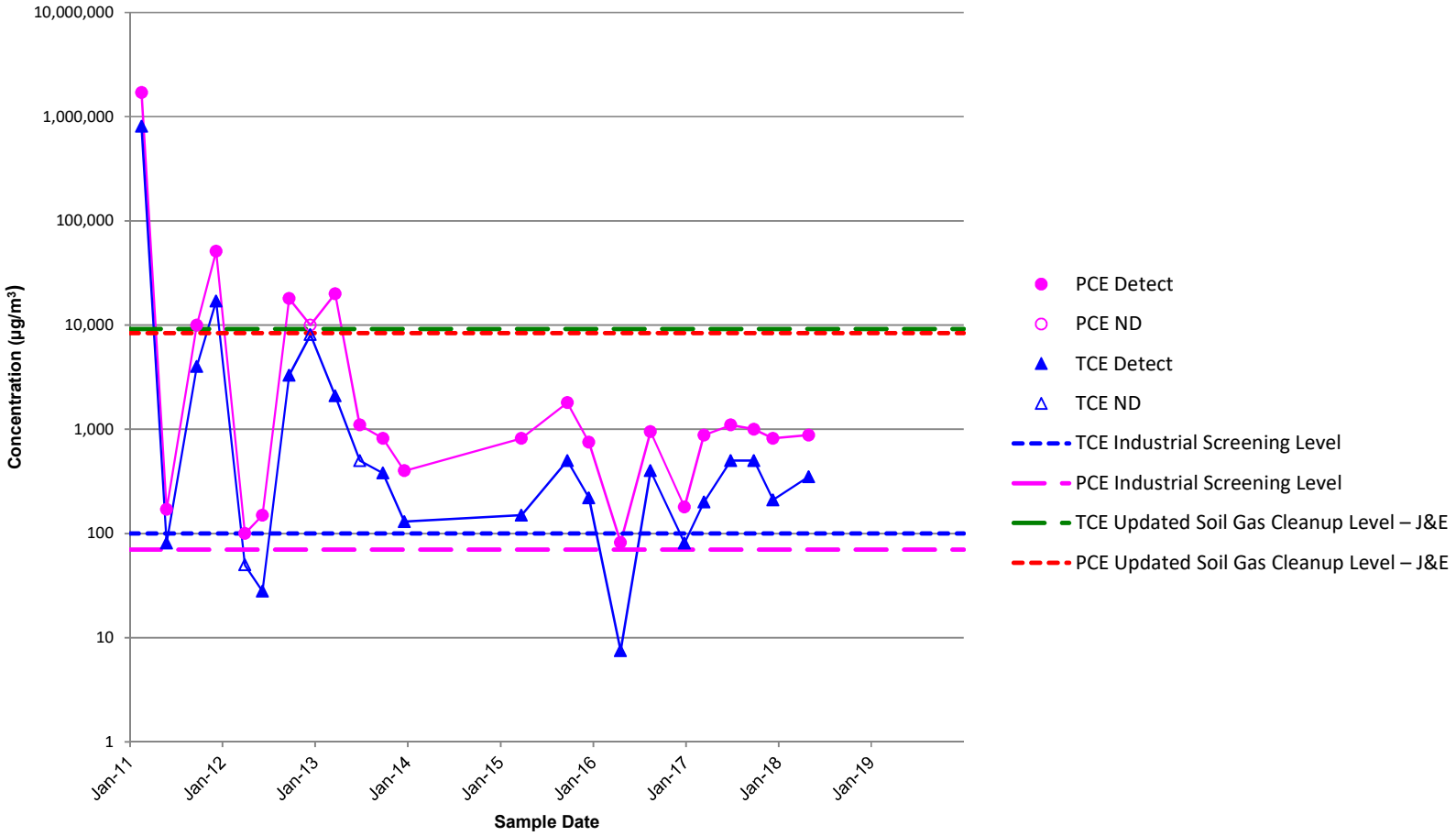
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-5C

August 2019 **Figure H-3**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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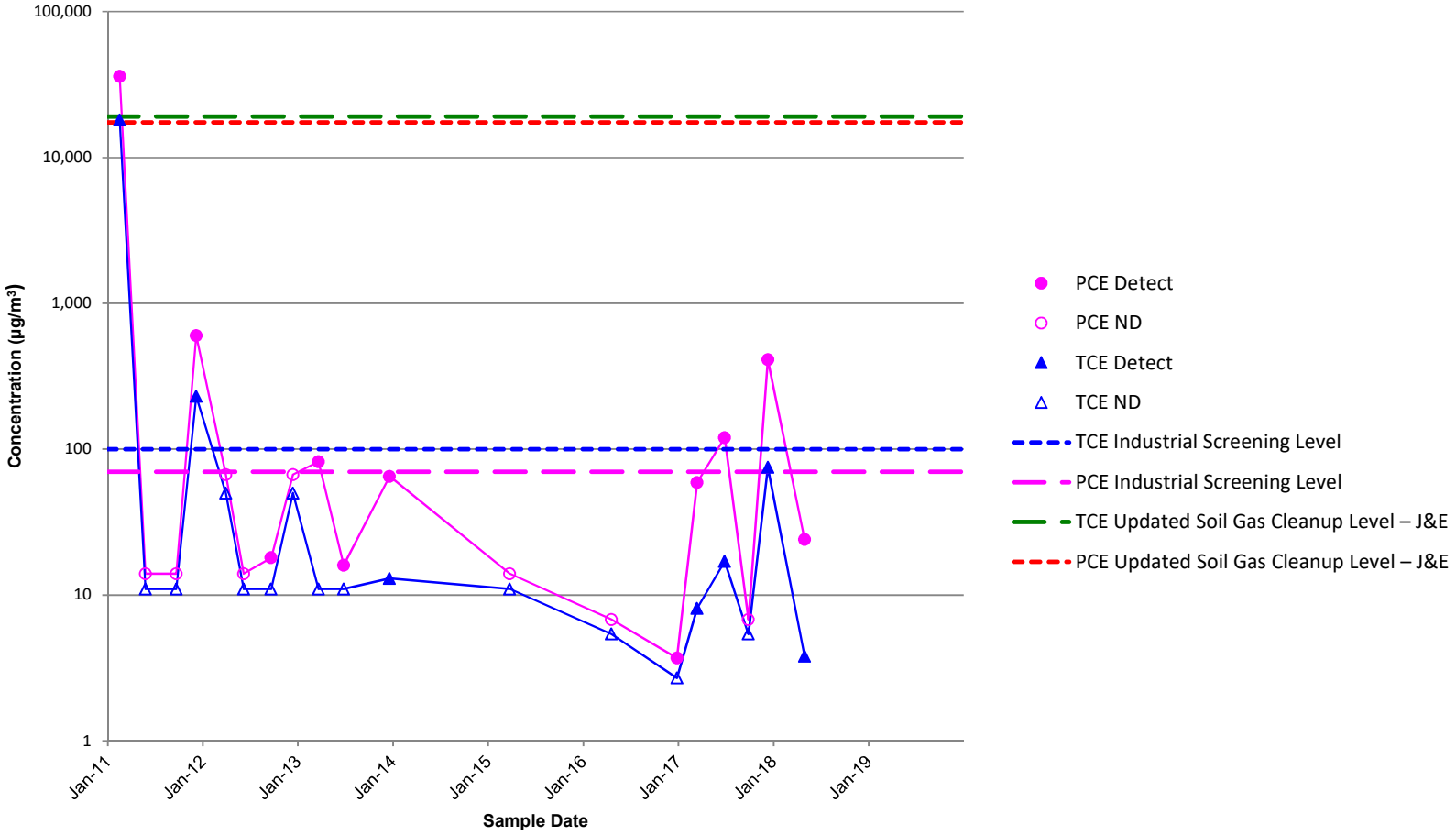
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-6A

August 2019 **Figure H-4**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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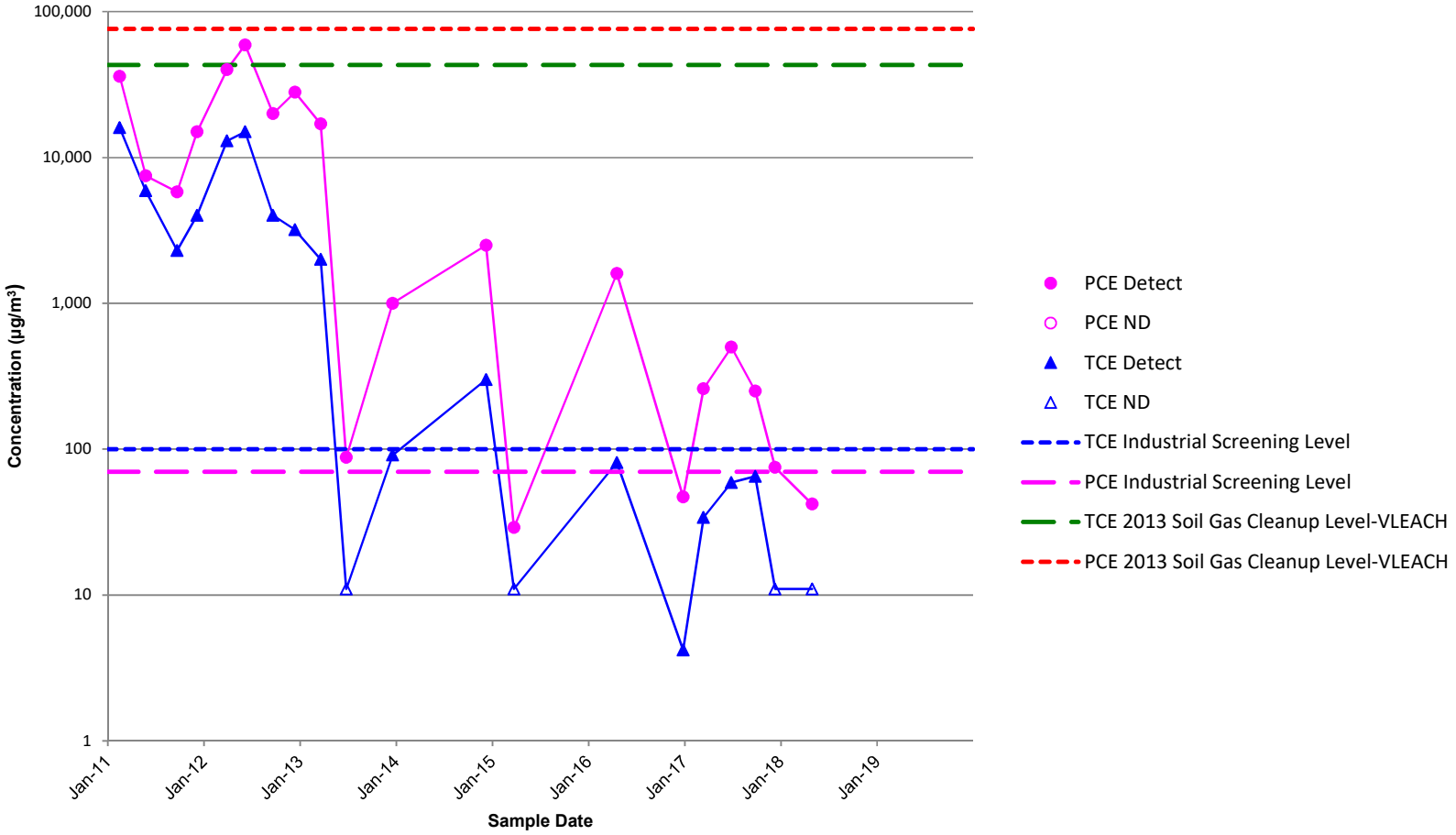
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-6B

August 2019 **Figure H-5**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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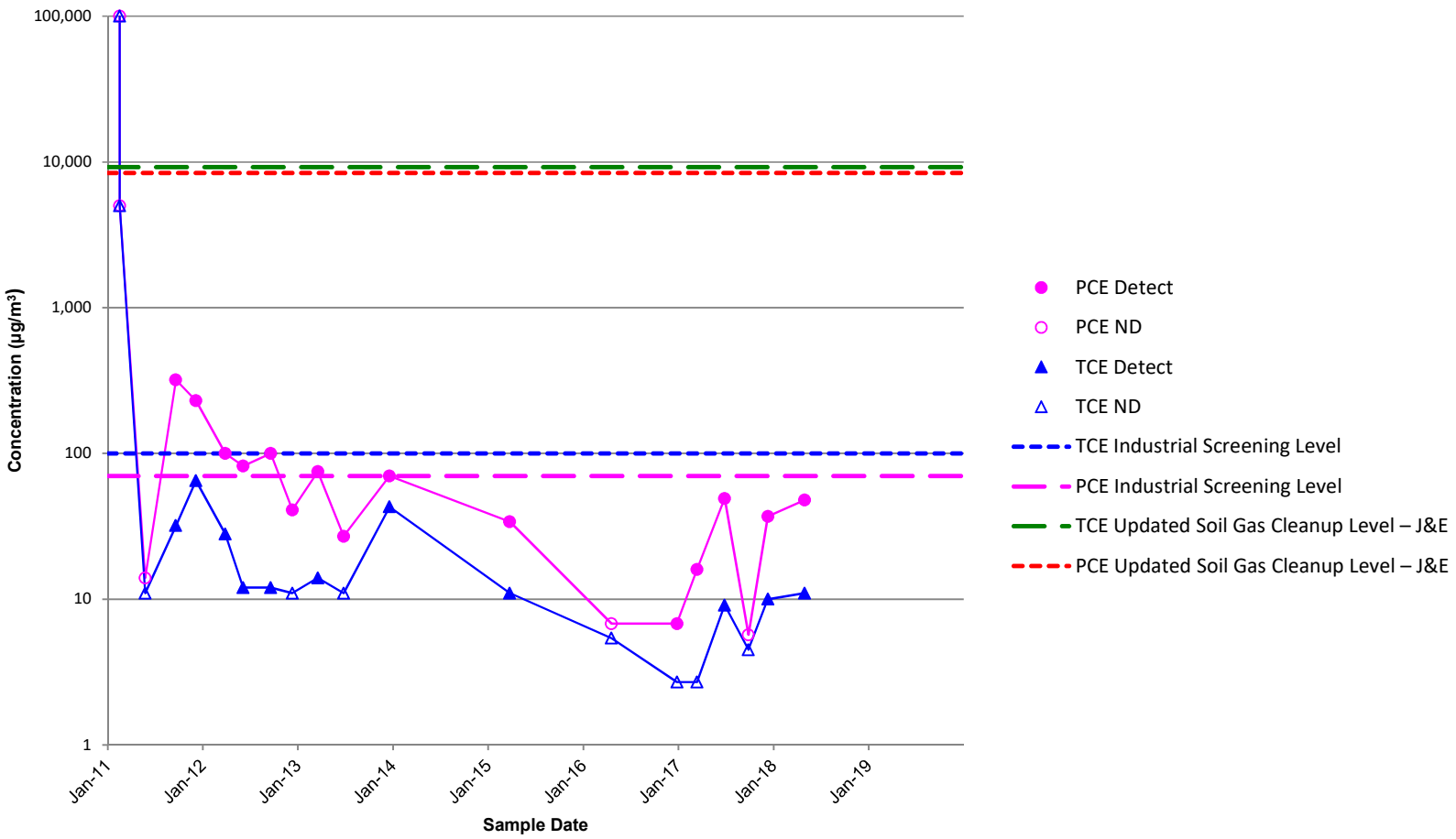
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-6C

August 2019 **Figure H-6**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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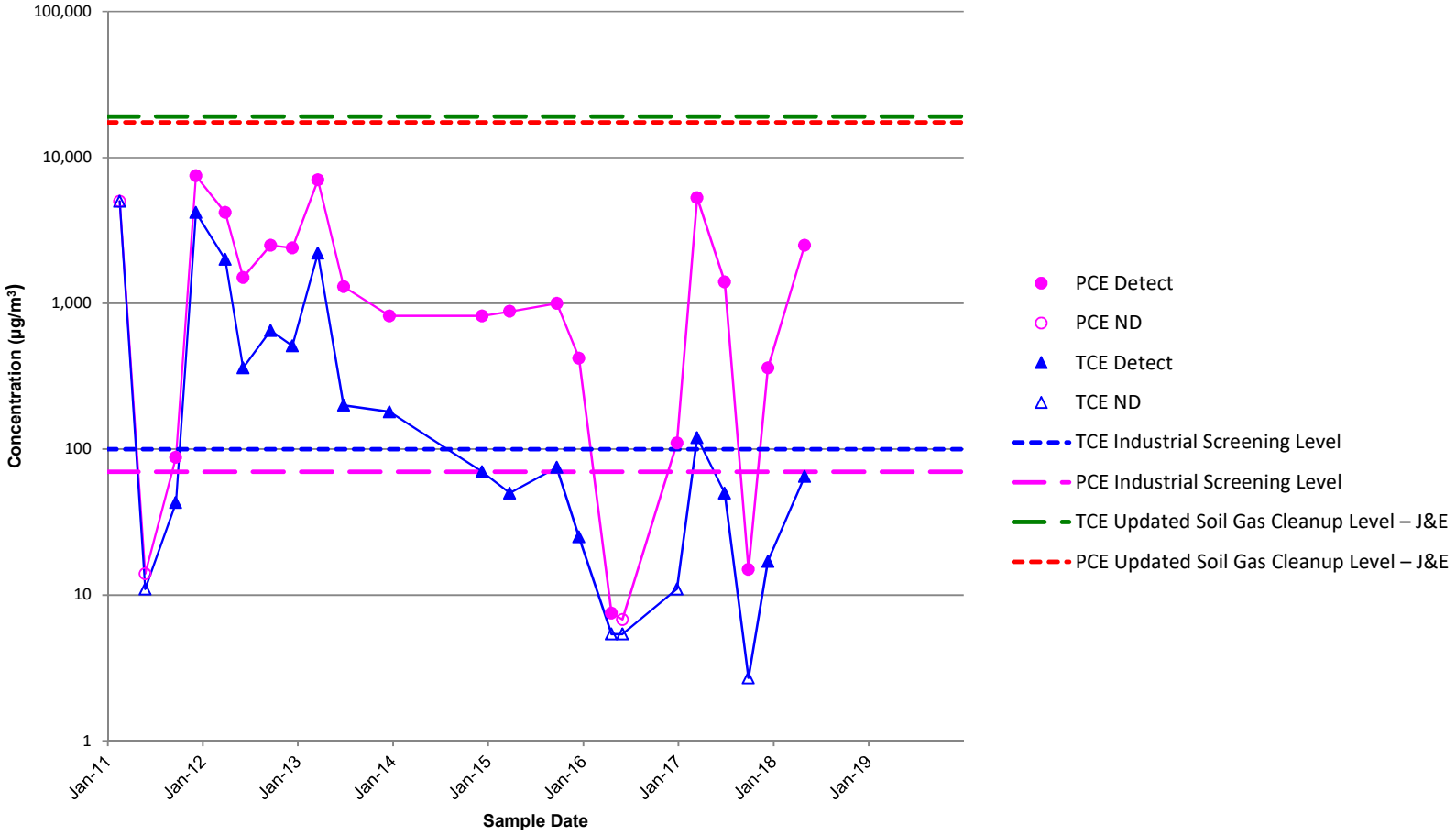
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-7A

August 2019 **Figure H-7**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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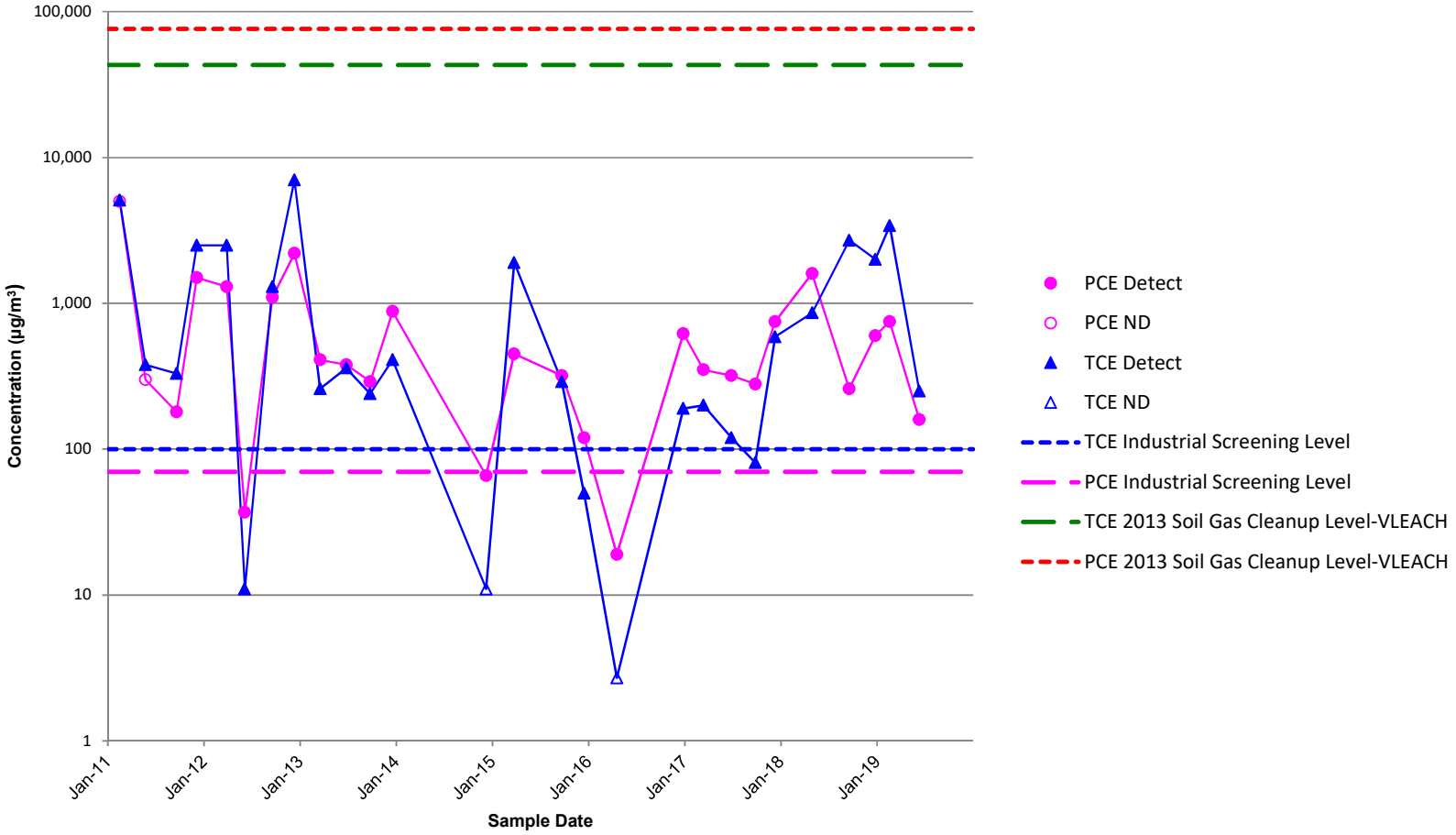
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-7B

August 2019 **Figure H-8**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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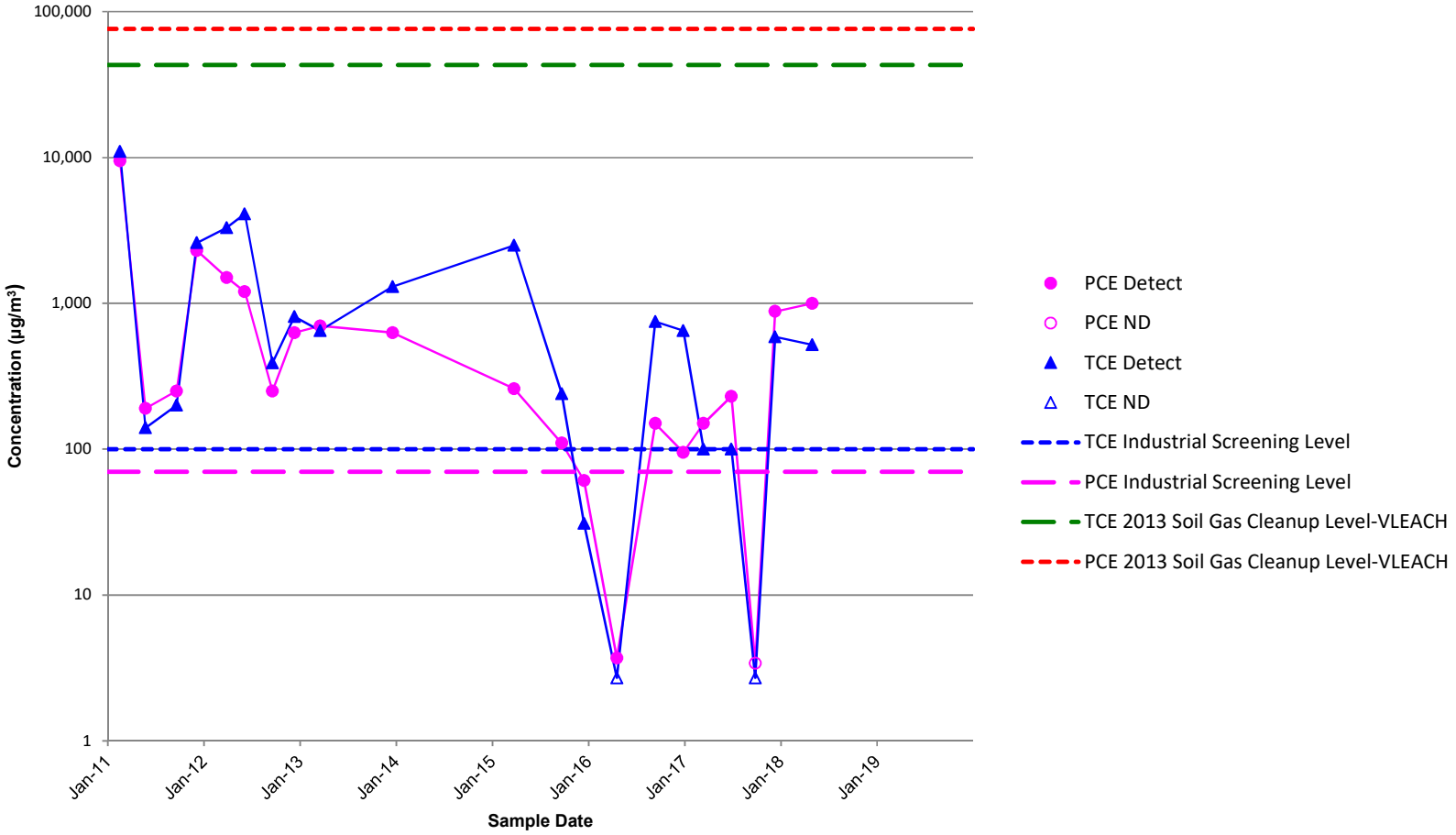
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-7C

August 2019 **Figure H-9**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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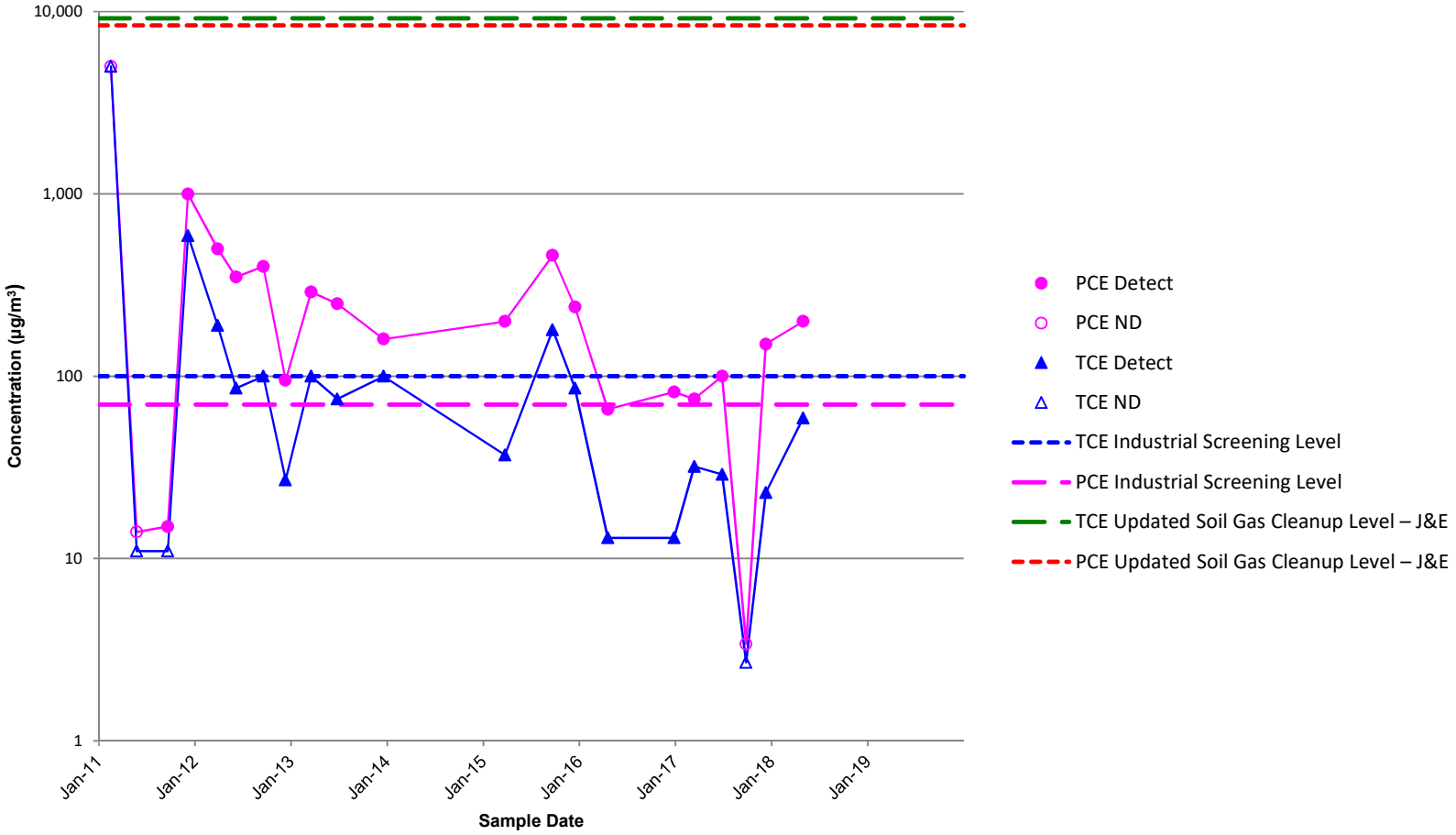
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-7D

August 2019 **Figure H-10**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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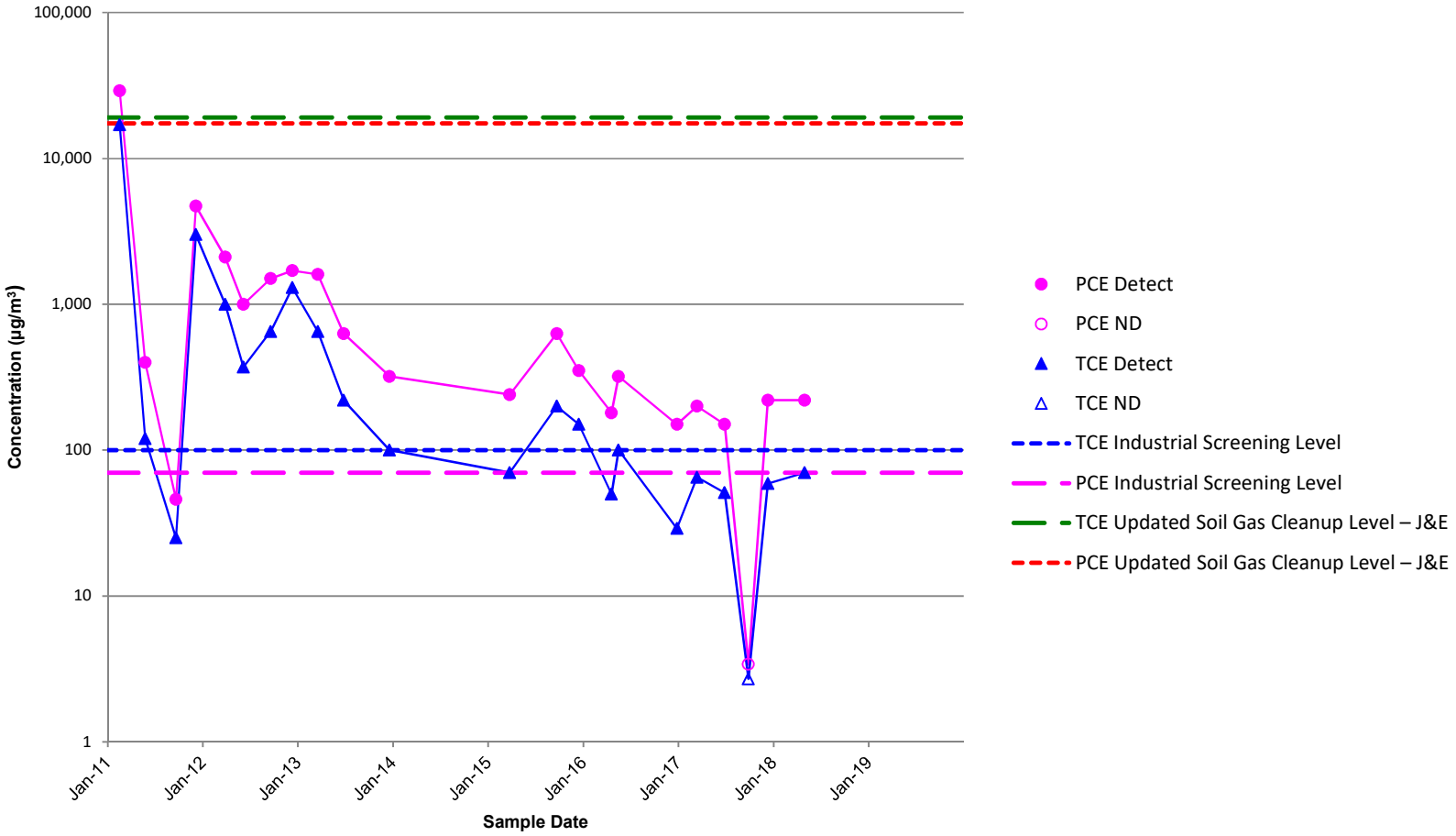
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-8A

August 2019 **Figure H-11**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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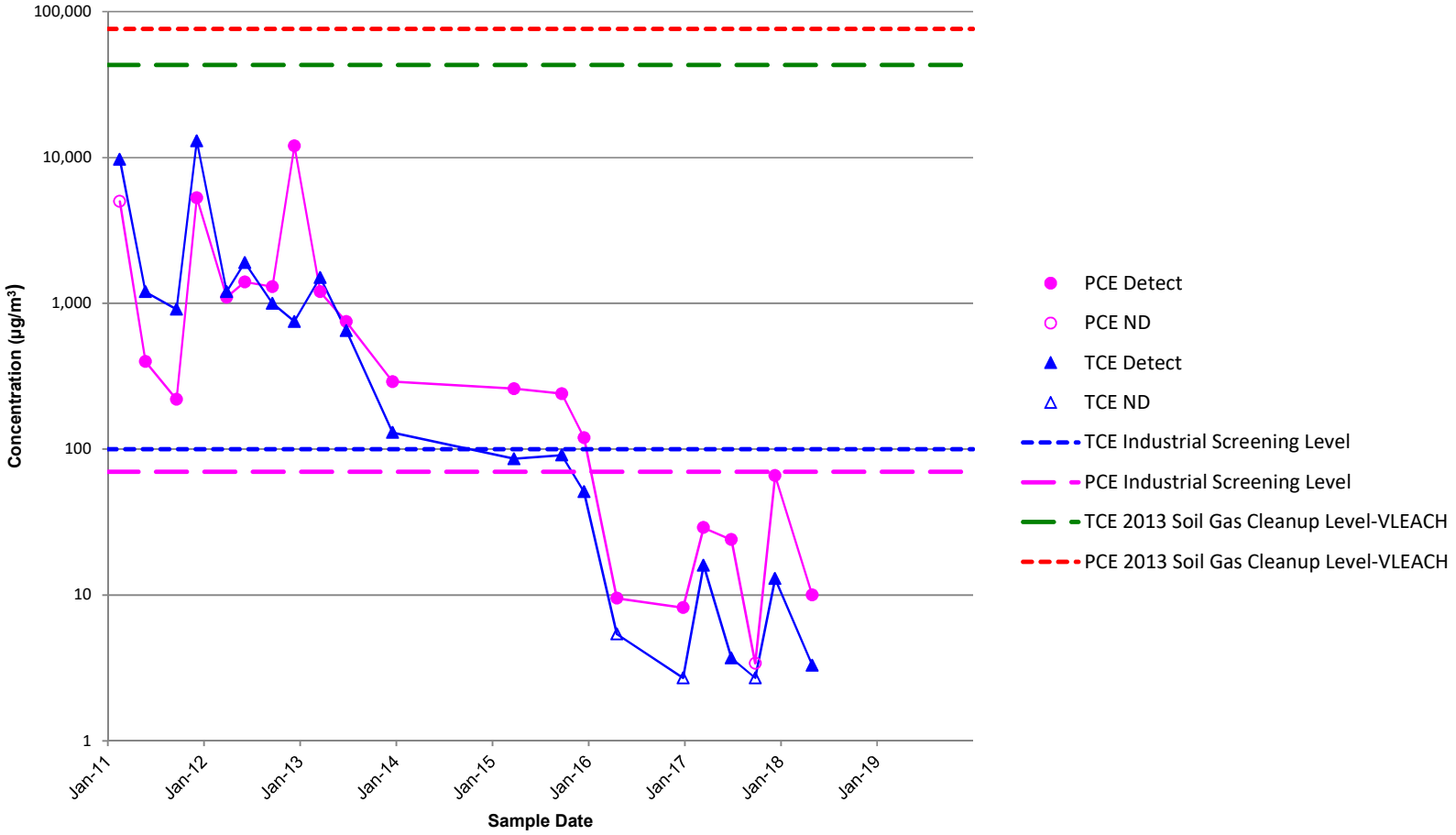
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-8B

August 2019 **Figure H-12**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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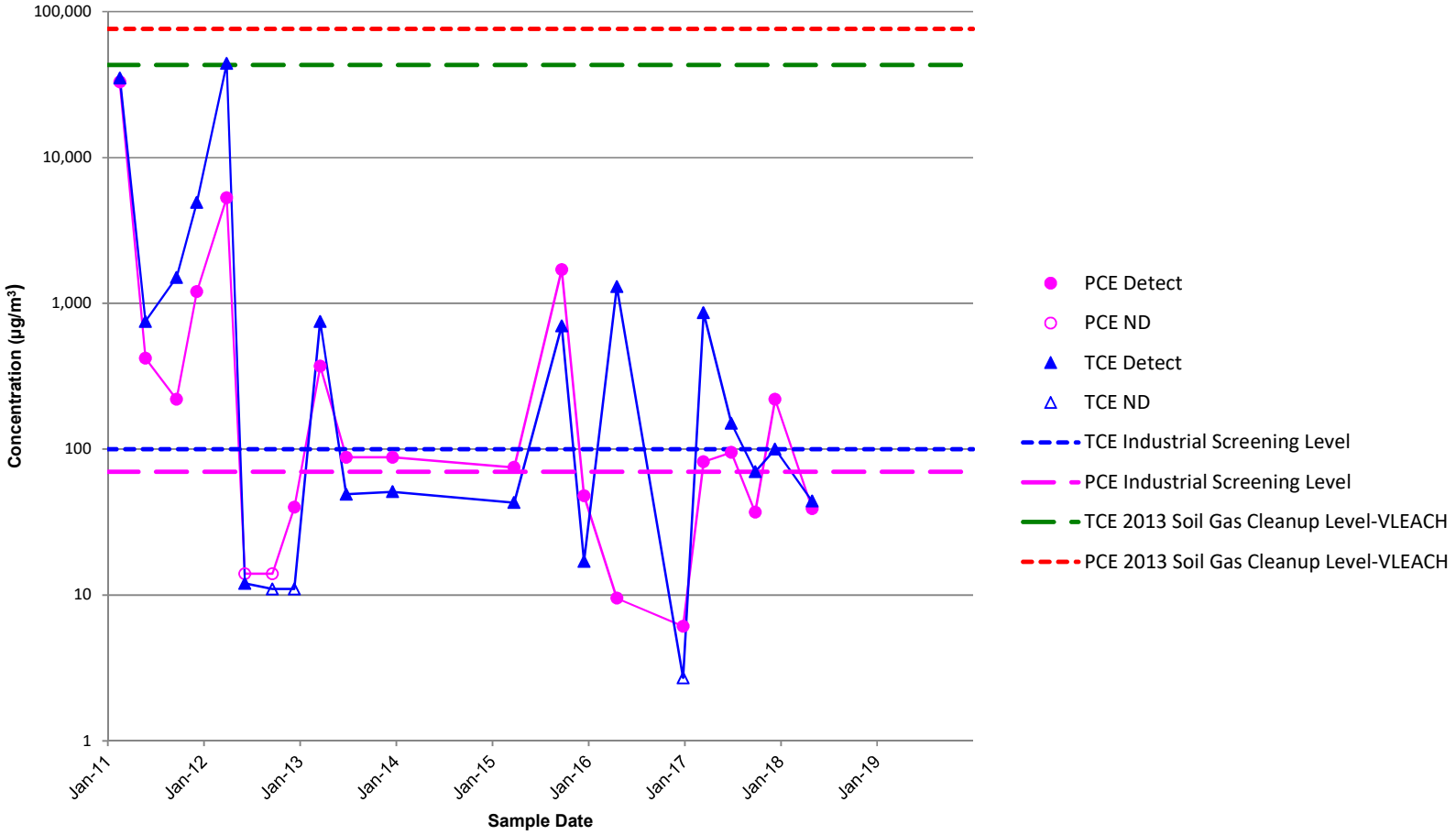
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-8C

August 2019 **Figure H-13**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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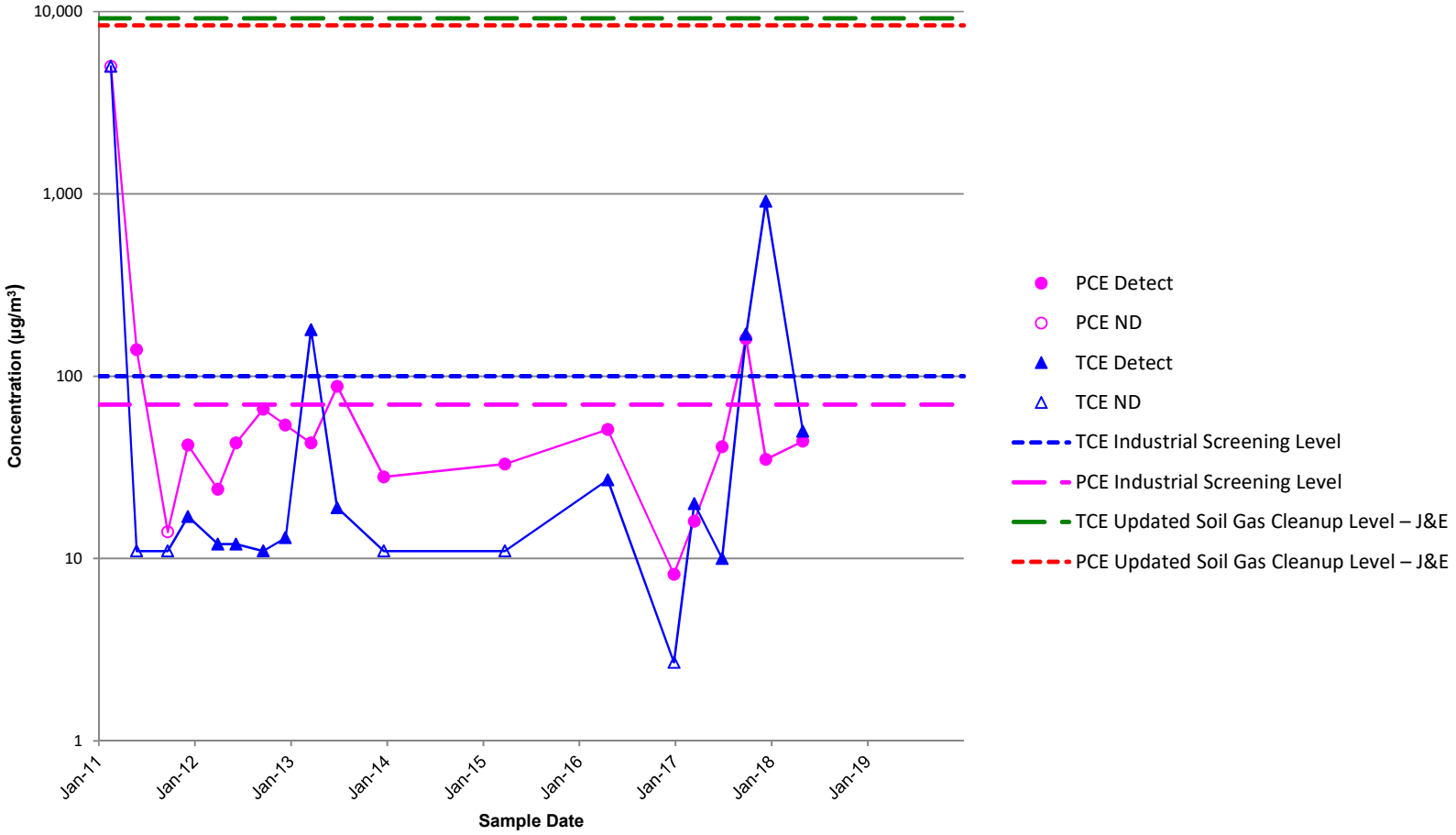
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-8D

August 2019 **Figure H-14**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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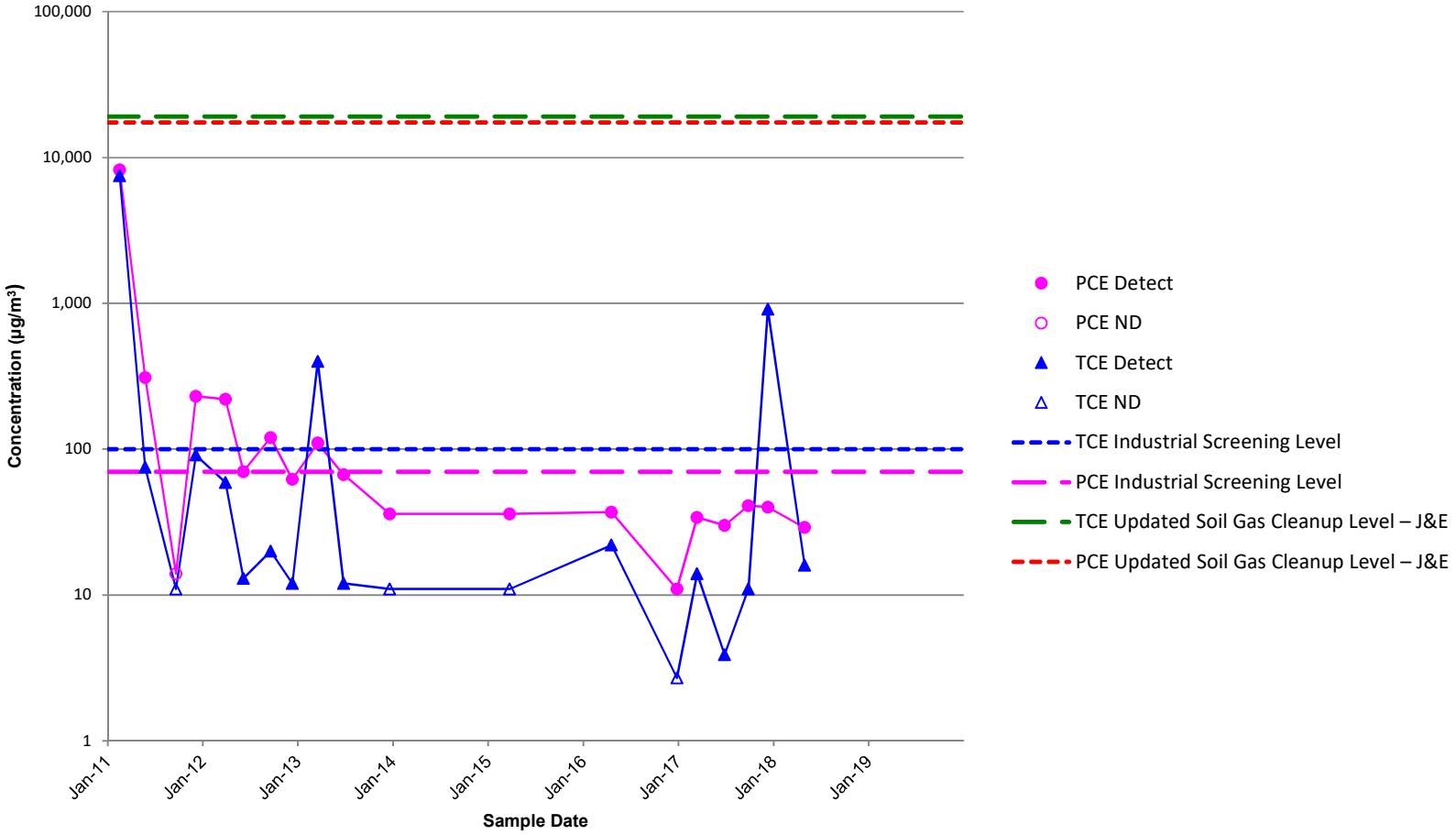
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-9A

August 2019 **Figure H-15**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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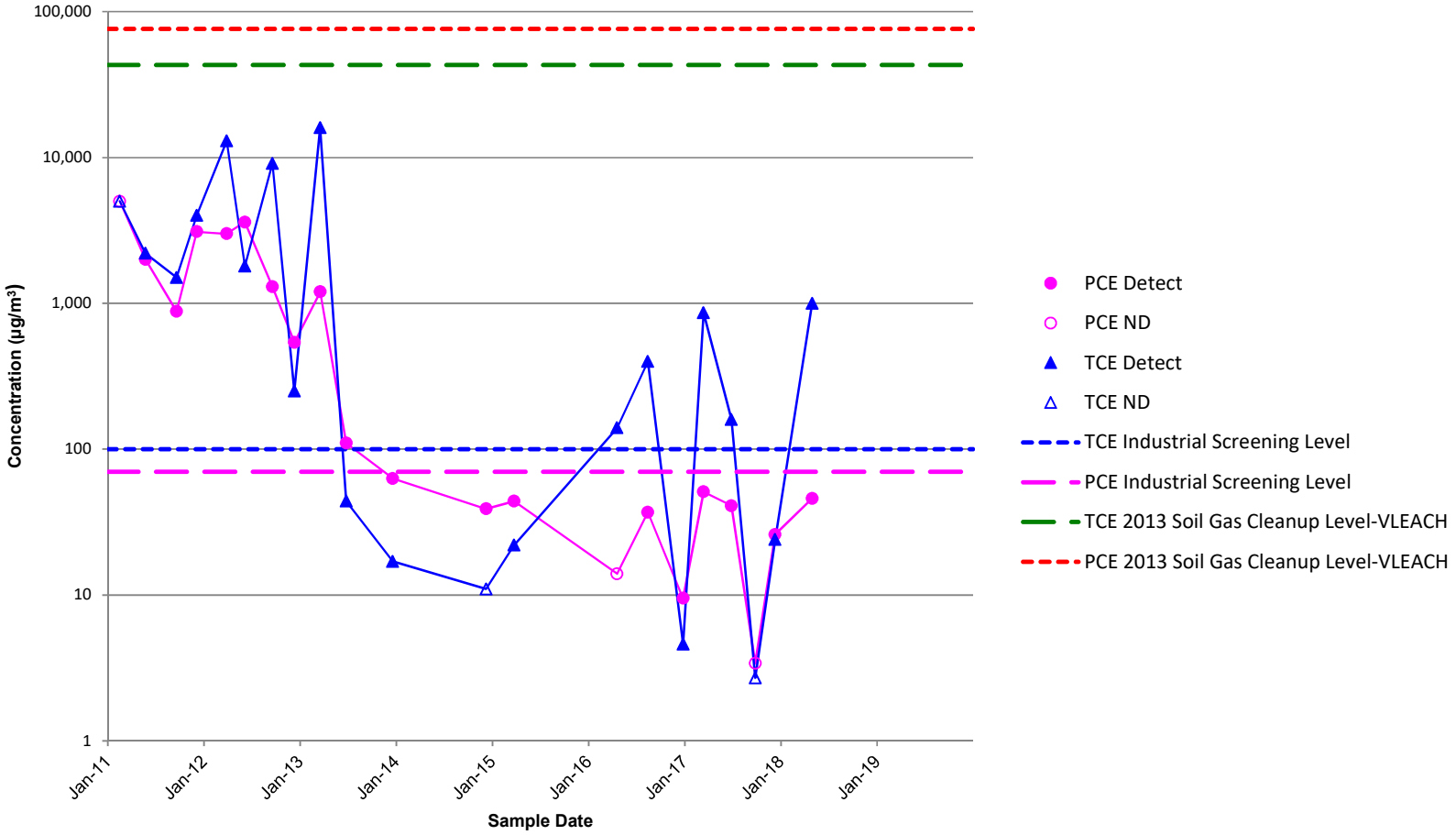
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-9B

August 2019 **Figure H-16**



EXPLANATION

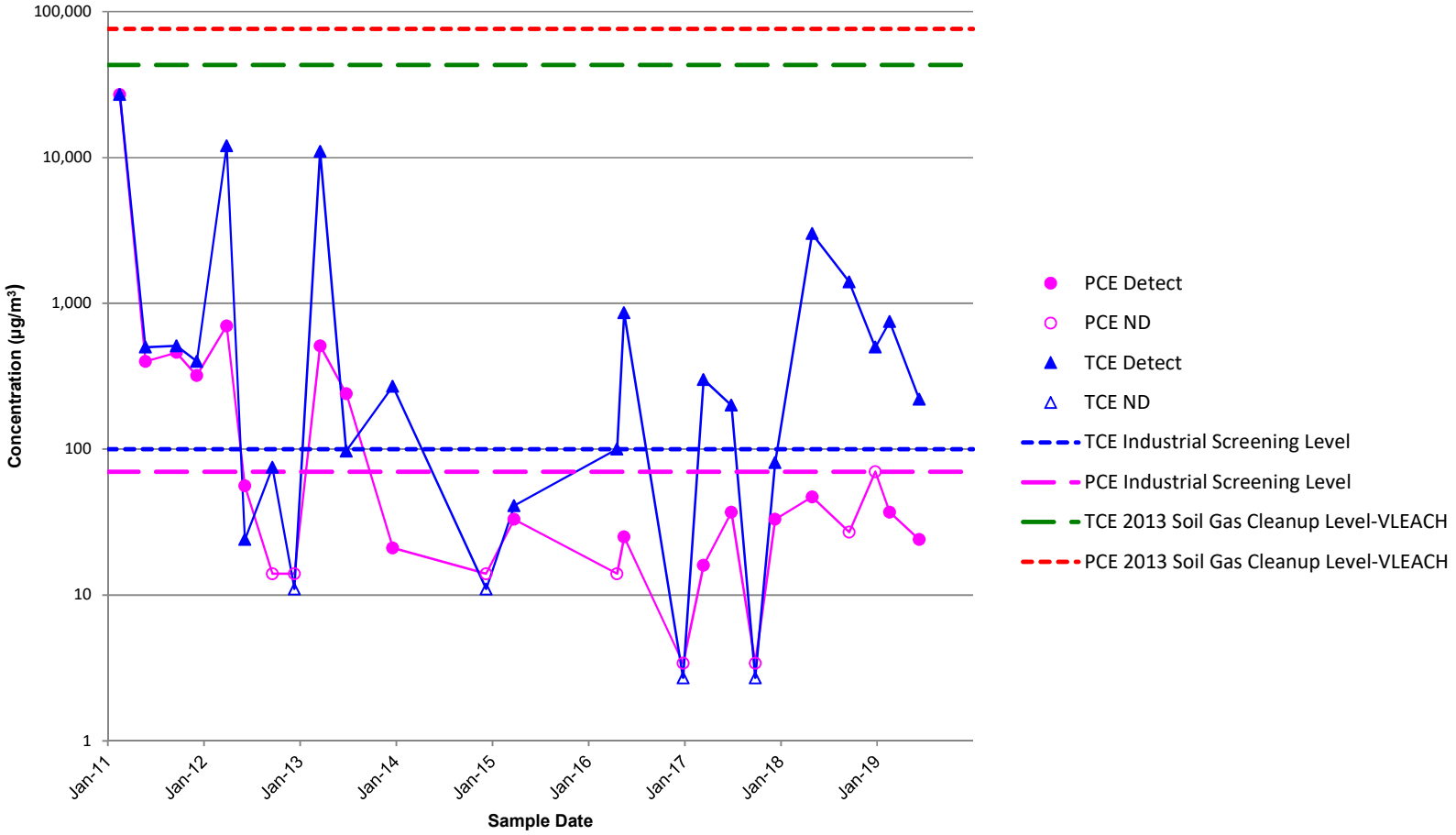
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-9C

August 2019 **Figure H-17**



EXPLANATION

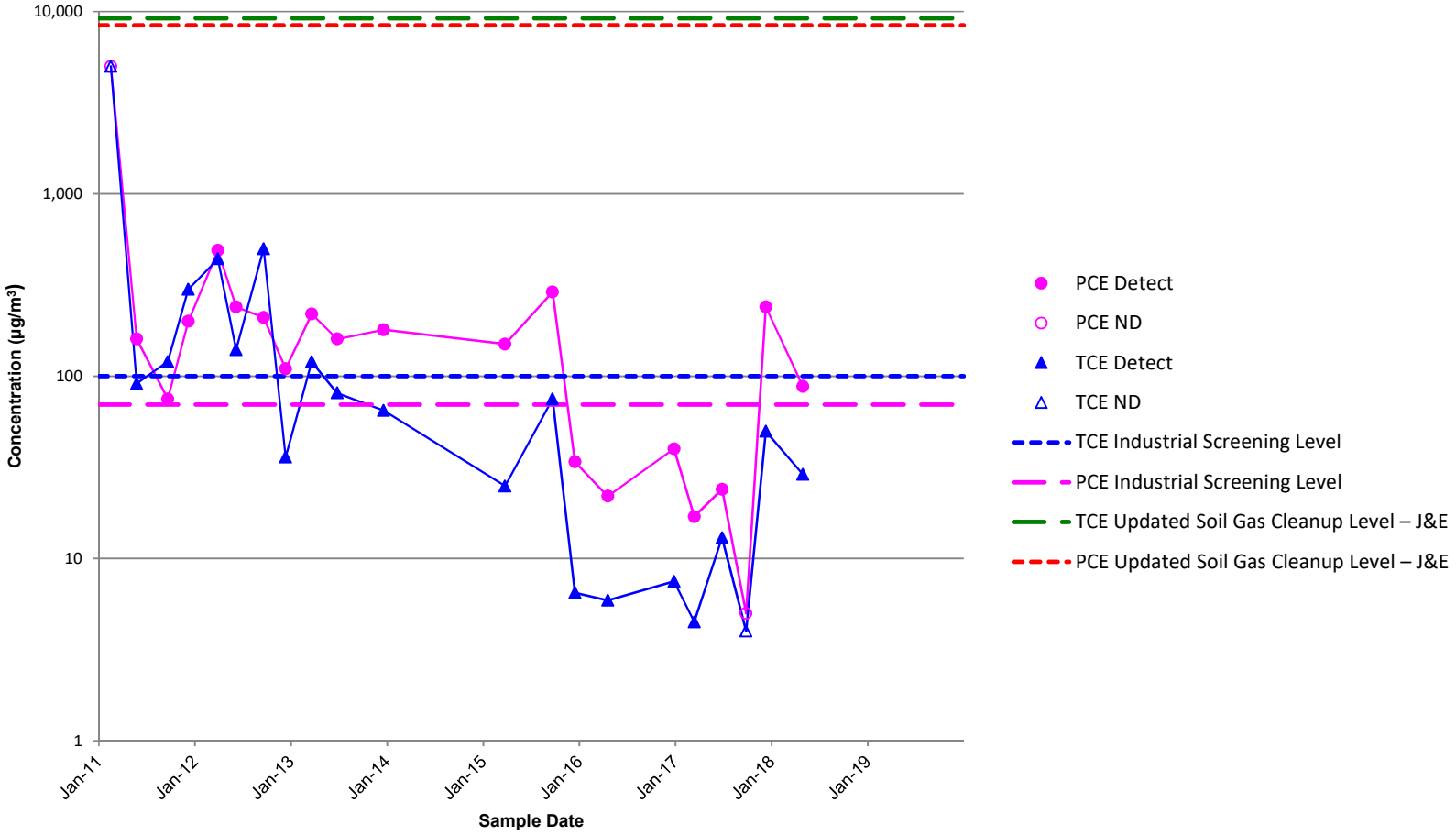
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-9D

August 2019 **Figure H-18**



EXPLANATION

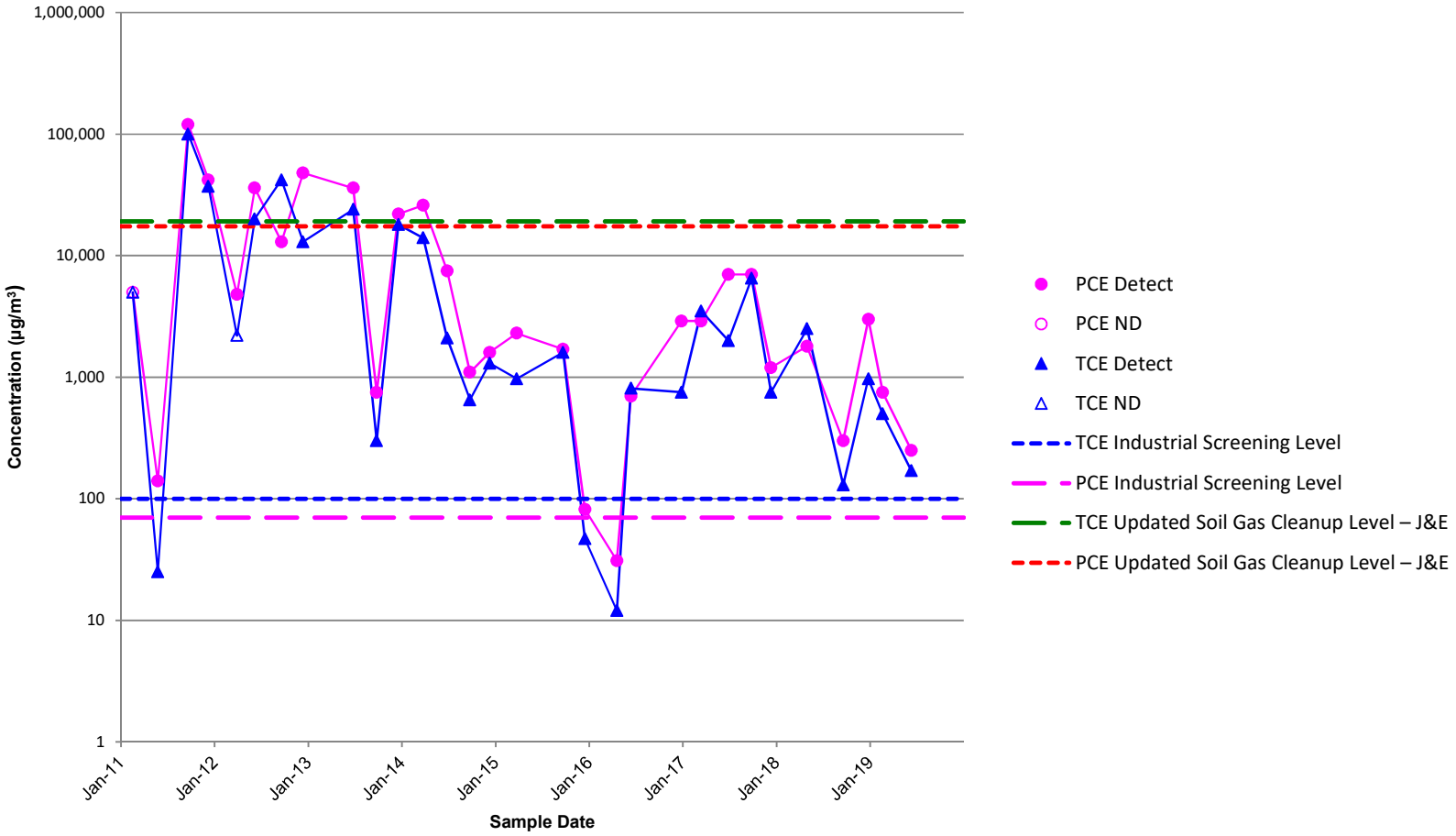
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-10A

August 2019 **Figure H-19**



EXPLANATION

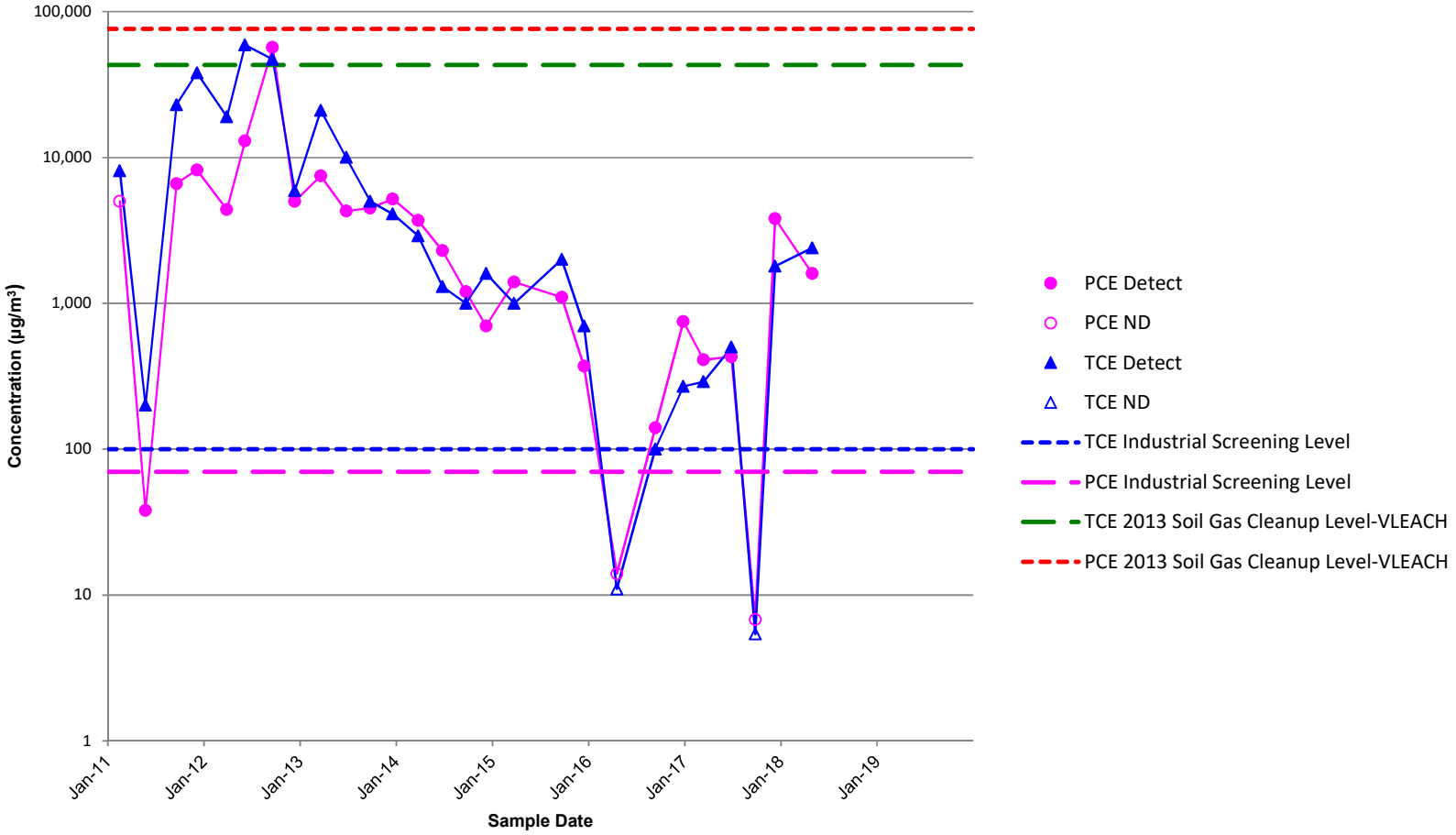
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-10B

August 2019 **Figure H-20**



EXPLANATION

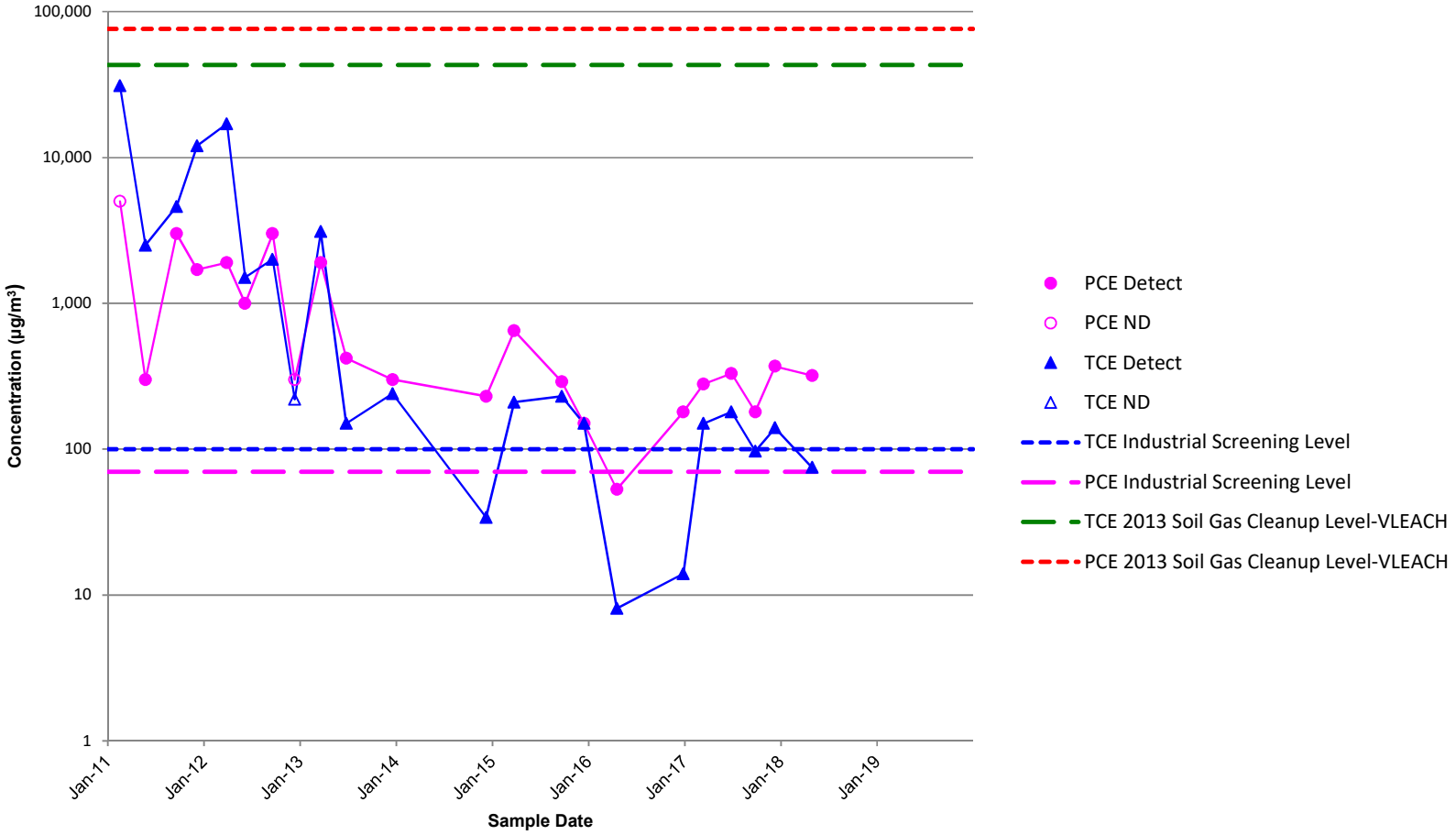
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-10C

August 2019 **Figure H-21**



EXPLANATION

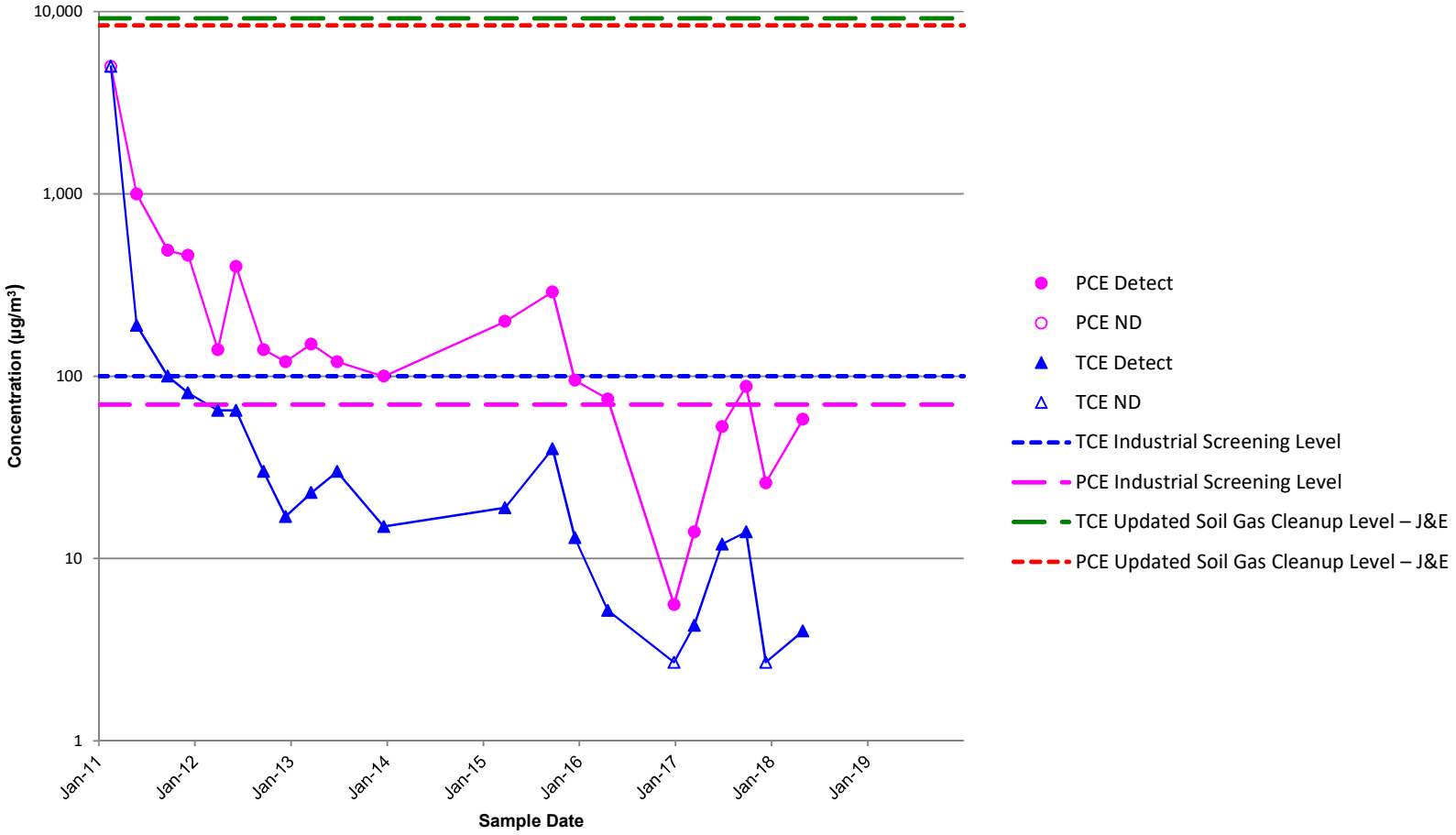
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-10D

August 2019 **Figure H-22**



EXPLANATION

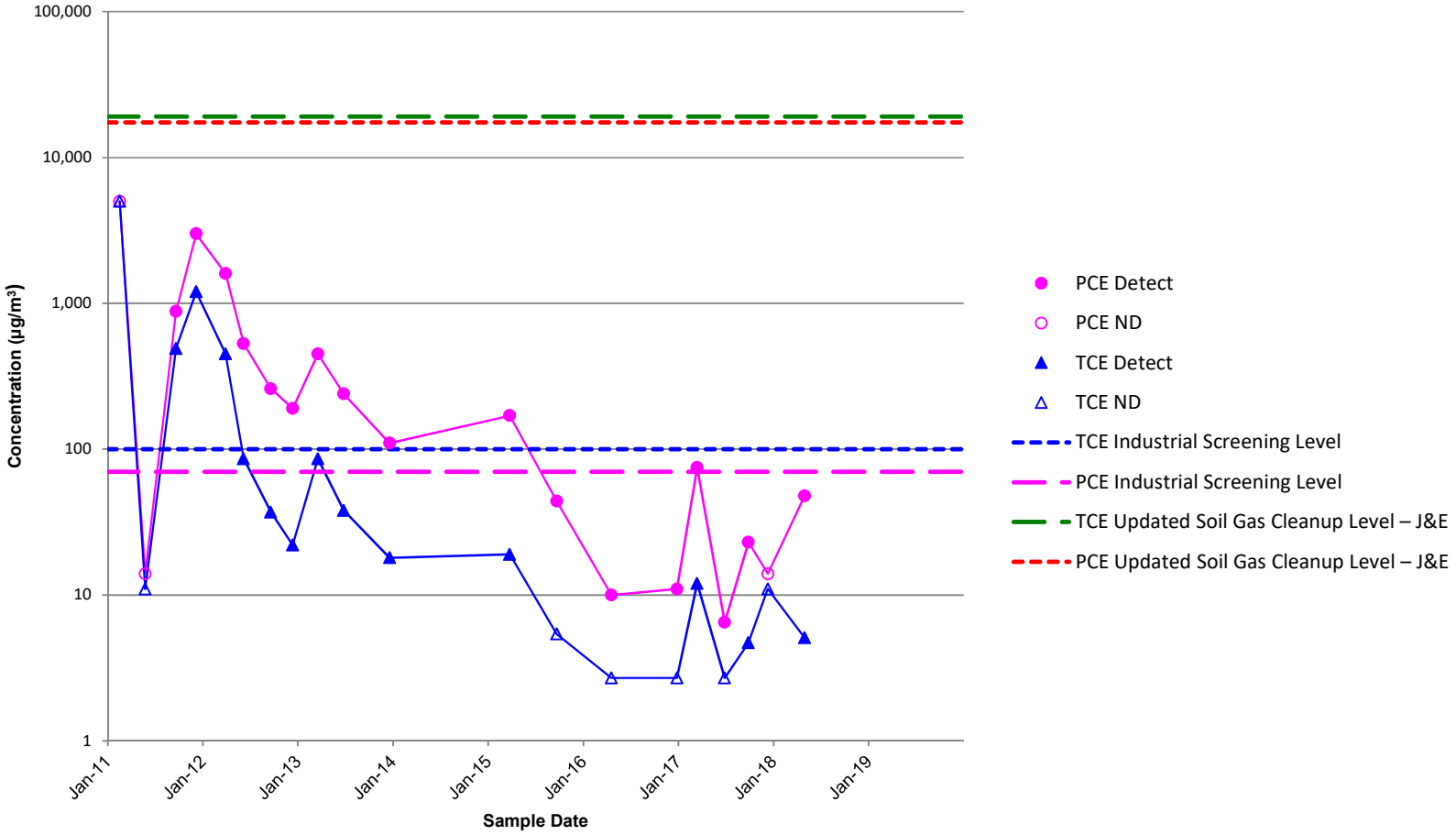
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-11A

August 2019 **Figure H-23**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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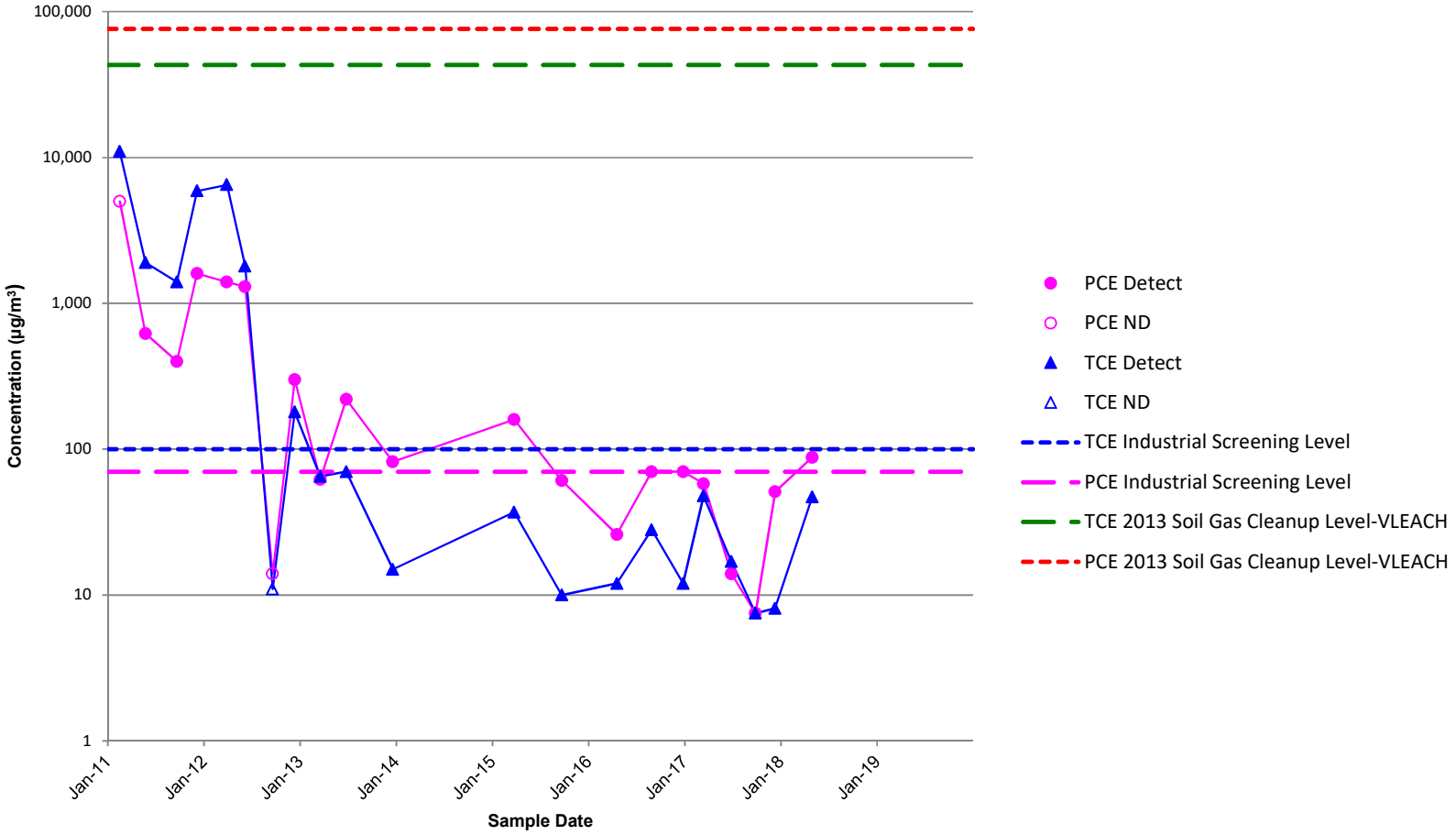
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-11B

August 2019 **Figure H-24**



EXPLANATION

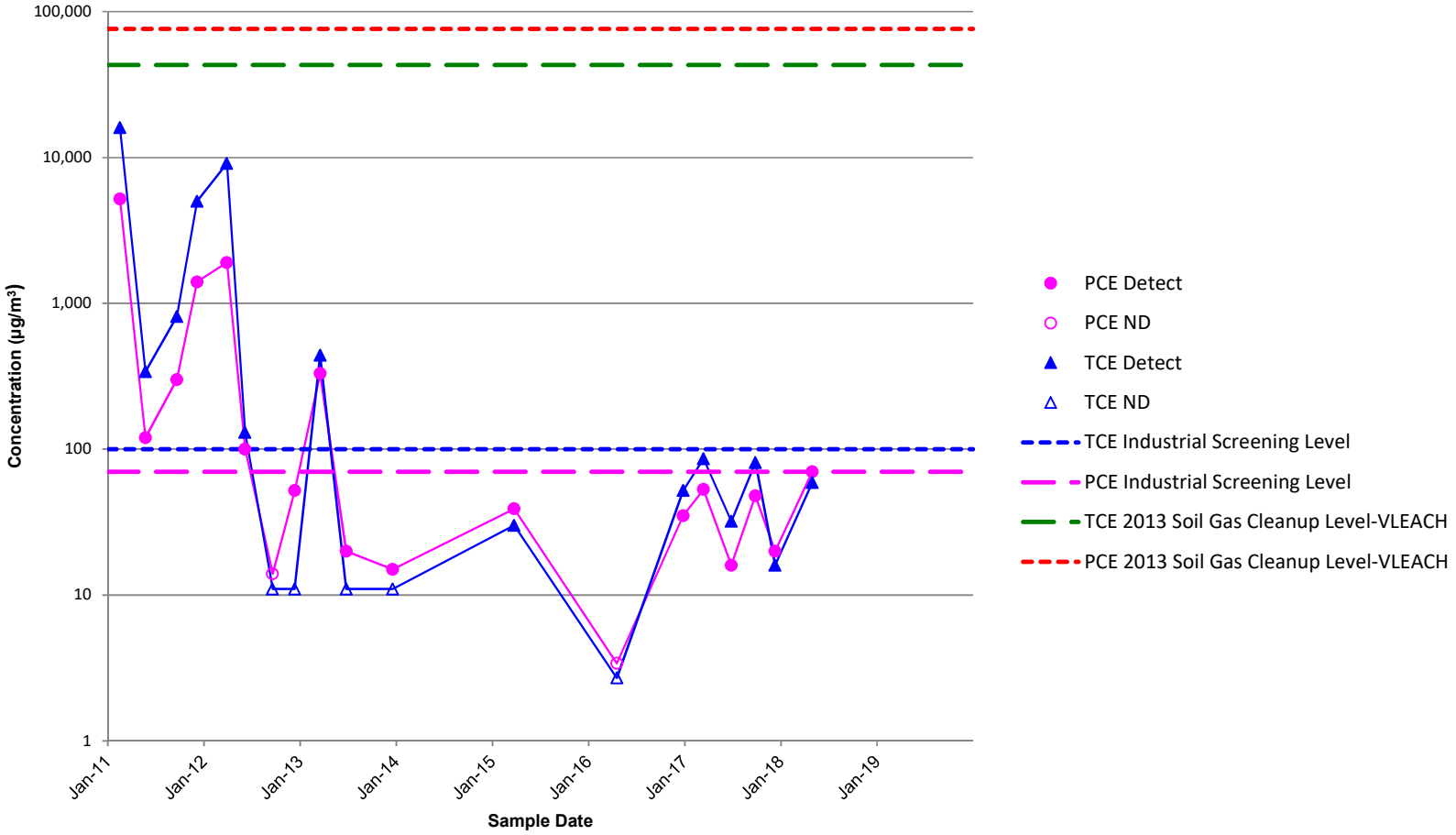
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-11C

August 2019 **Figure H-25**



EXPLANATION

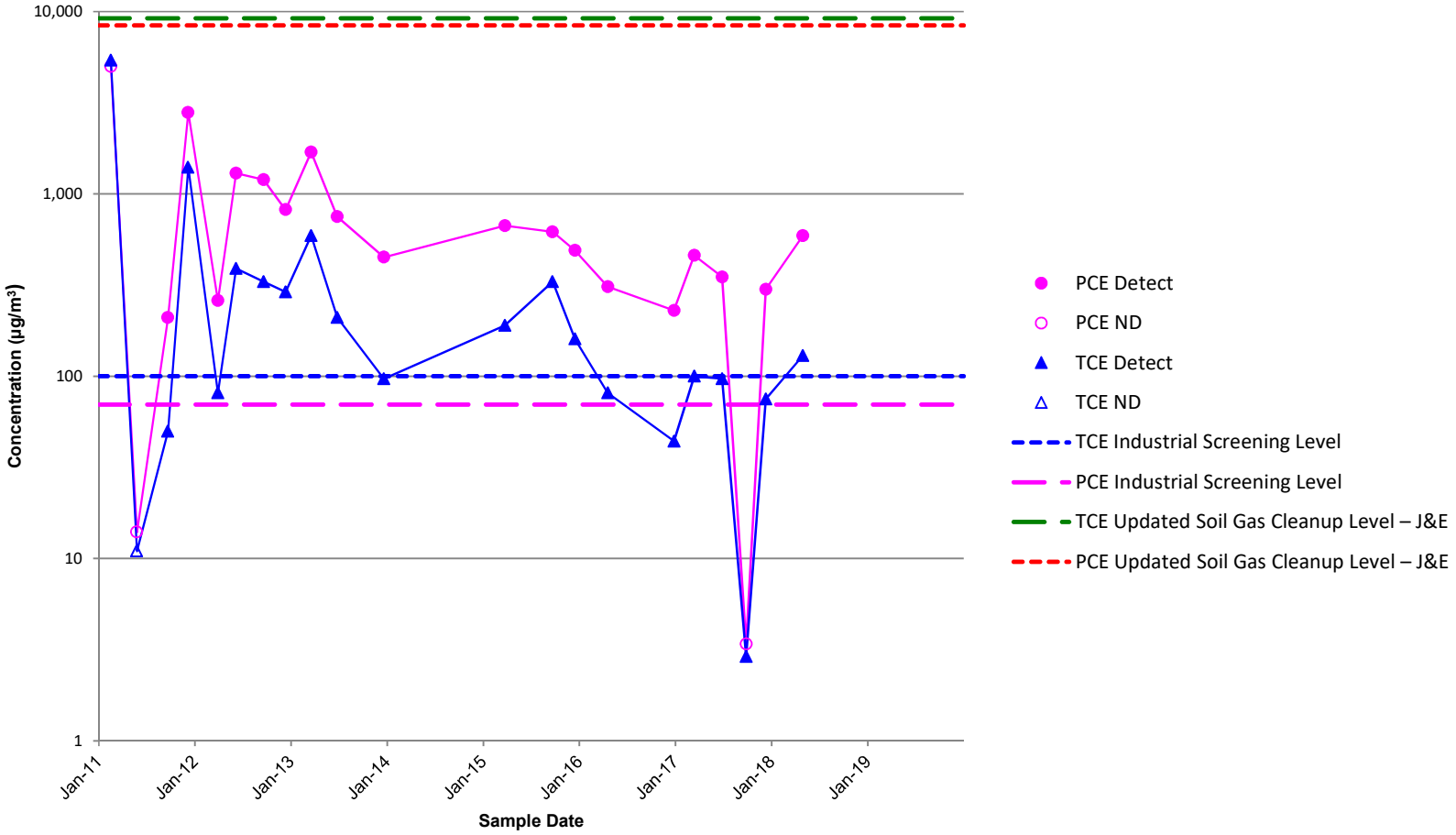
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-11D

August 2019 **Figure H-26**



EXPLANATION

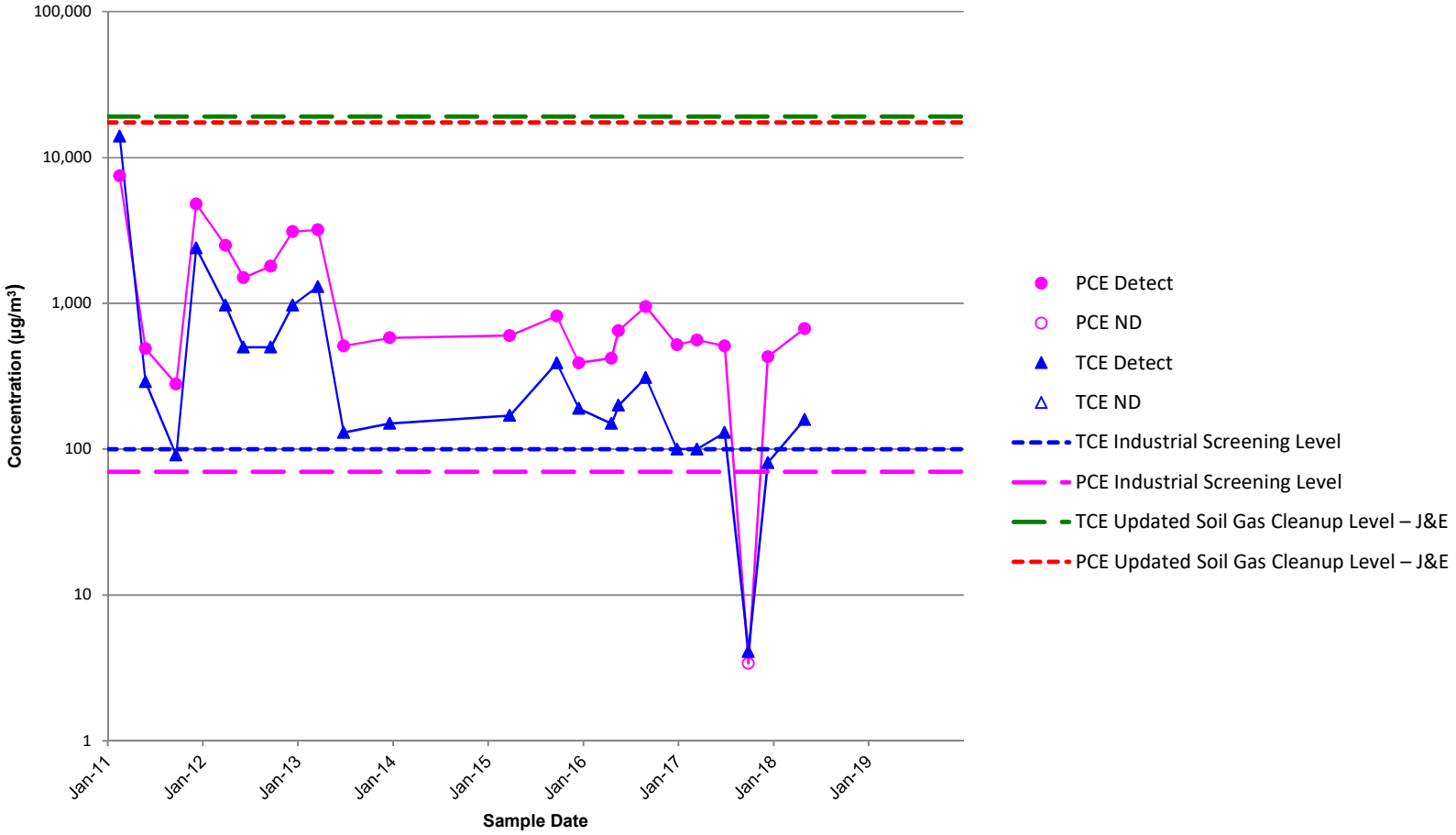
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-12A

August 2019 **Figure H-27**



EXPLANATION

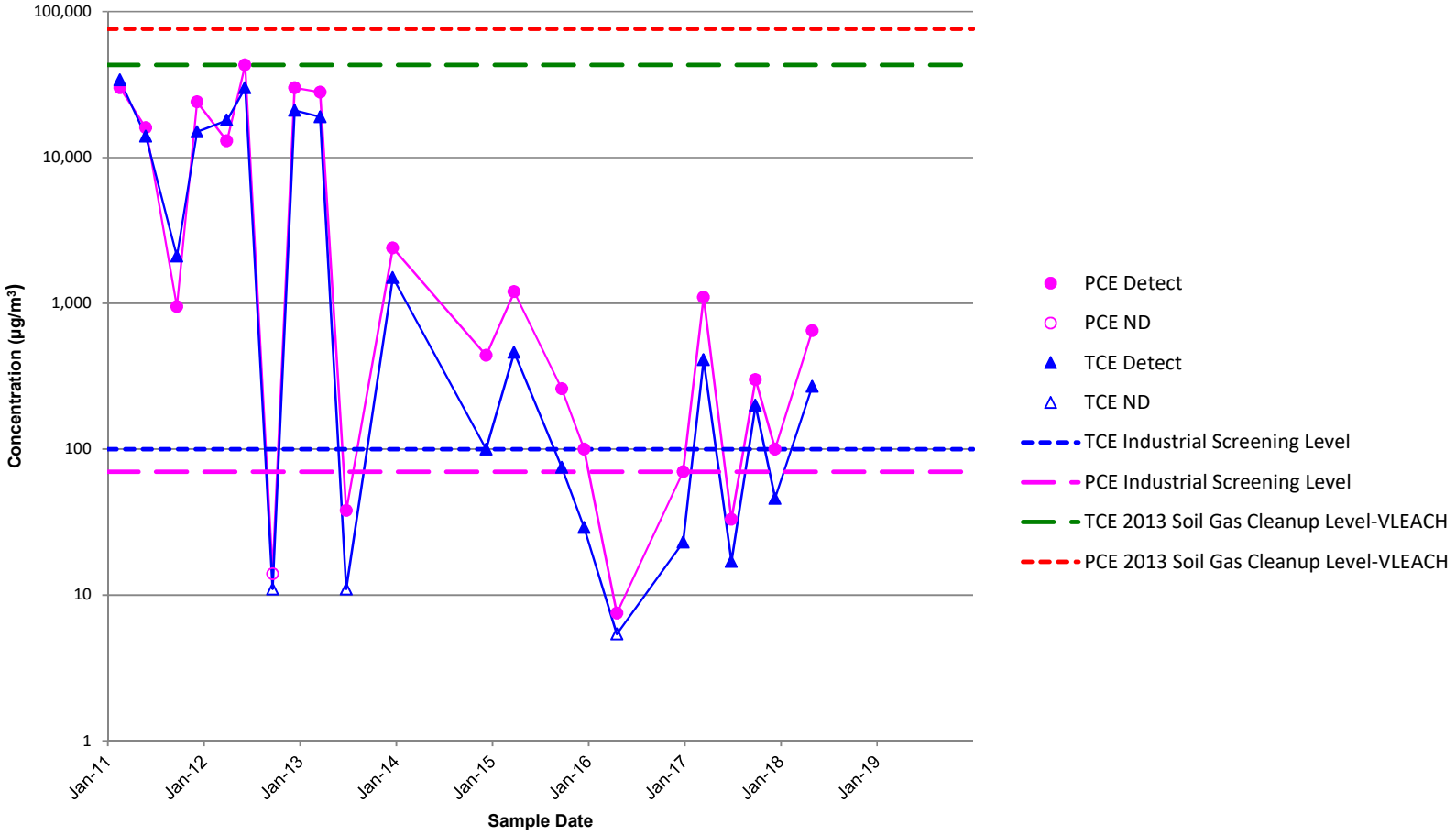
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-12B

August 2019 **Figure H-28**



EXPLANATION

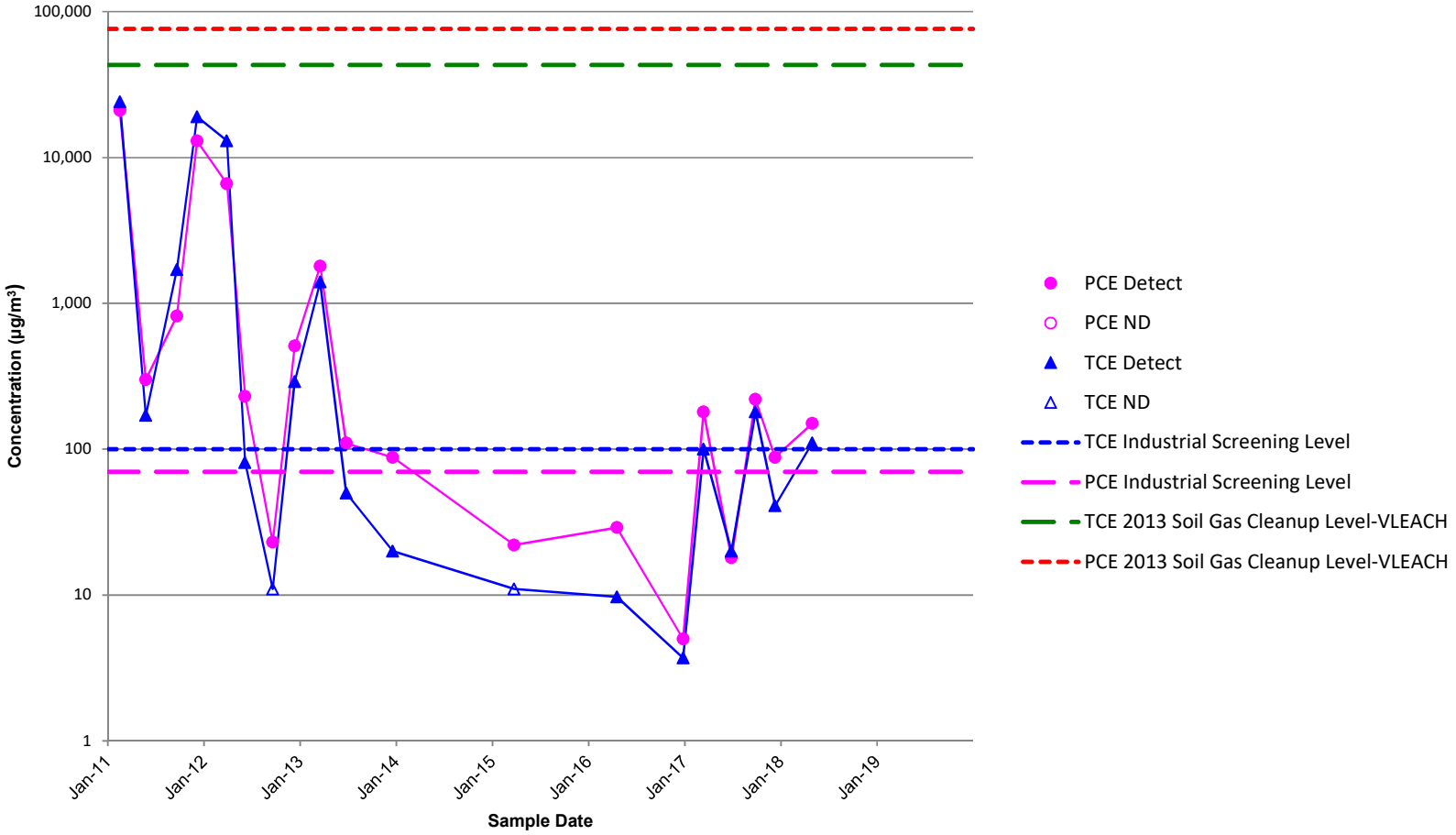
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-12C

August 2019 **Figure H-29**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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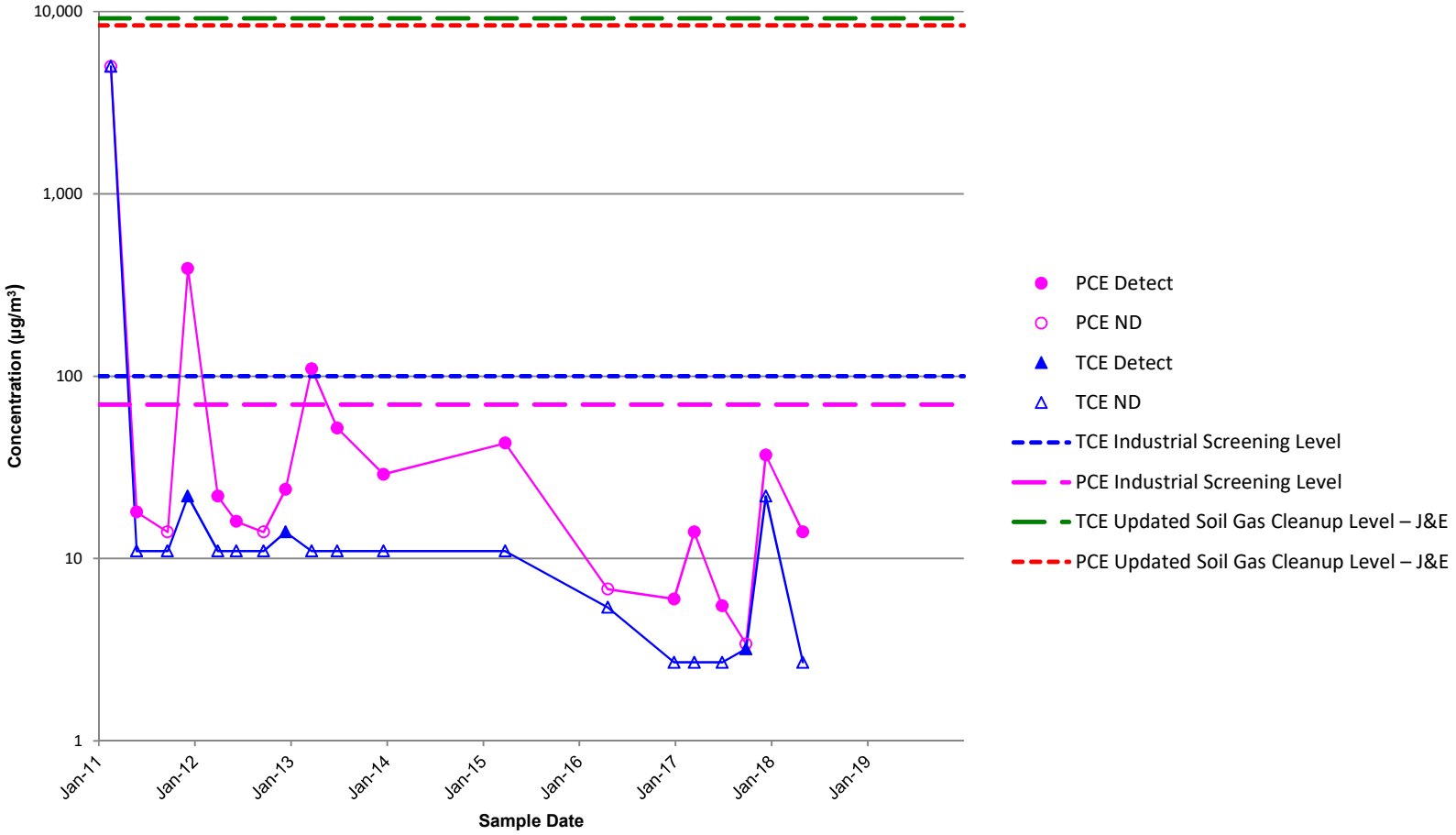
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-12D

August 2019 **Figure H-30**



EXPLANATION

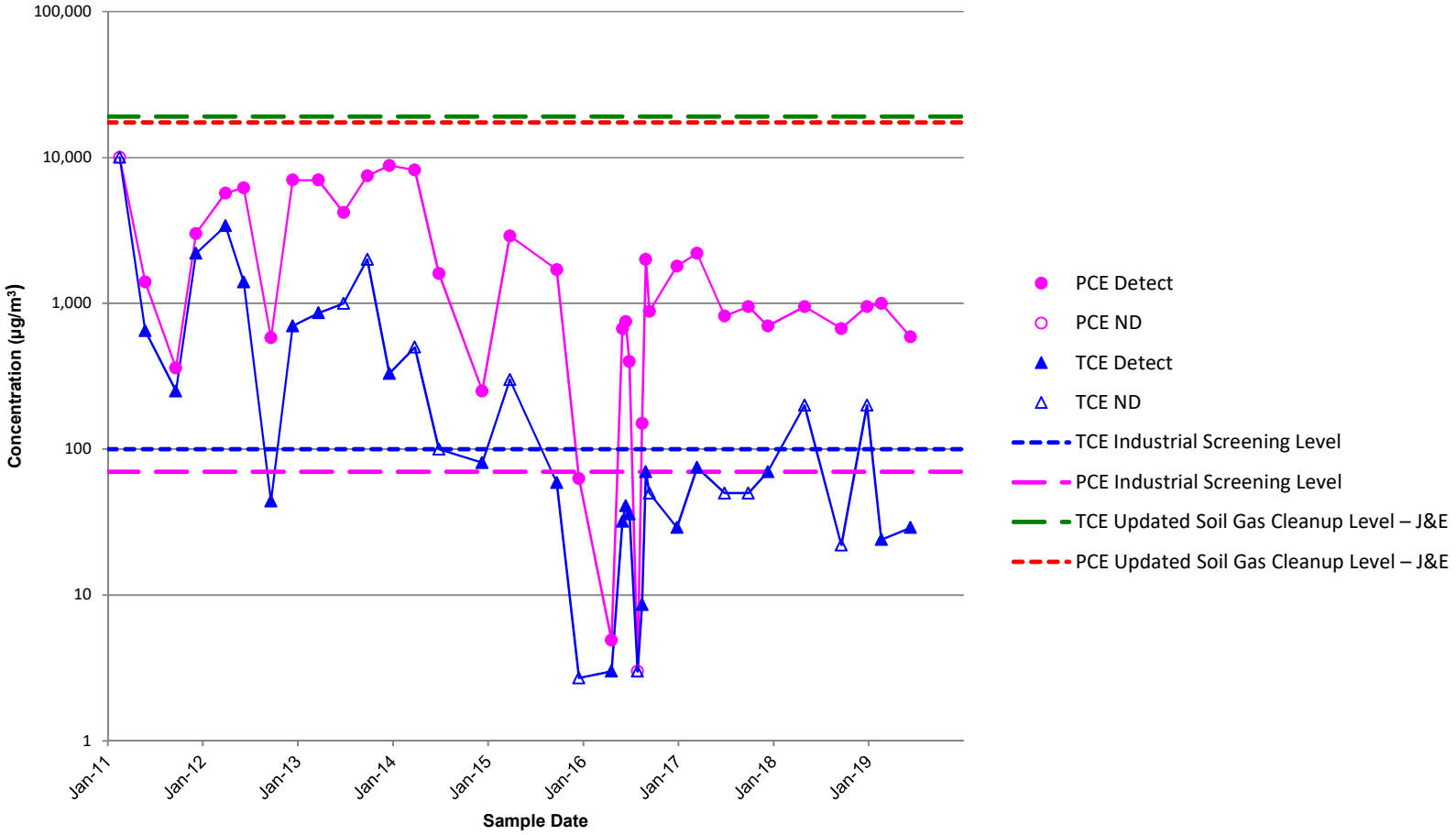
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-13A

August 2019 **Figure H-31**



EXPLANATION

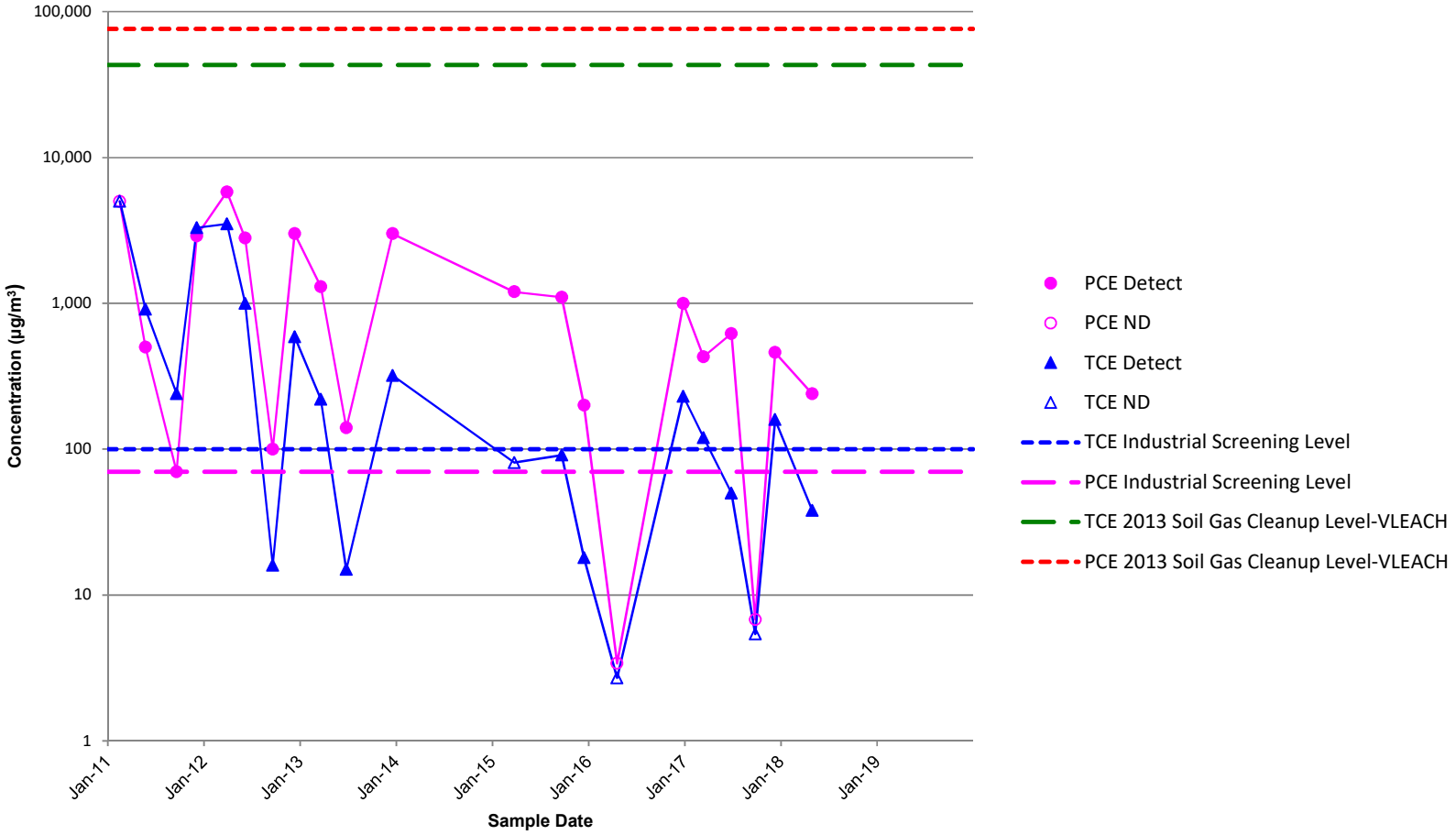
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-13B

August 2019 **Figure H-32**



EXPLANATION

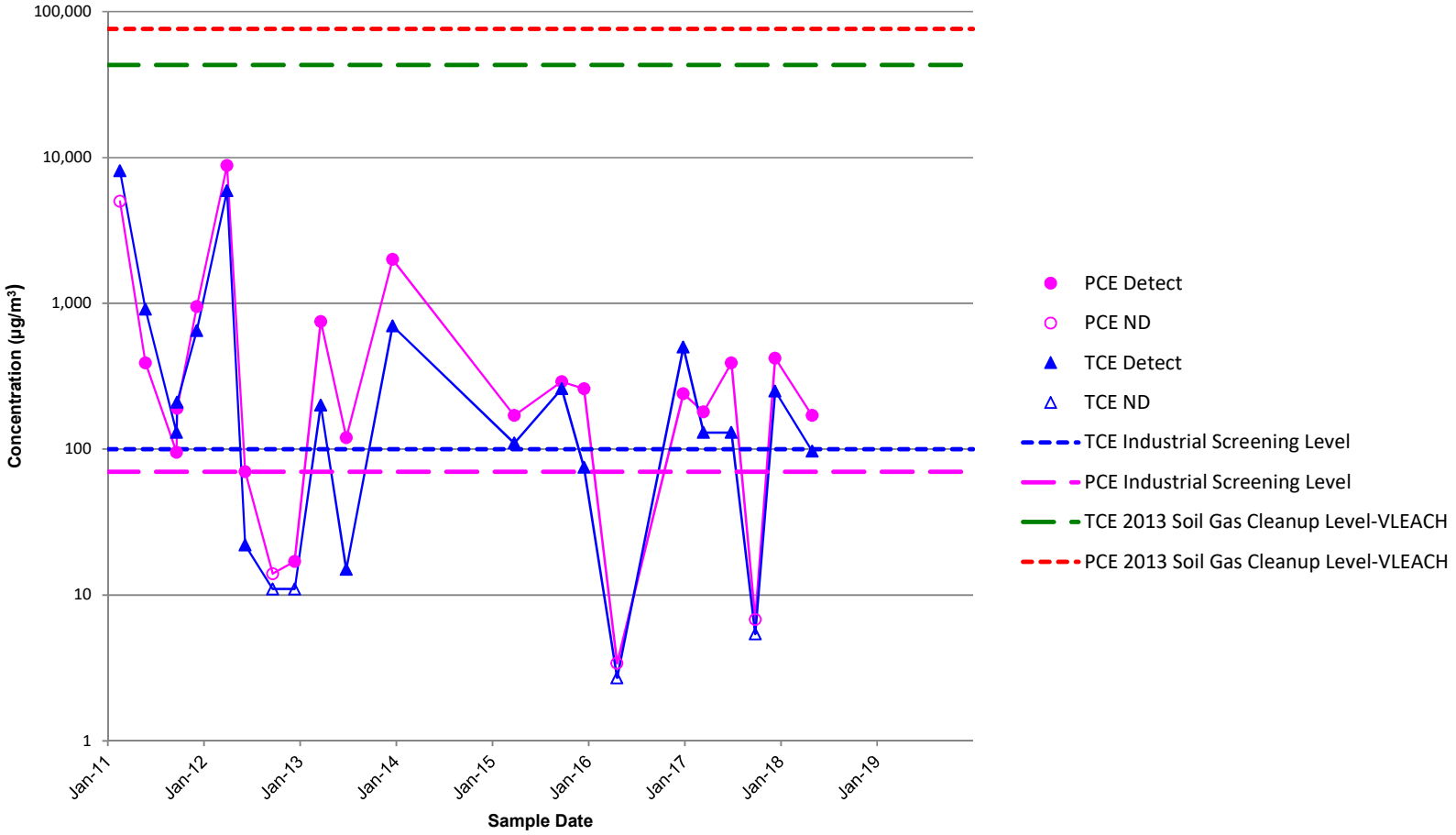
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-13C

August 2019 **Figure H-33**



EXPLANATION

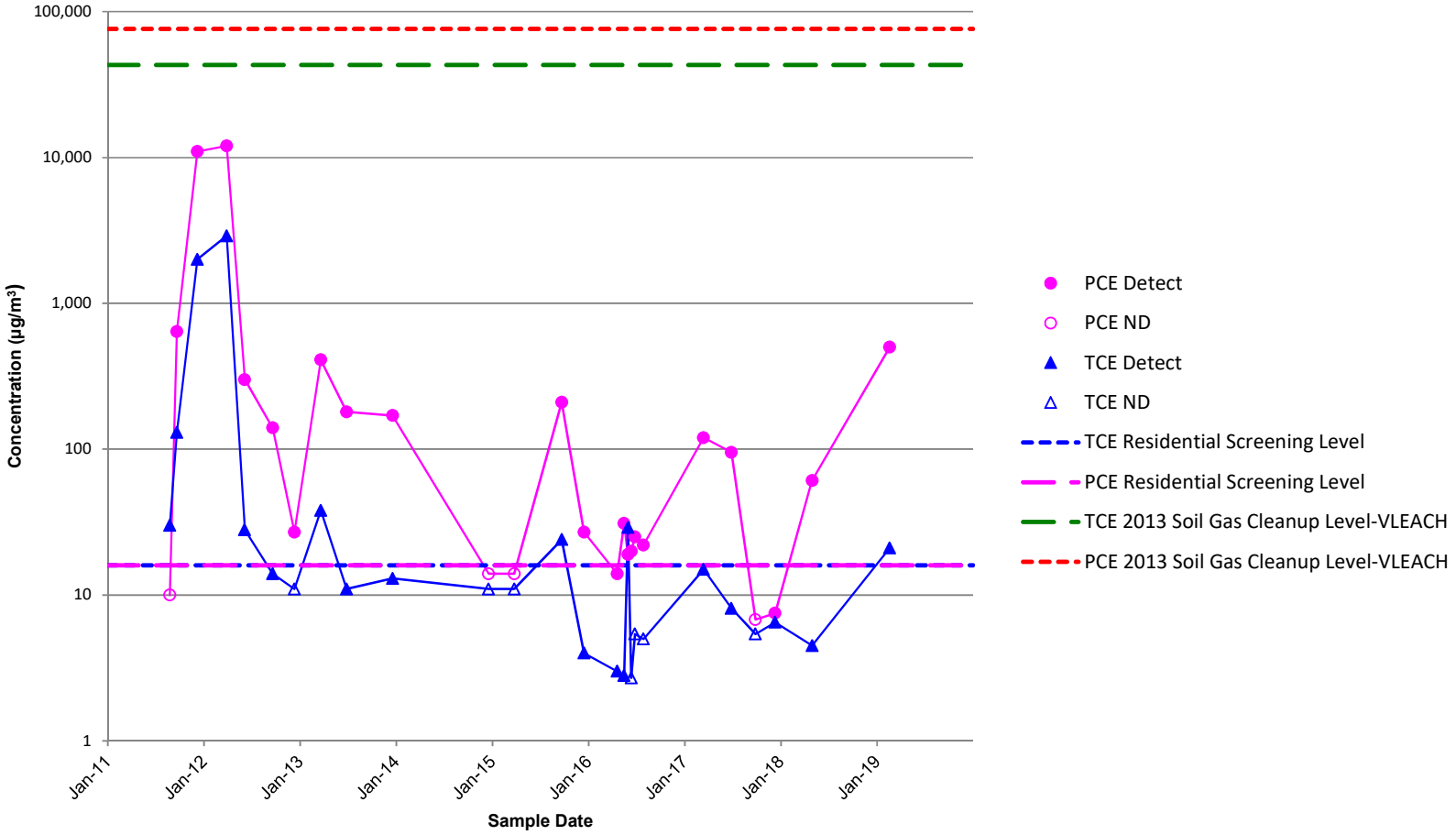
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-13D

August 2019 **Figure H-34**



EXPLANATION

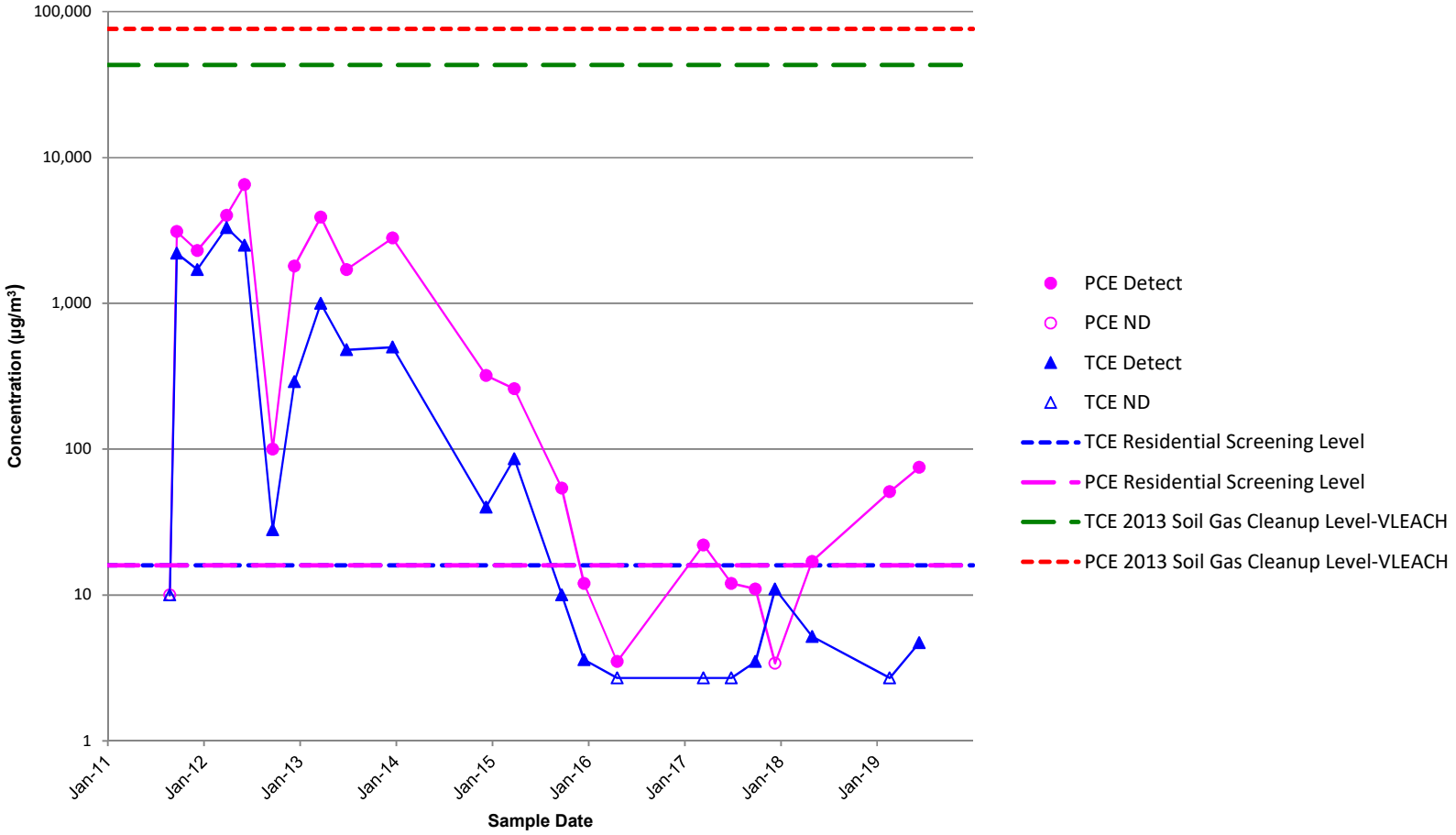
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-14A

August 2019 **Figure H-35**



EXPLANATION

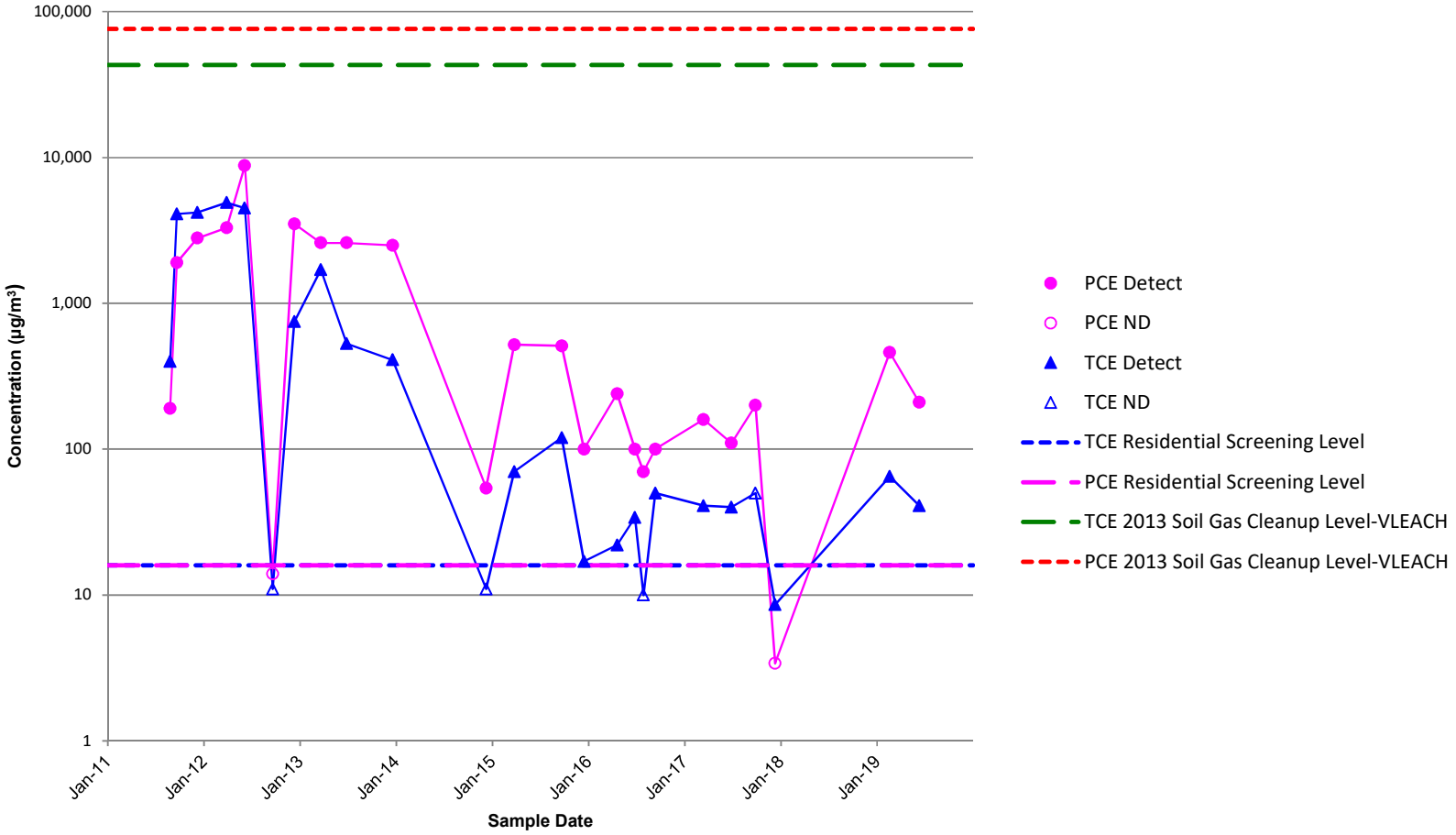
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-14B

August 2019 **Figure H-36**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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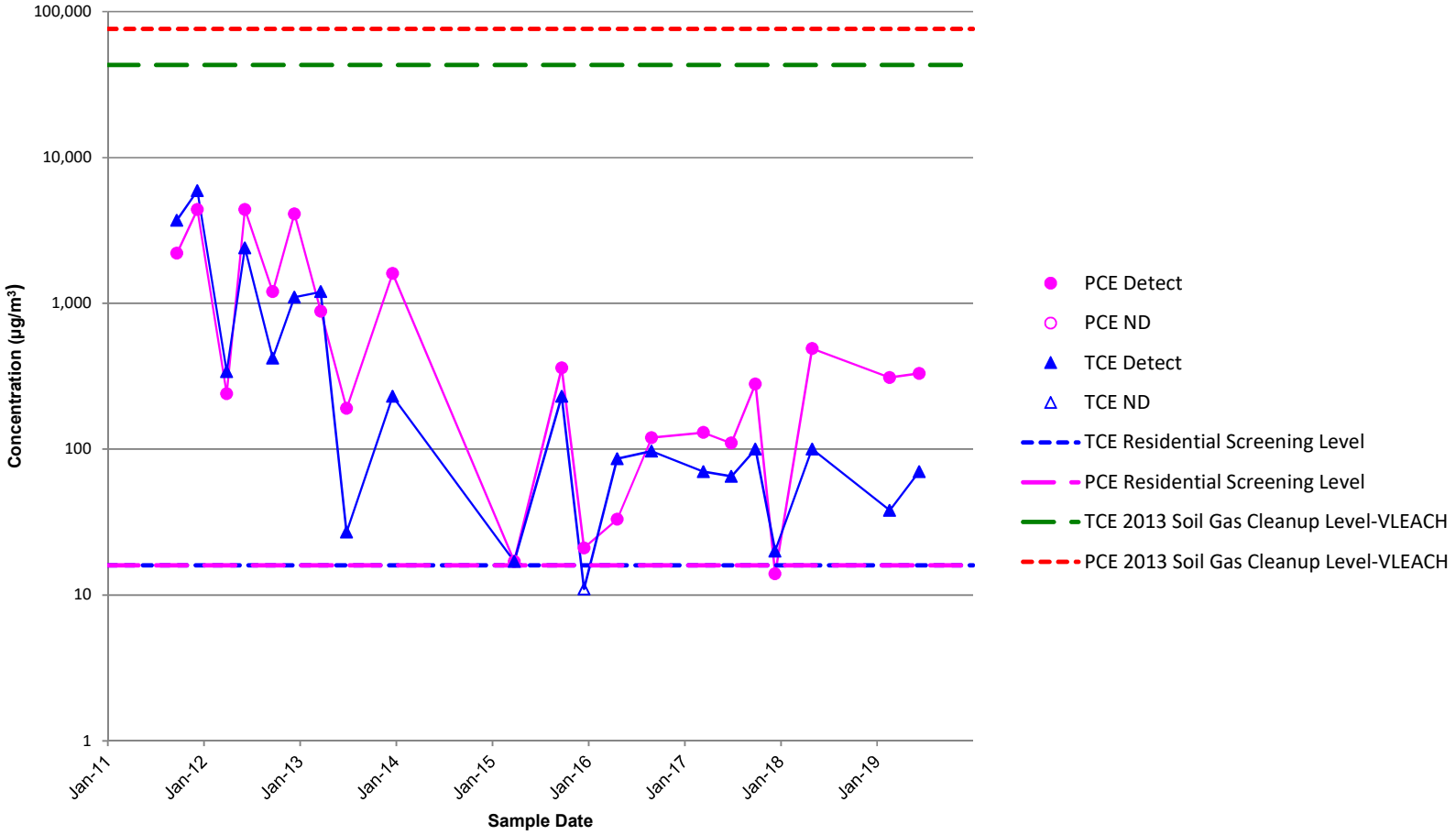
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-14C

August 2019 **Figure H-37**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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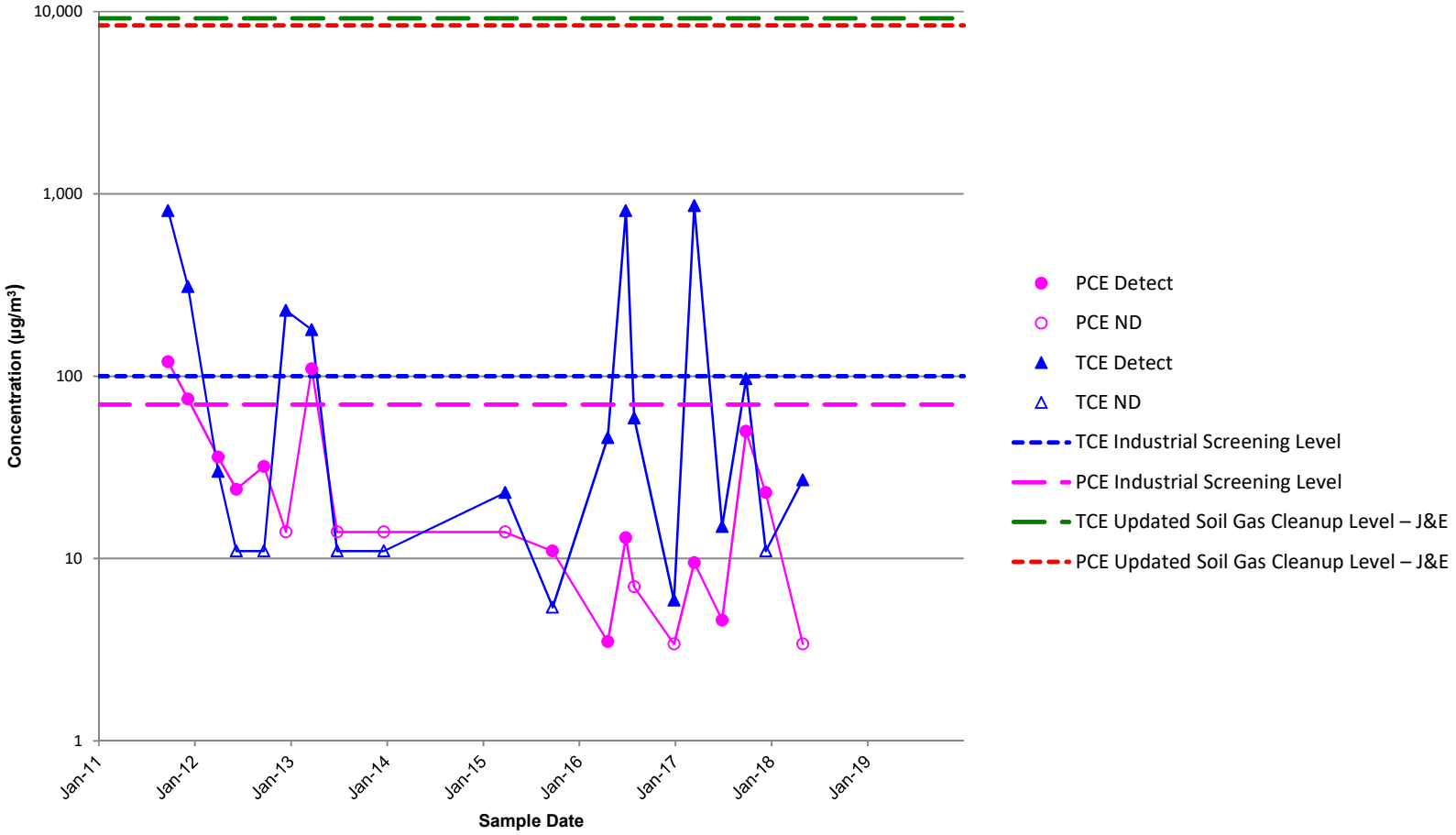
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-14D

August 2019 **Figure H-38**



EXPLANATION

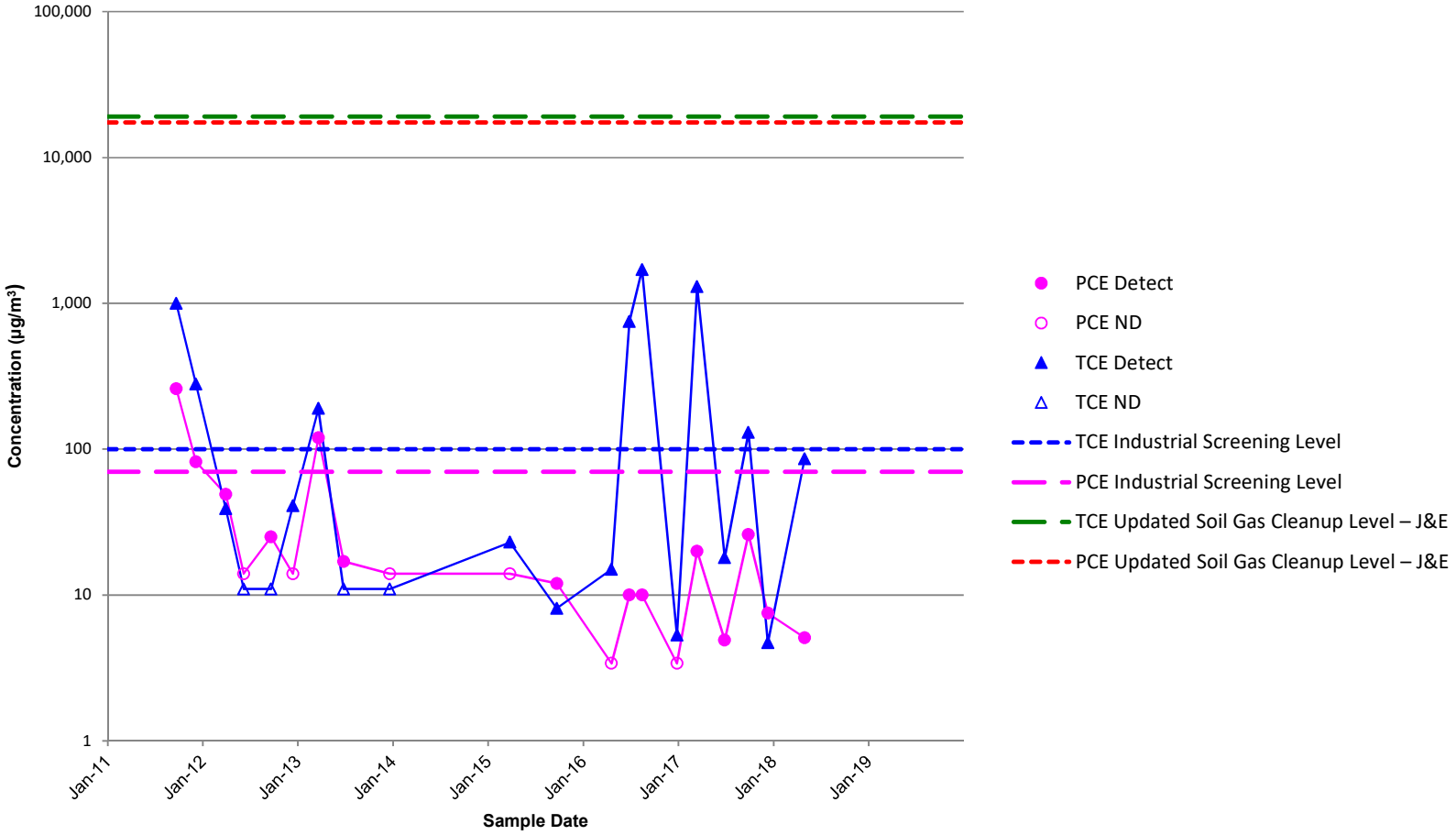
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-15A

August 2019 **Figure H-39**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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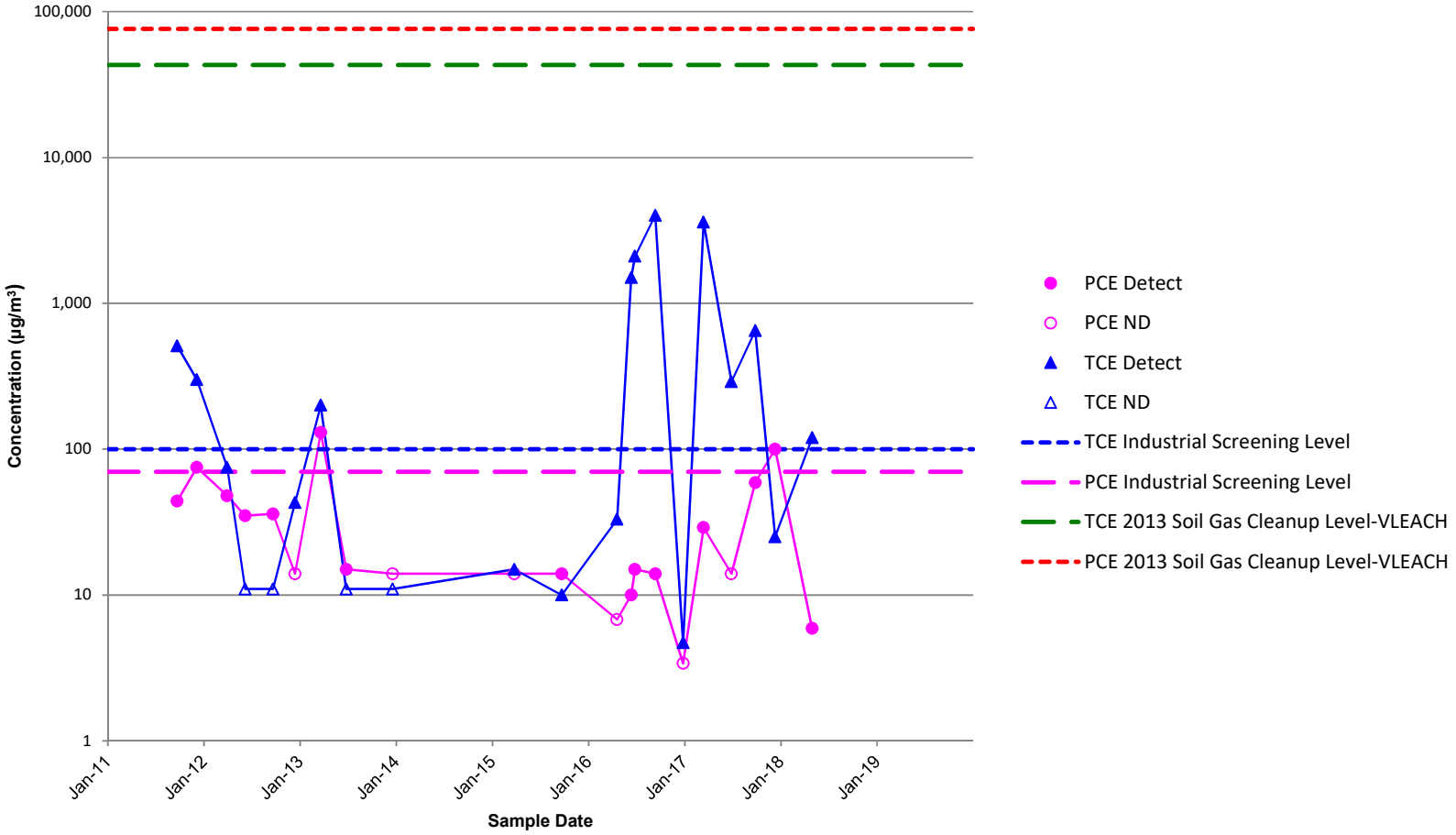
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-15B

August 2019 **Figure H-40**



EXPLANATION

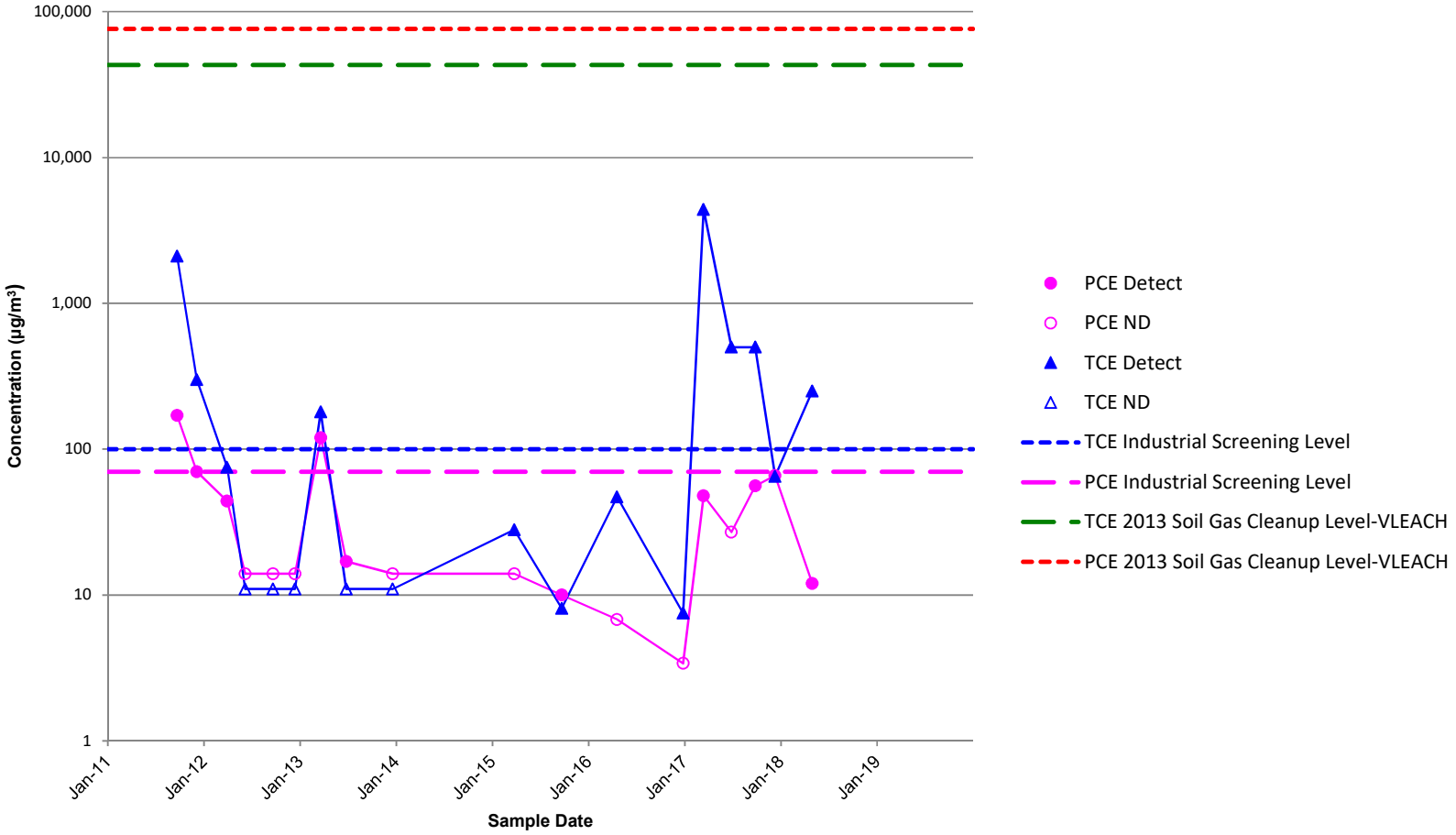
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-15C

August 2019 **Figure H-41**



EXPLANATION

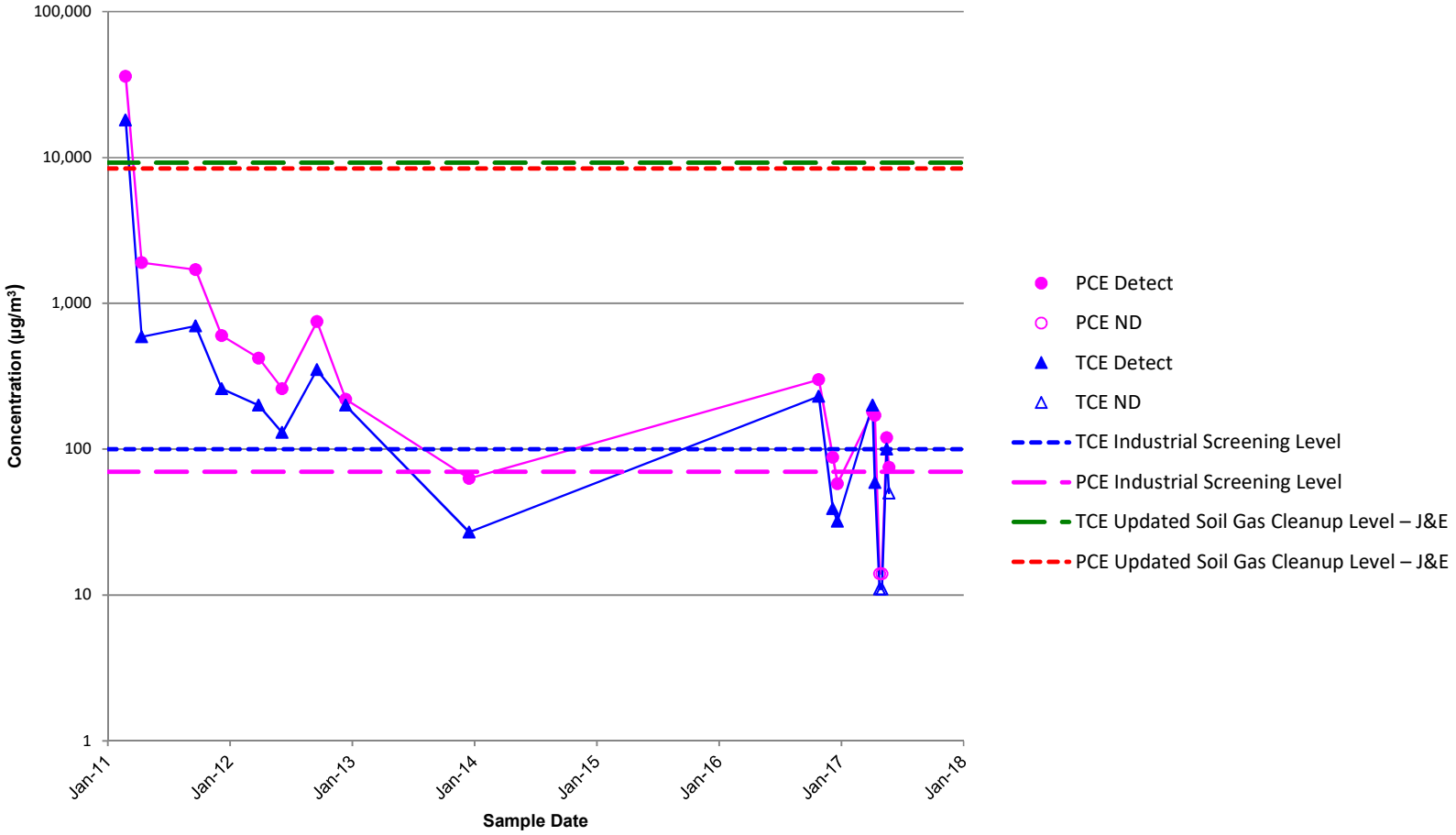
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT VP-15D

August 2019 **Figure H-42**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

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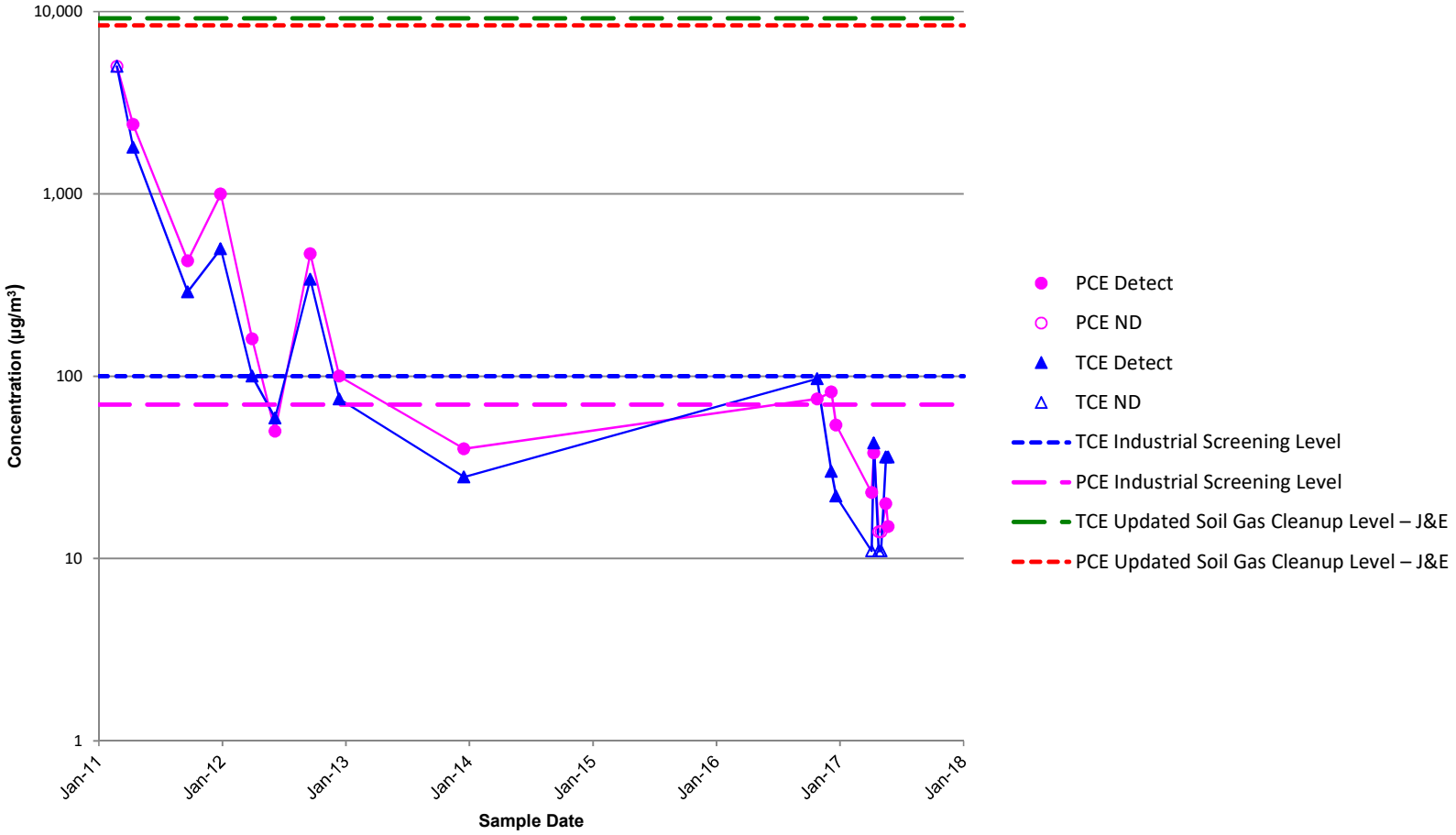
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-3

August 2019 **Figure H-43**



EXPLANATION

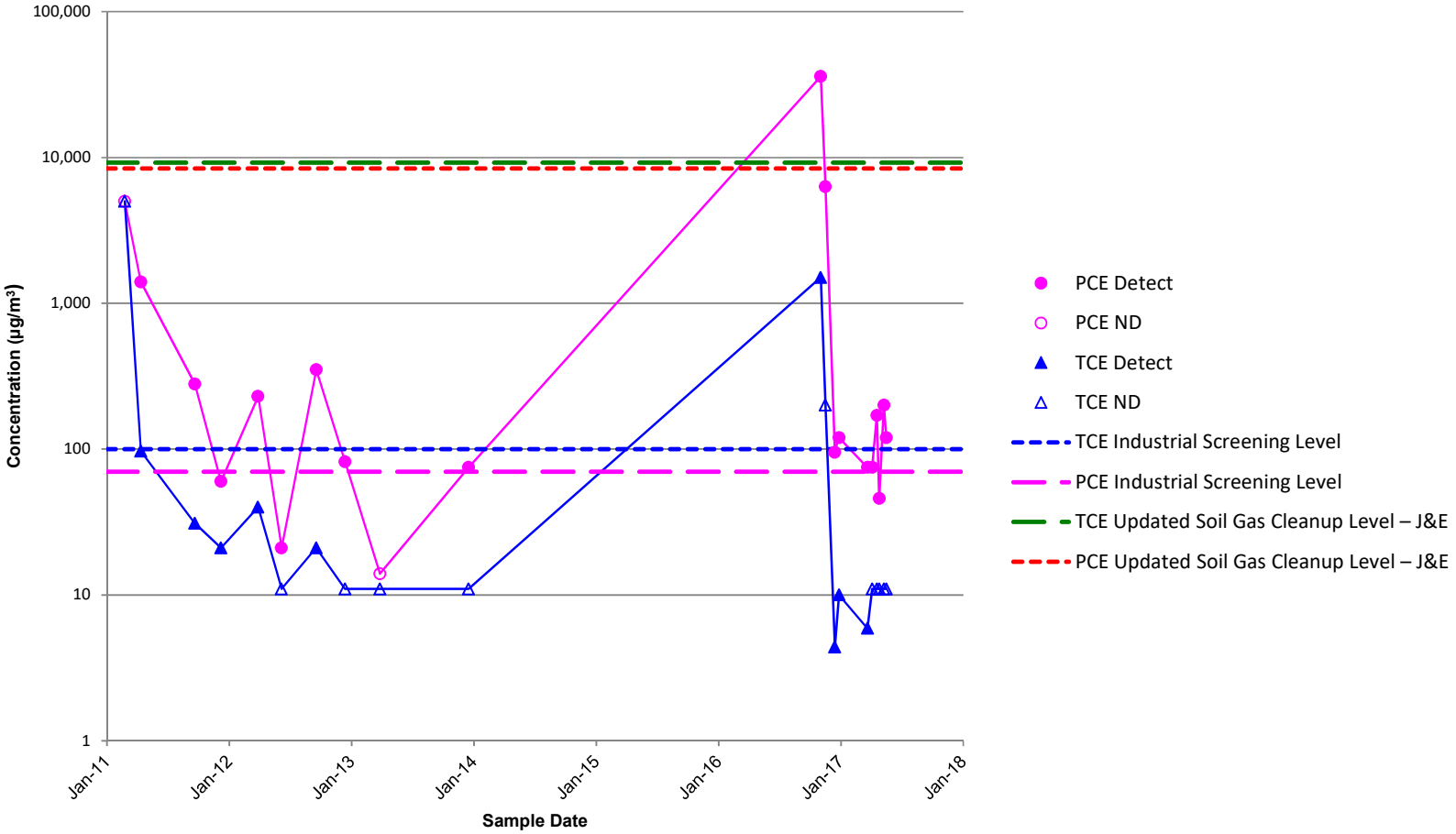
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-4

August 2019 **Figure H-44**



EXPLANATION

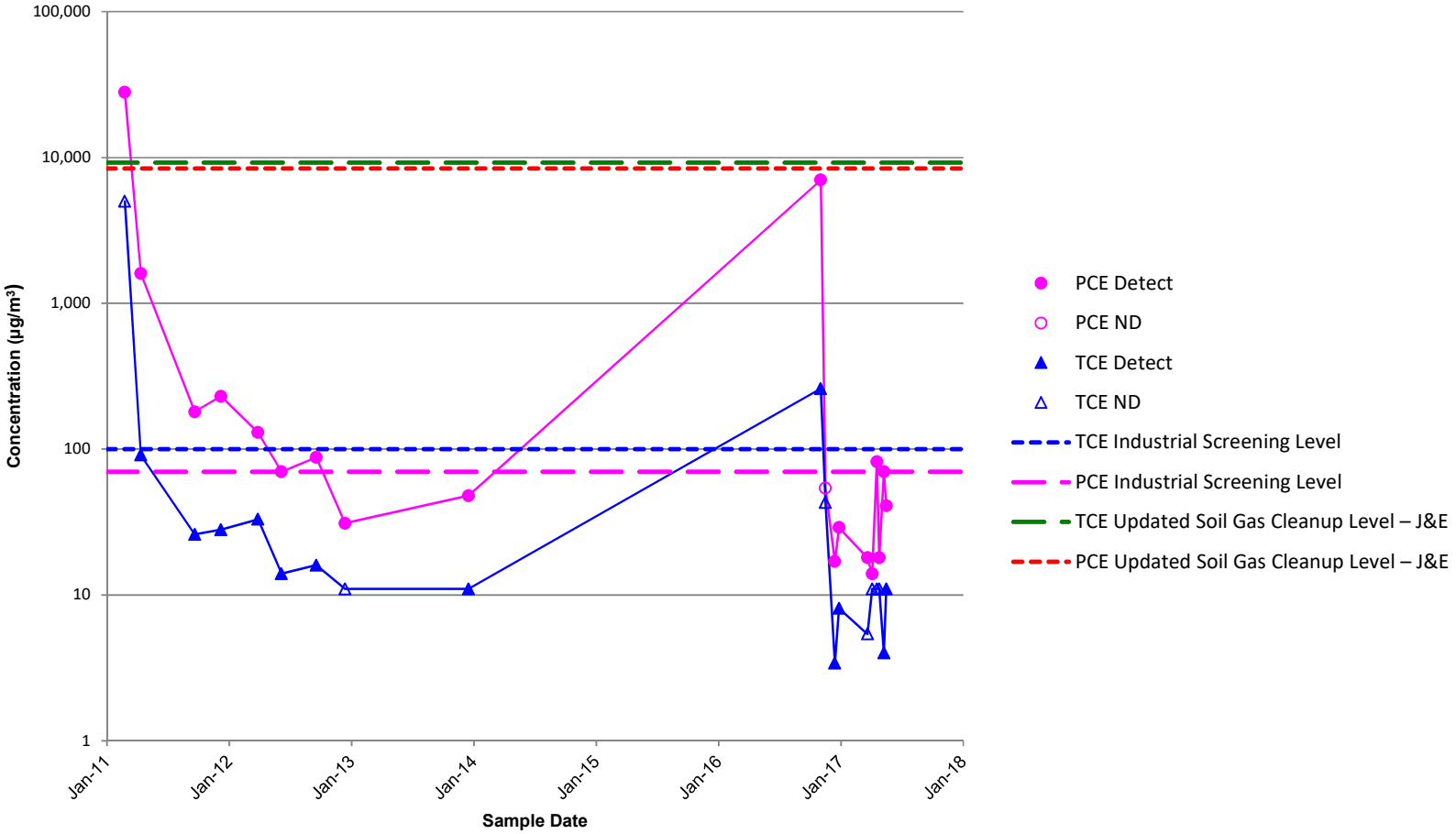
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-5

August 2019 **Figure H-45**



EXPLANATION

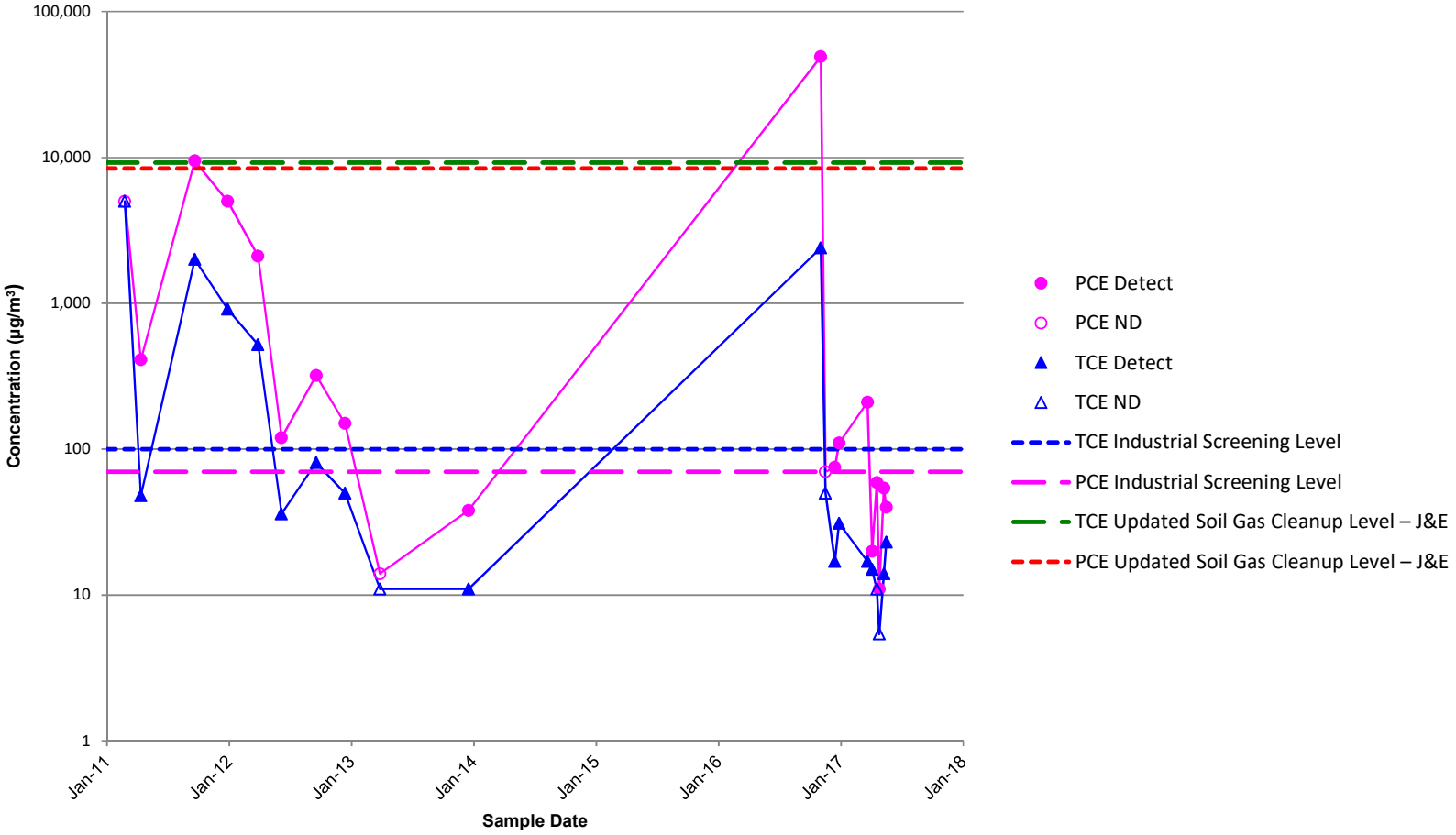
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-6

August 2019 **Figure H-46**



EXPLANATION

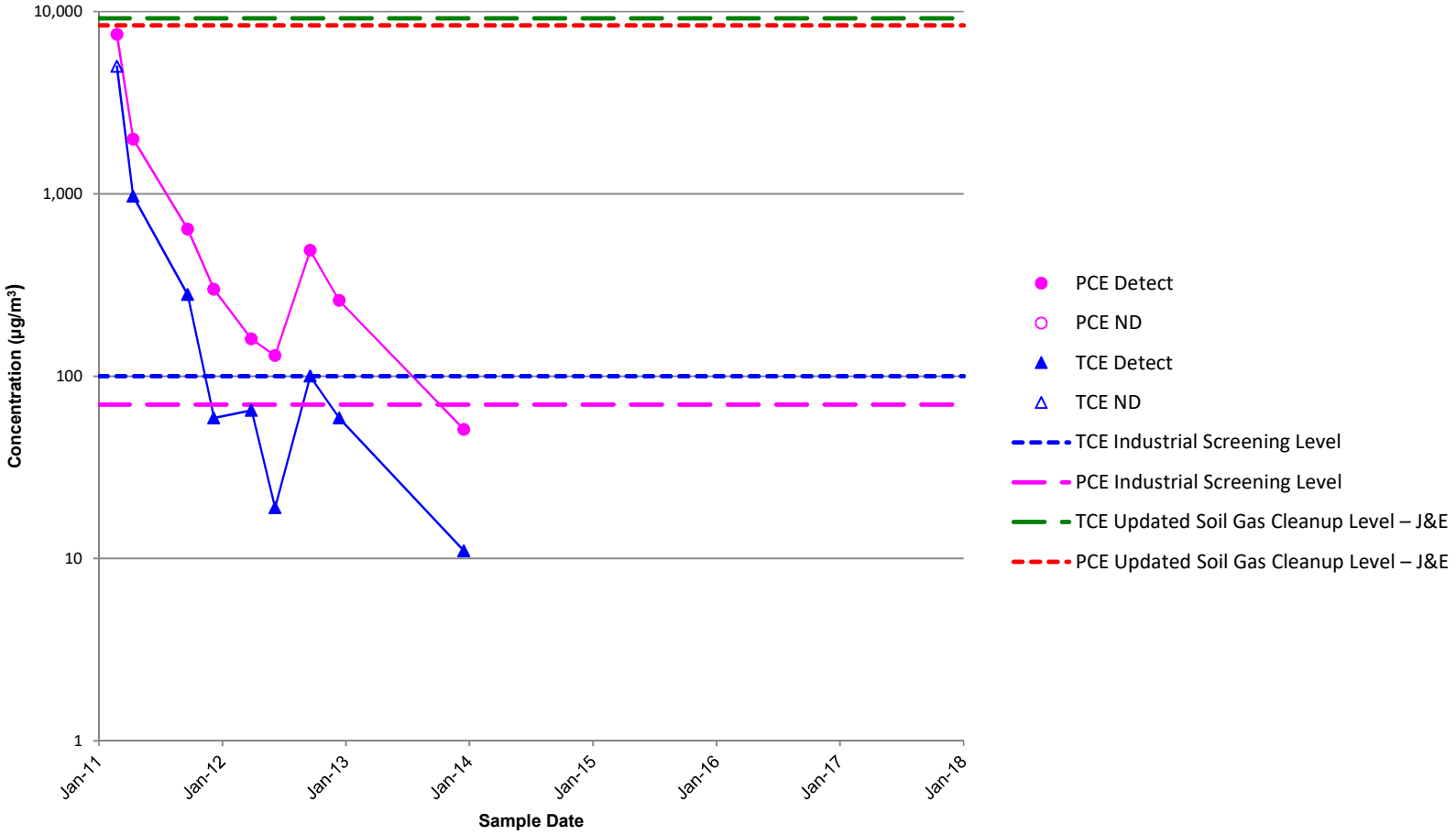
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-7

August 2019 **Figure H-47**



EXPLANATION

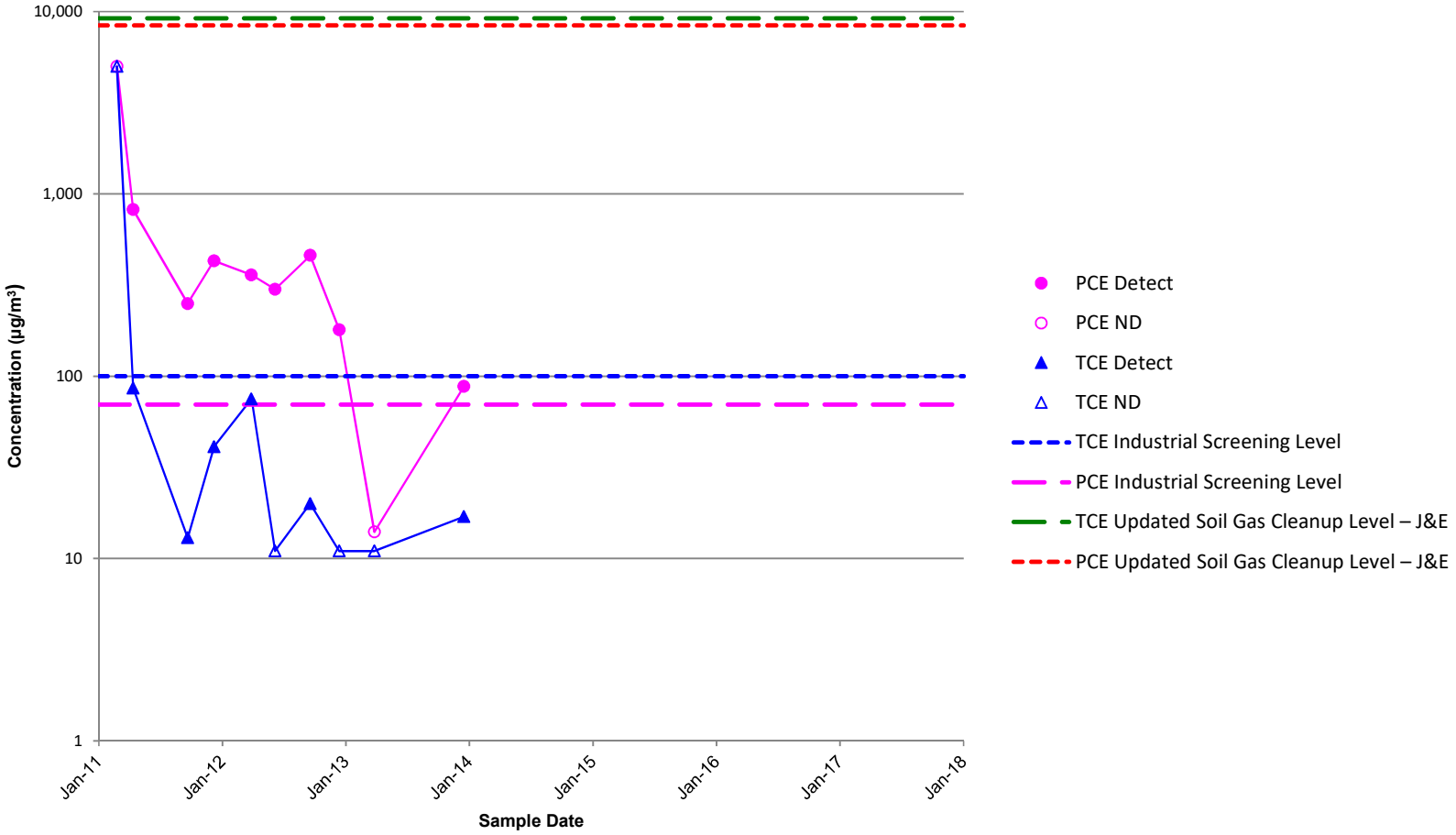
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-8

August 2019 **Figure H-48**



EXPLANATION

µg/m^3 = micrograms per cubic meter
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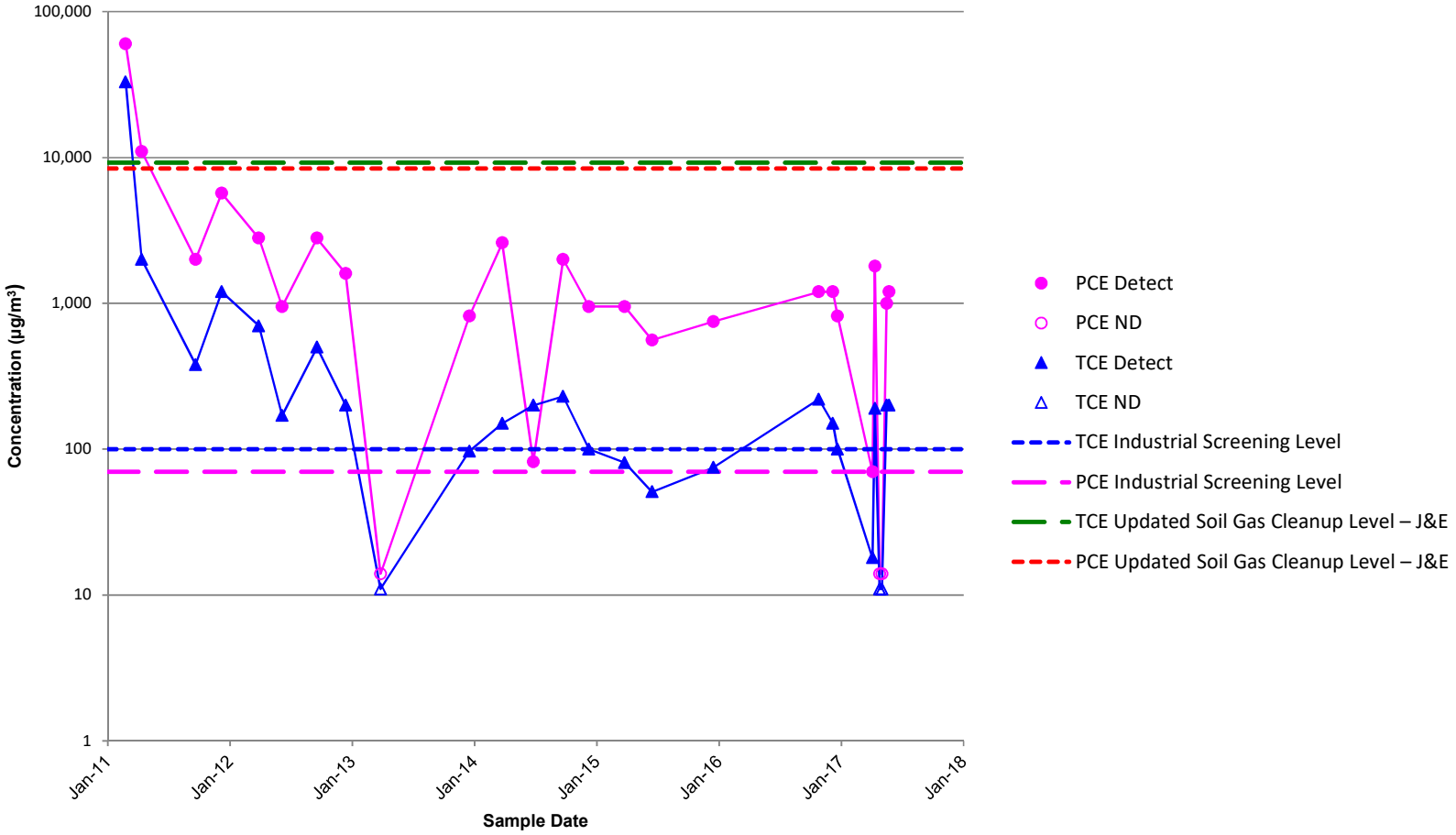
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-9

August 2019 **Figure H-49**



EXPLANATION

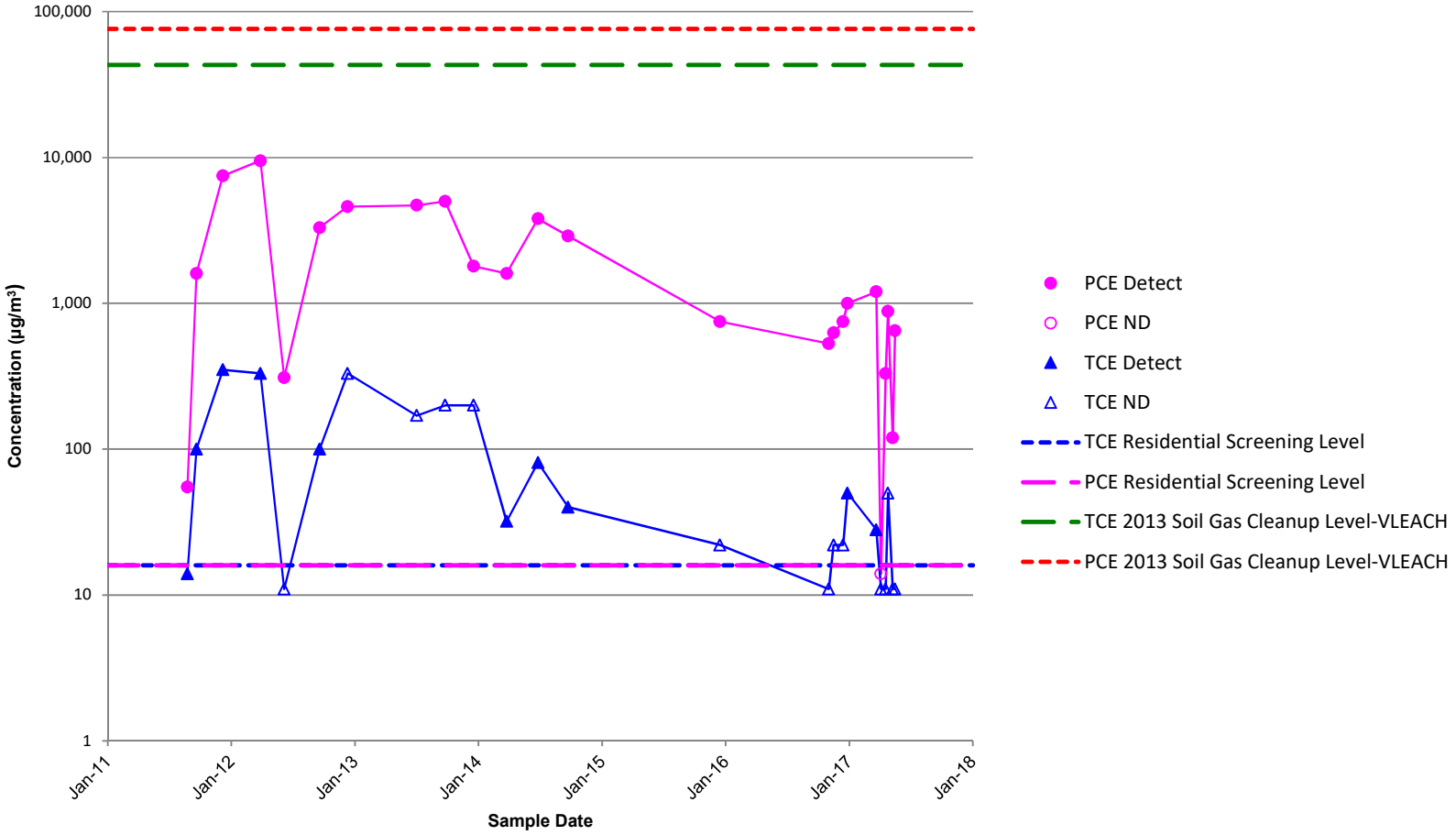
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
J&E = Johnson & Ettinger model used to develop Site-specific Soil Gas Cleanup Levels

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-10

August 2019 **Figure H-50**



EXPLANATION

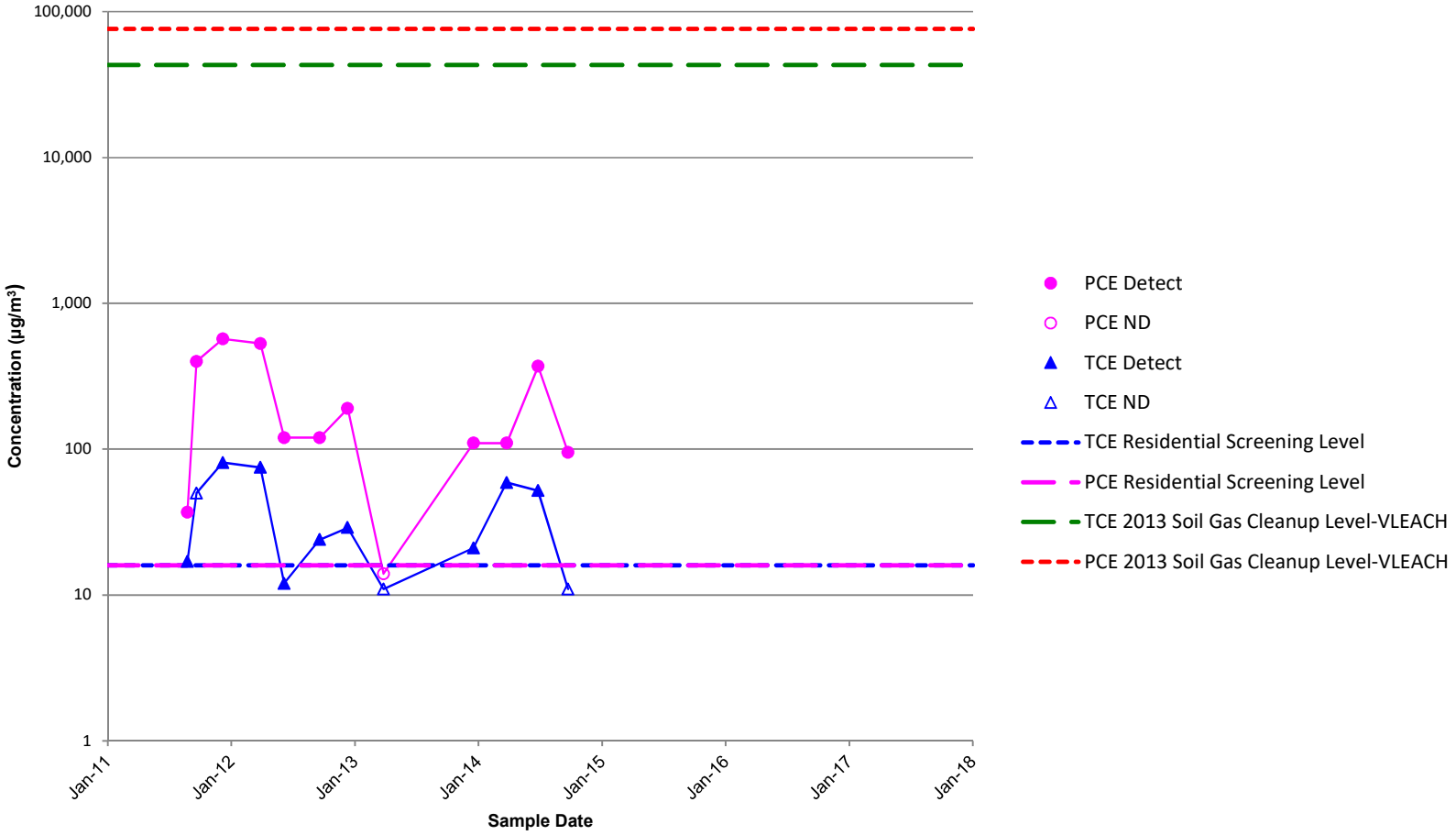
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-11

August 2019 **Figure H-51**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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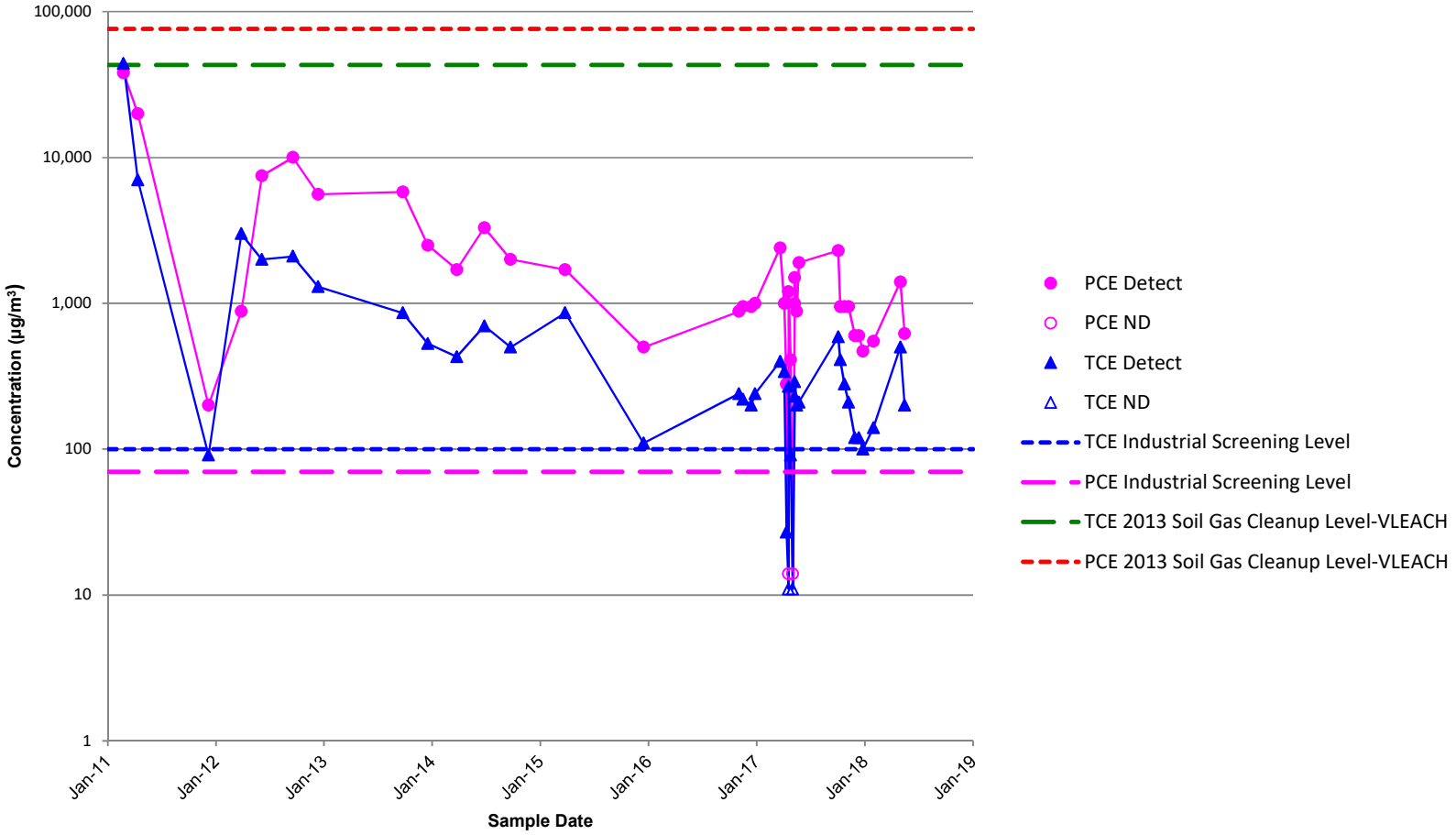
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT SVE-12

August 2019 **Figure H-52**



EXPLANATION

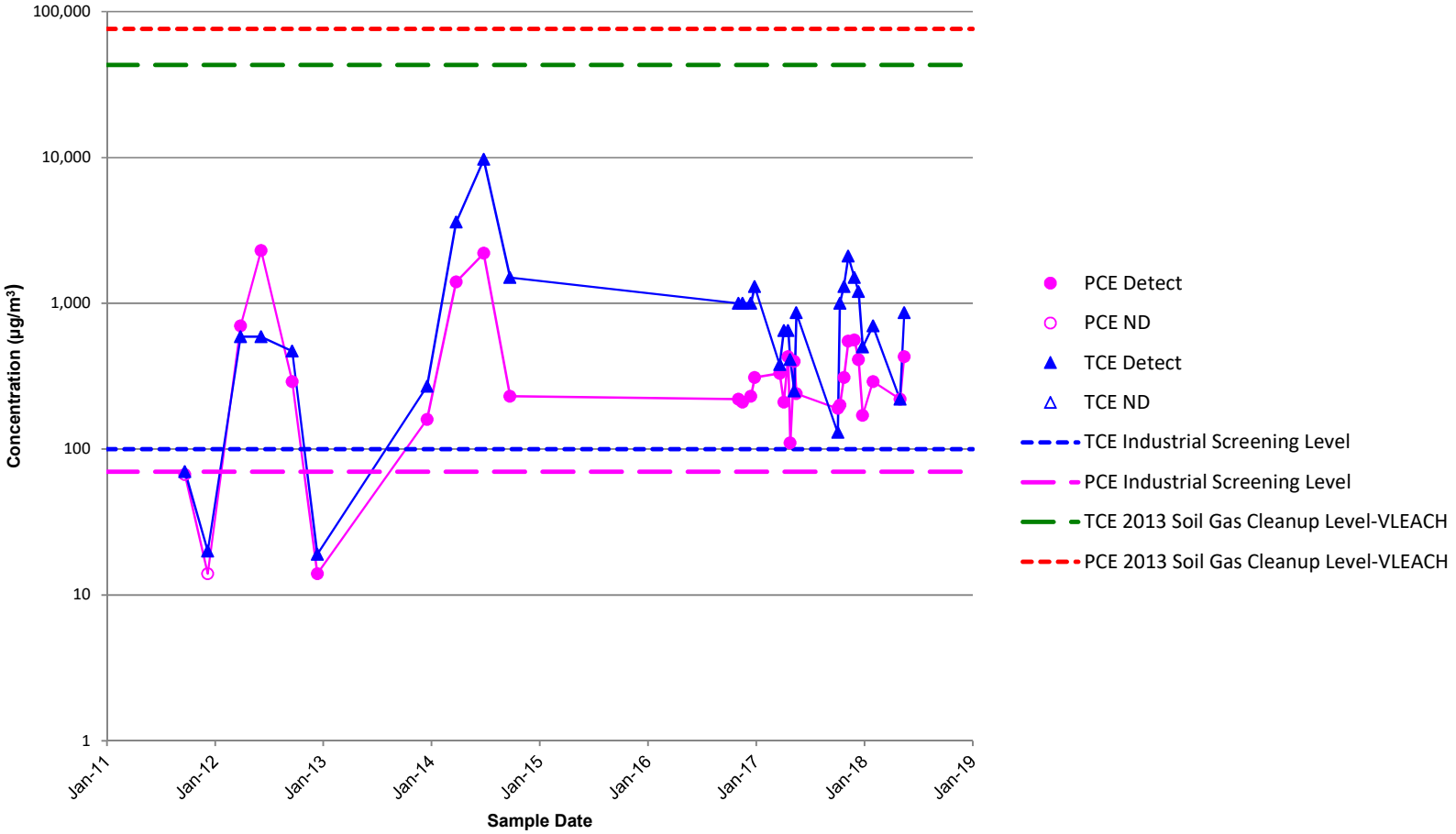
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-1

August 2019 **Figure H-53**



EXPLANATION

µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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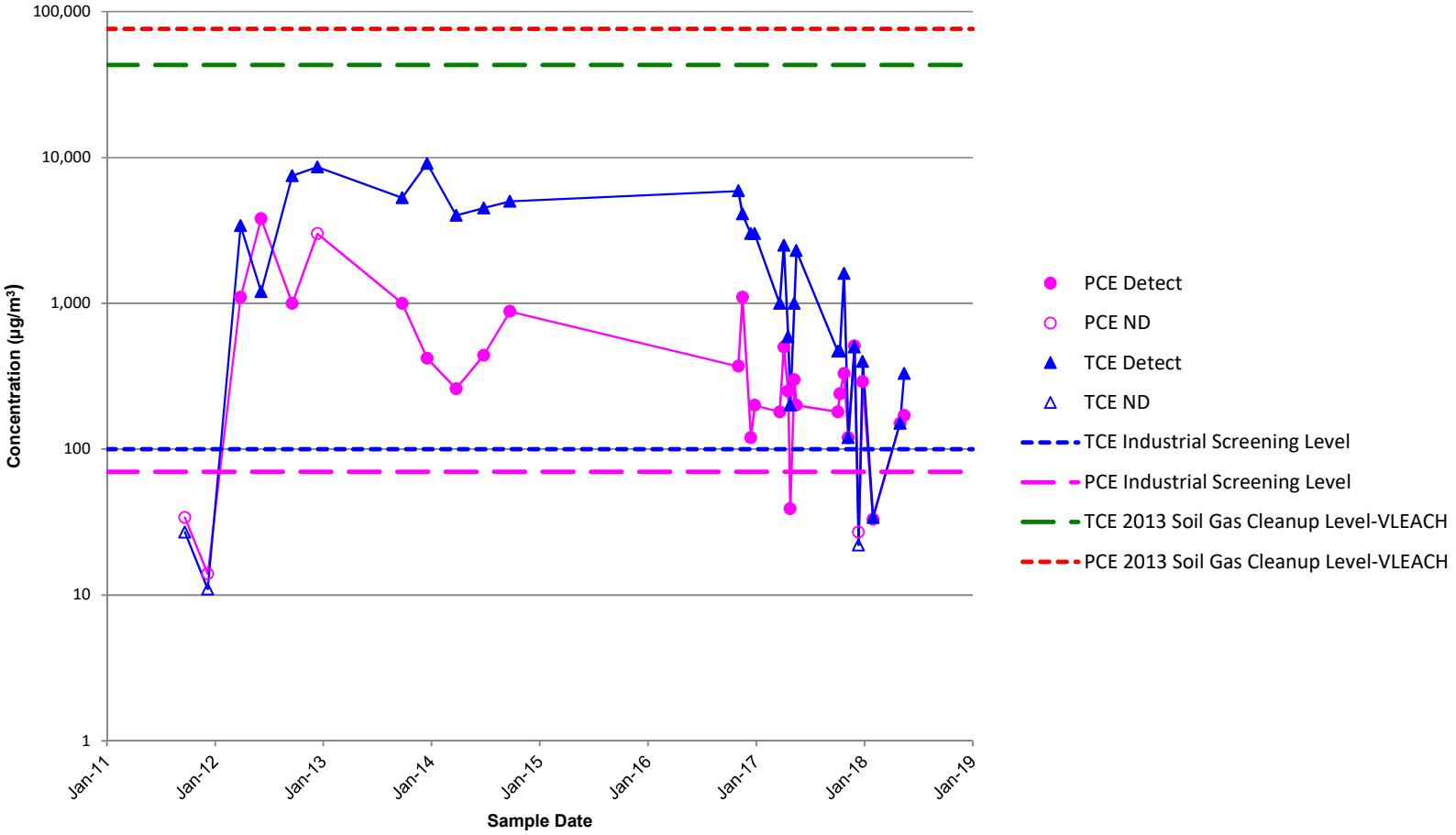
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-2

August 2019 **Figure H-54**



EXPLANATION

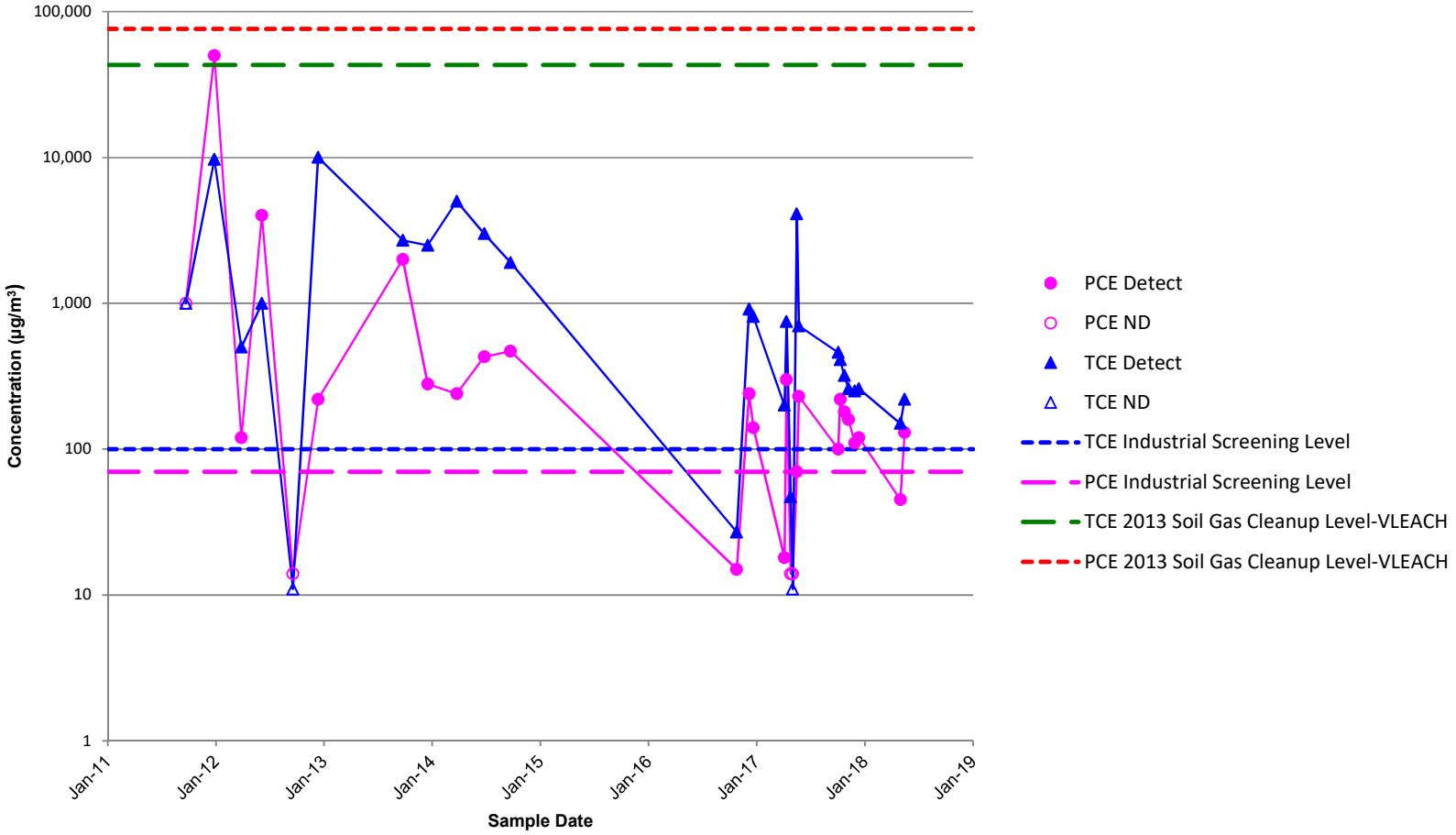
µg/m^3 = micrograms per cubic meter
ND = not detected at or above laboratory reporting limit
PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-3

August 2019 **Figure H-55**



EXPLANATION

µg/m^3 = micrograms per cubic meter
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PCE = tetrachloroethene
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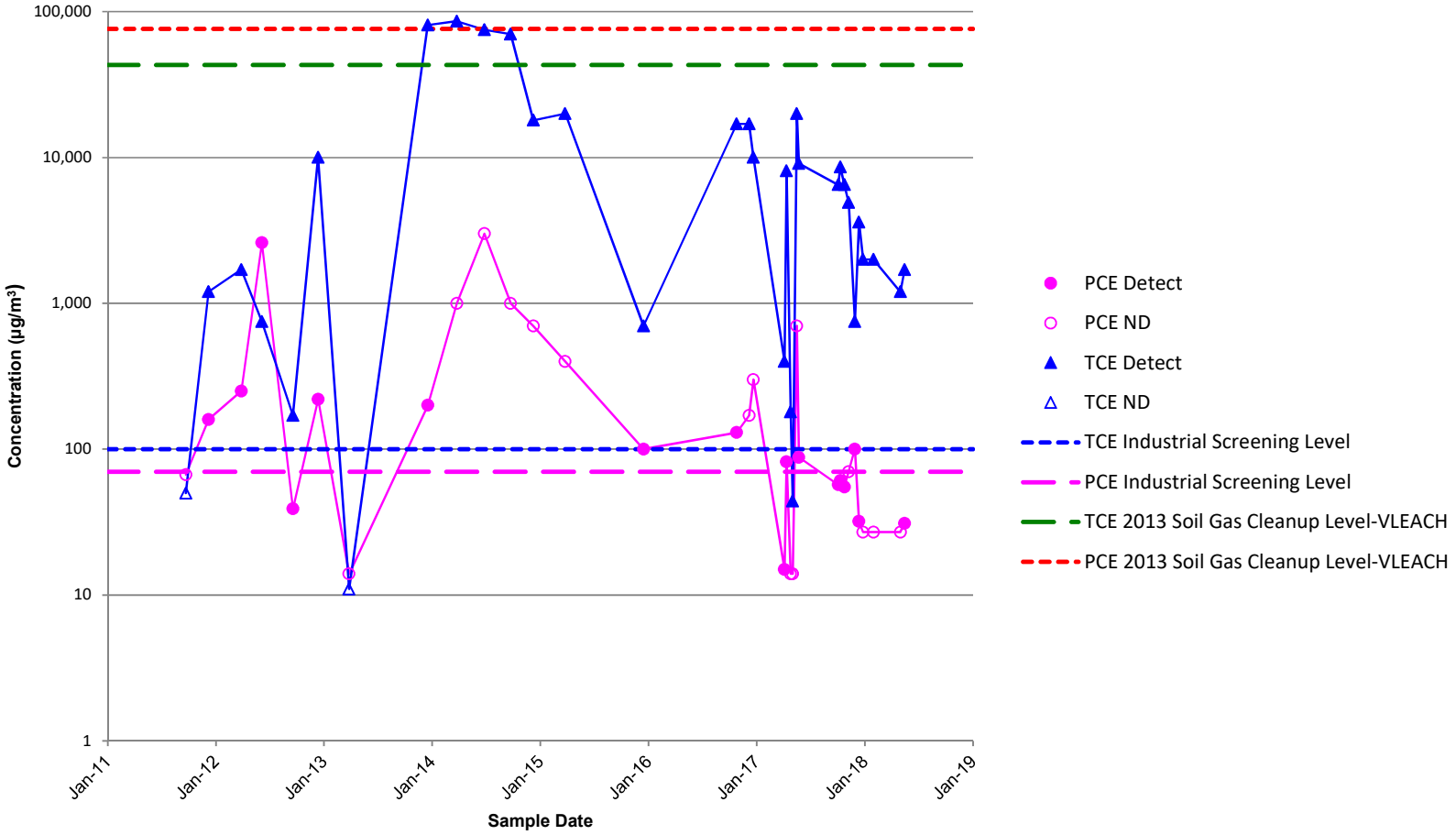
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-4

August 2019 **Figure H-56**



EXPLANATION

µg/m^3 = micrograms per cubic meter
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PCE = tetrachloroethene
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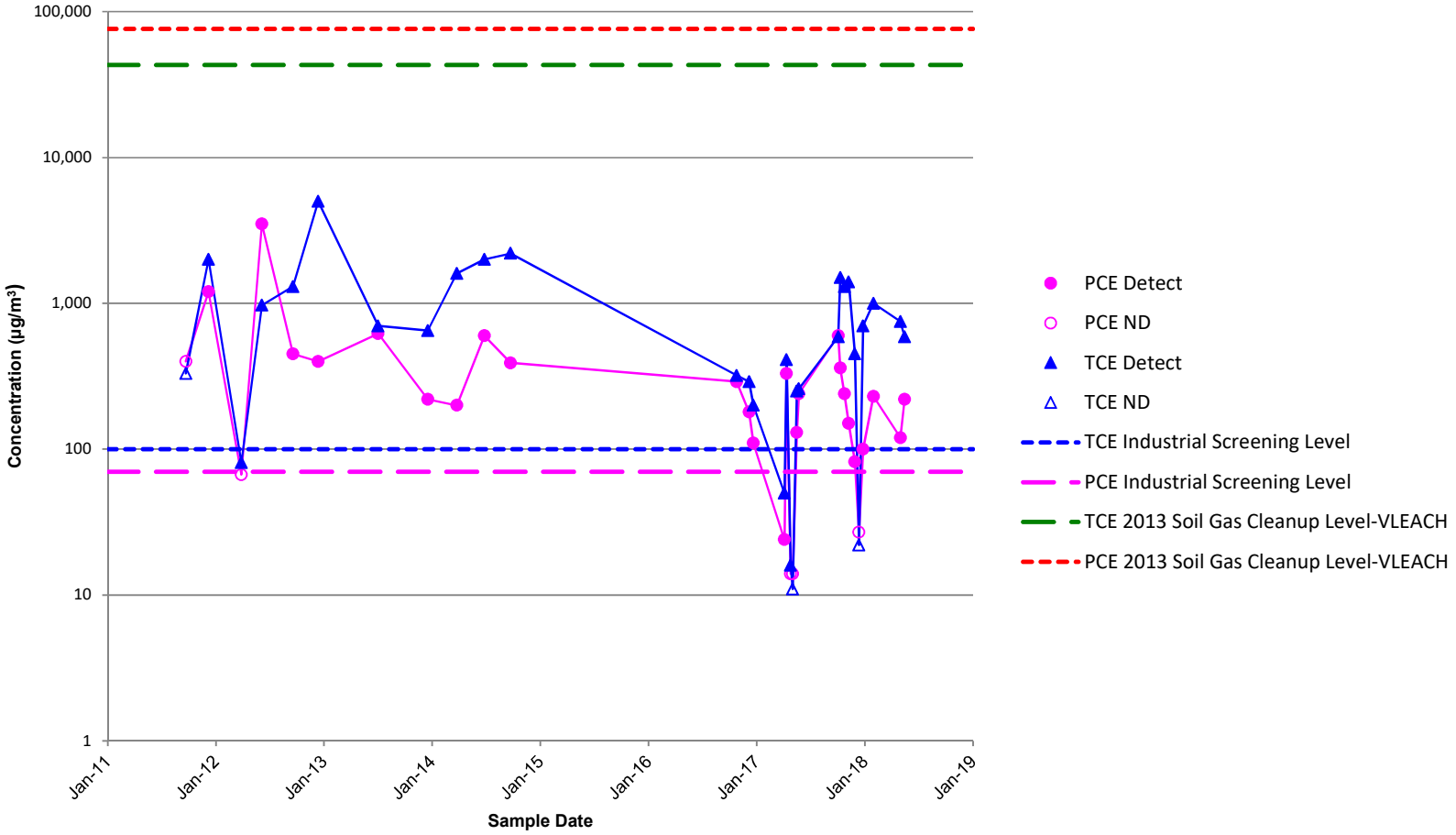
HALEY ALDRICH

COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-5

August 2019 **Figure H-57**



EXPLANATION

µg/m^3 = micrograms per cubic meter
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PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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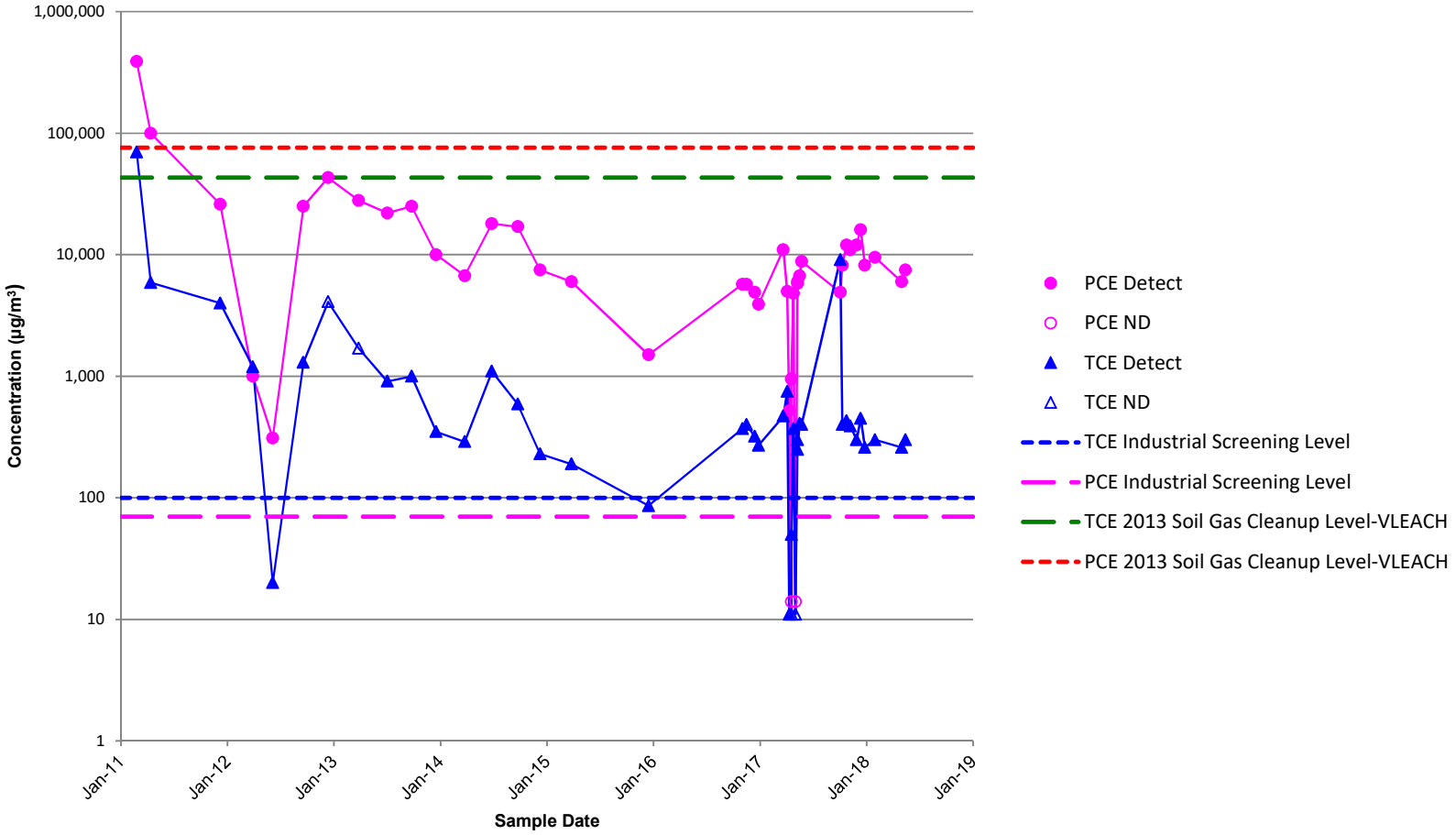
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-6

August 2019 **Figure H-58**



EXPLANATION

µg/m^3 = micrograms per cubic meter
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PCE = tetrachloroethene
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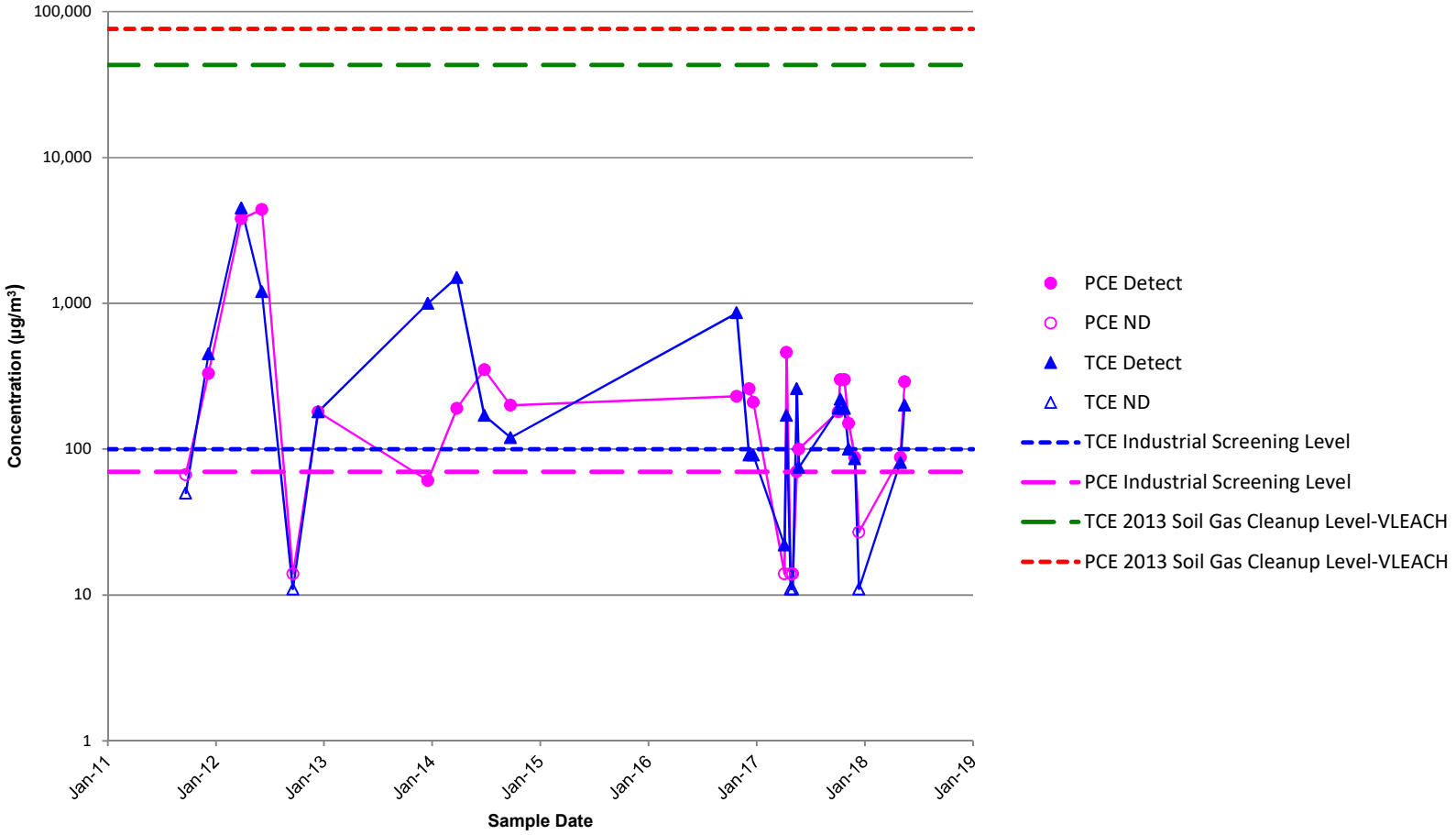
PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-7

August 2019 **Figure H-59**



EXPLANATION

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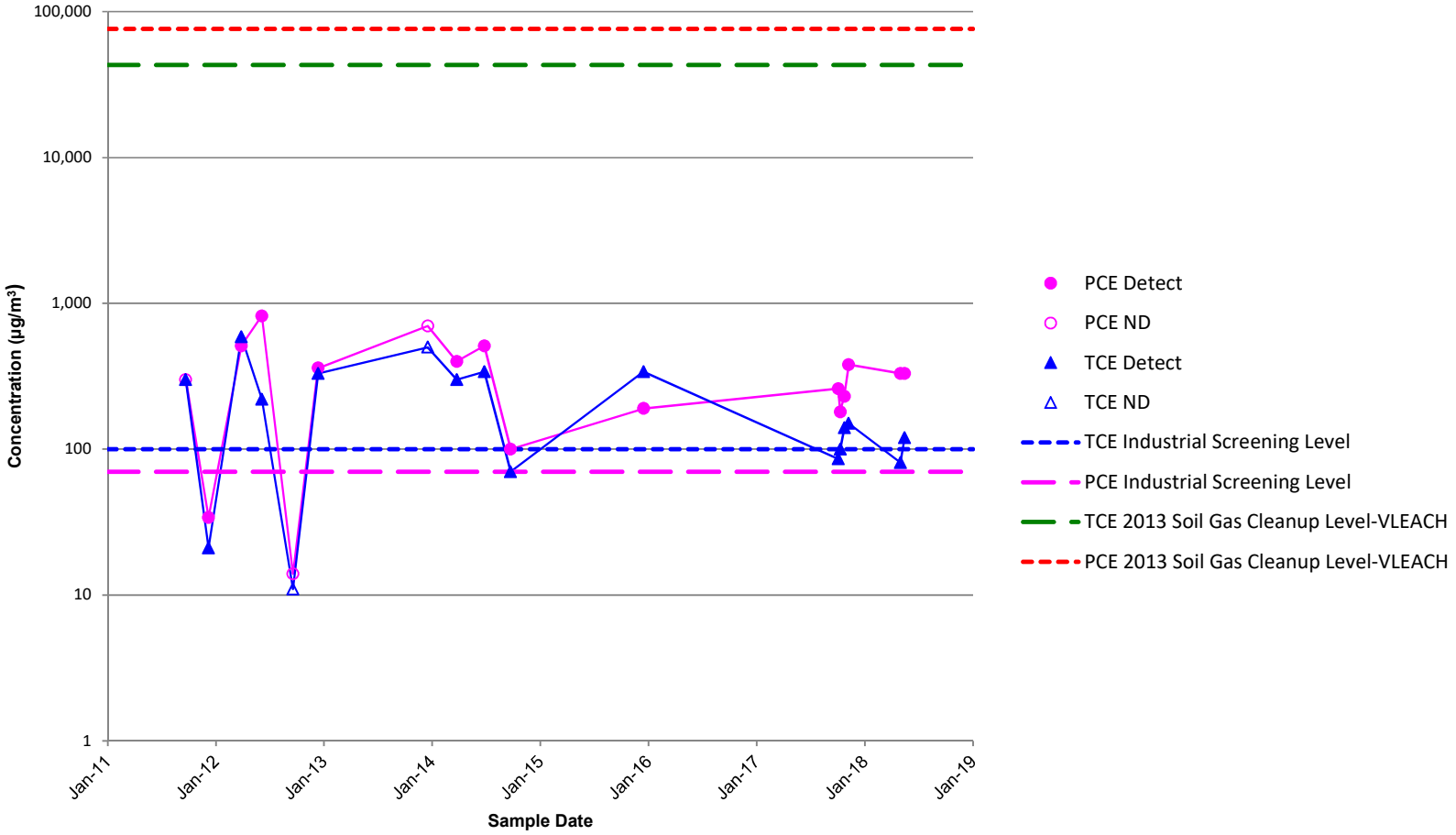
COOPER DRUM COMPANY SUPERFUND SITE
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-8

August 2019 **Figure H-60**



EXPLANATION

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PCE = tetrachloroethene
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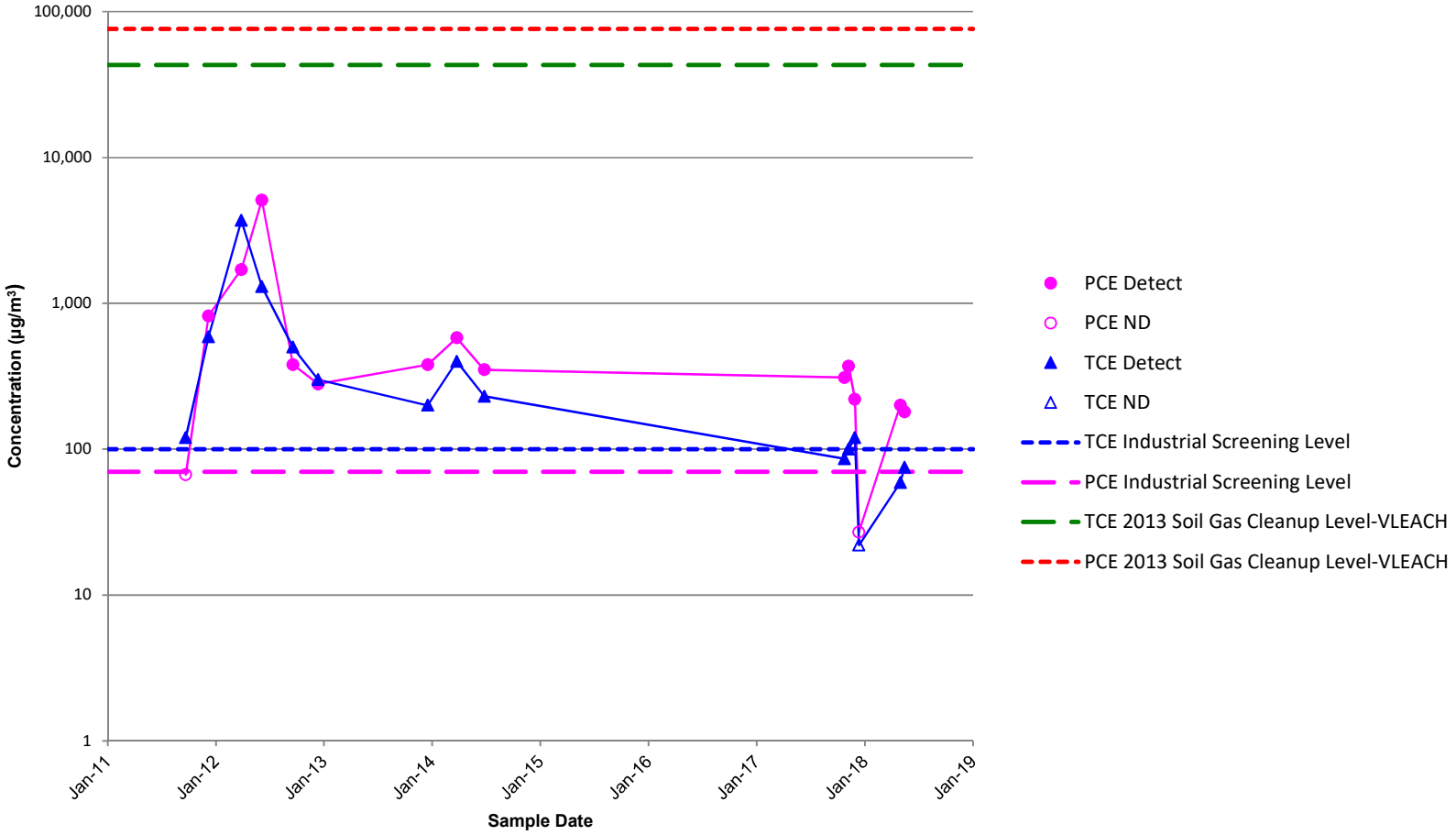
PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-9

August 2019 **Figure H-61**



EXPLANATION

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PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

HALEY ALDRICH

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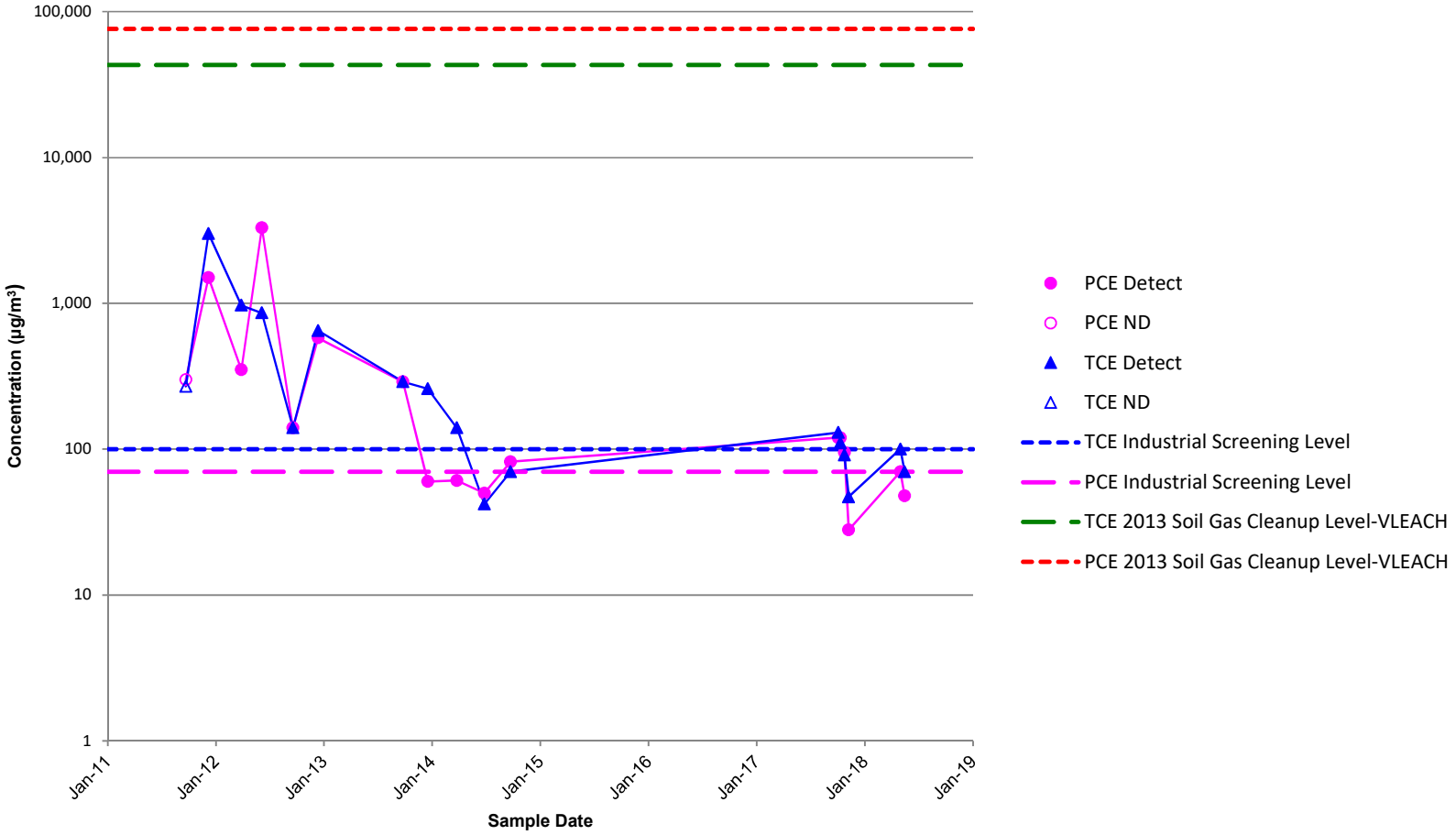
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-10

August 2019 **Figure H-62**



EXPLANATION

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PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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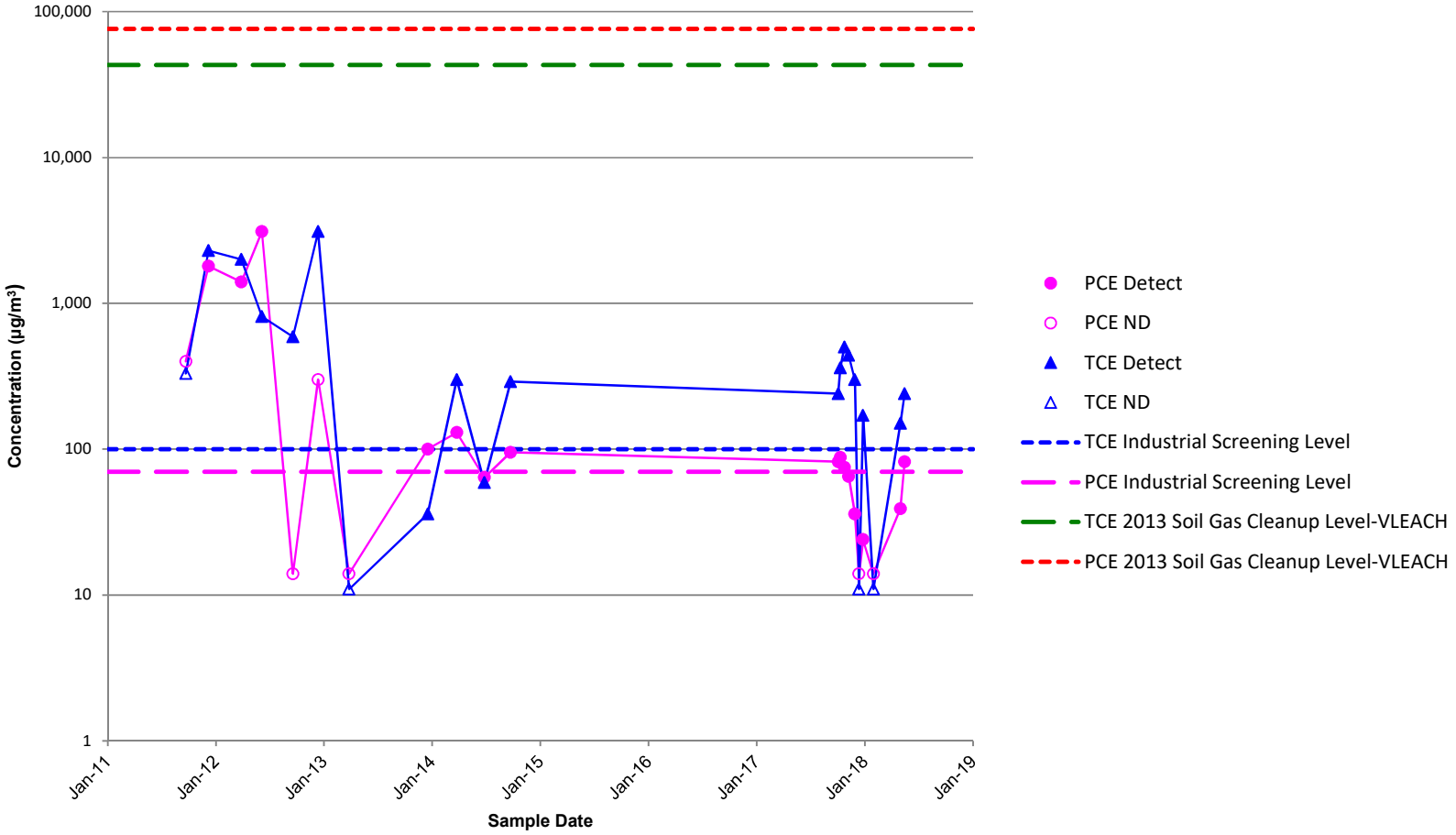
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-11

August 2019 **Figure H-63**



EXPLANATION

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TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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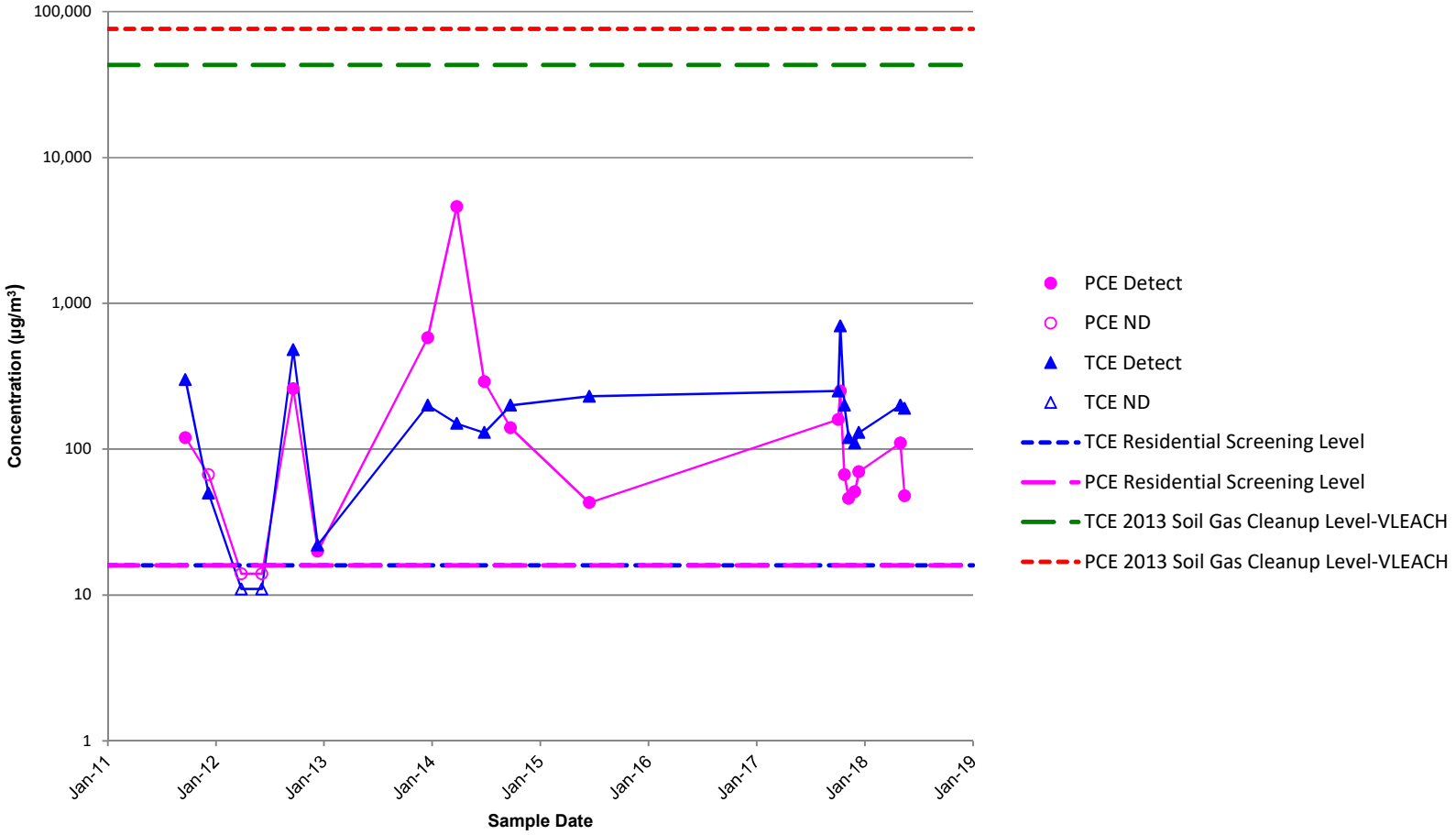
SOUTH GATE, CALIFORNIA

PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-12

August 2019 **Figure H-64**



EXPLANATION

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PCE = tetrachloroethene
TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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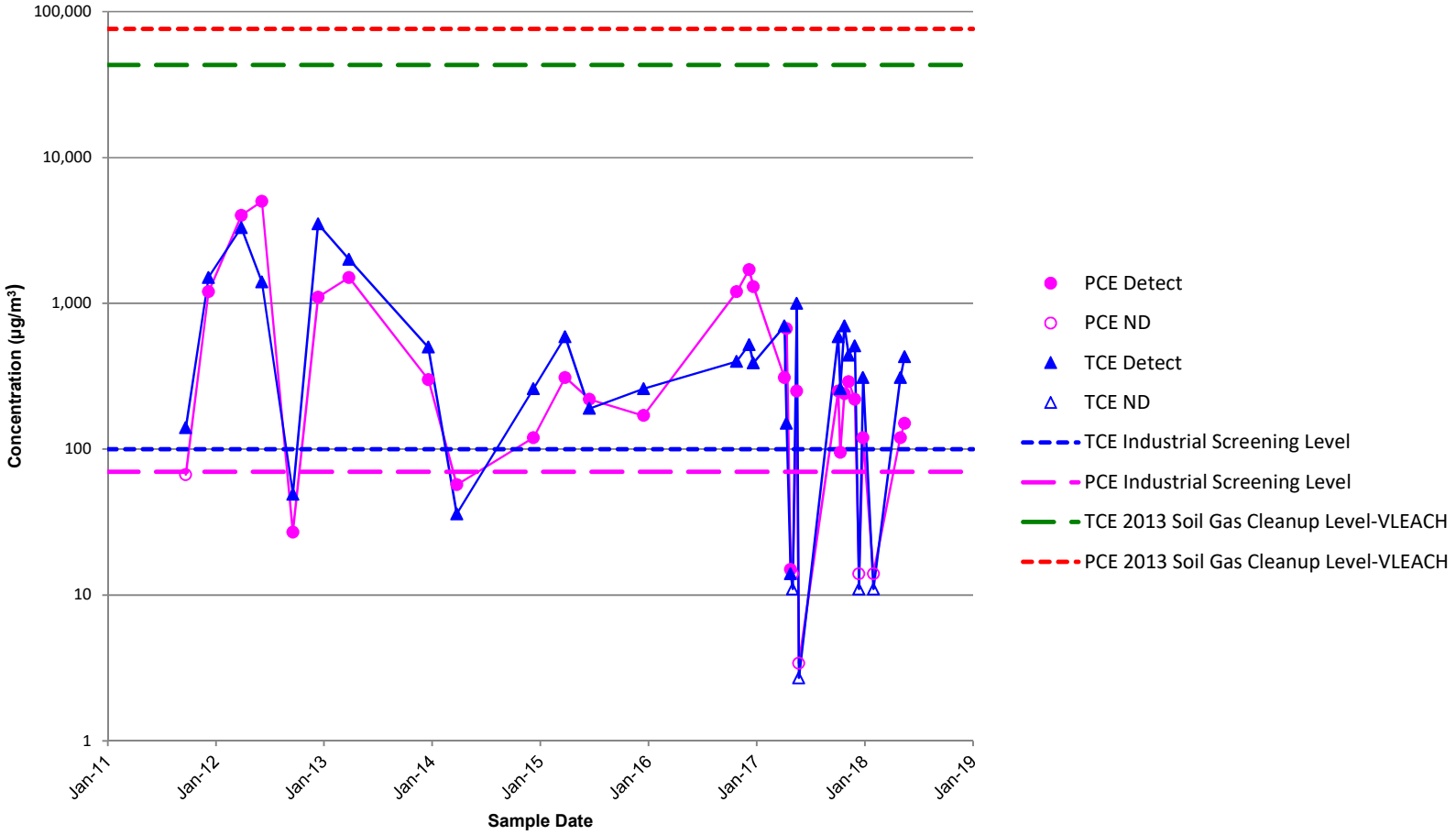
PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-13

August 2019 **Figure H-65**



EXPLANATION

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TCE = trichloroethene
VLEACH = vadose zone leaching model used to develop Site-specfic Interim Soil Gas Cleanup Goals

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COOPER DRUM COMPANY SUPERFUND SITE
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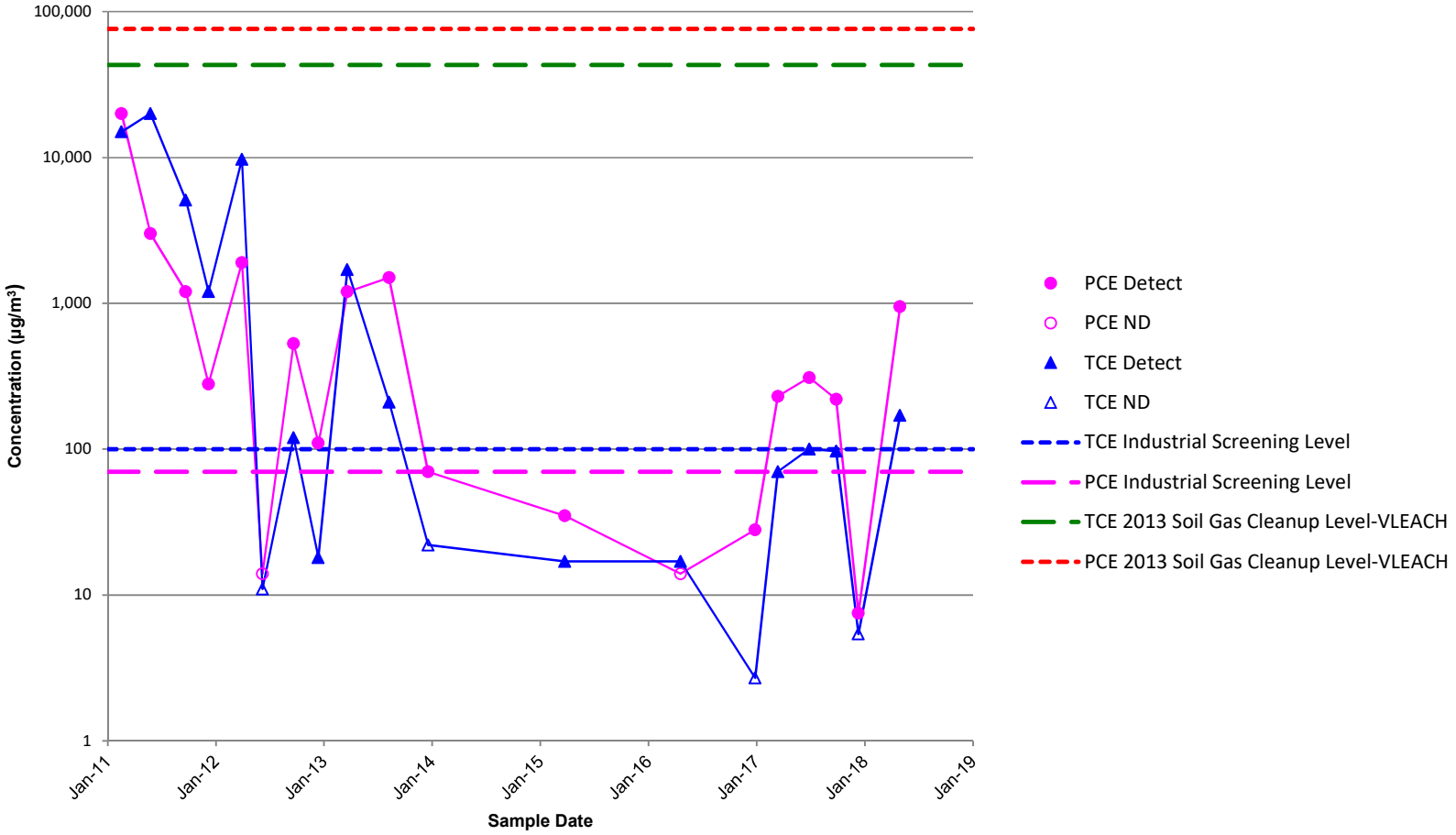
PCE AND TCE VAPOR CONCENTRATION TRENDS AT DPE-14

August 2019 **Figure H-66**



EXPLANATION

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TCE = trichloroethene
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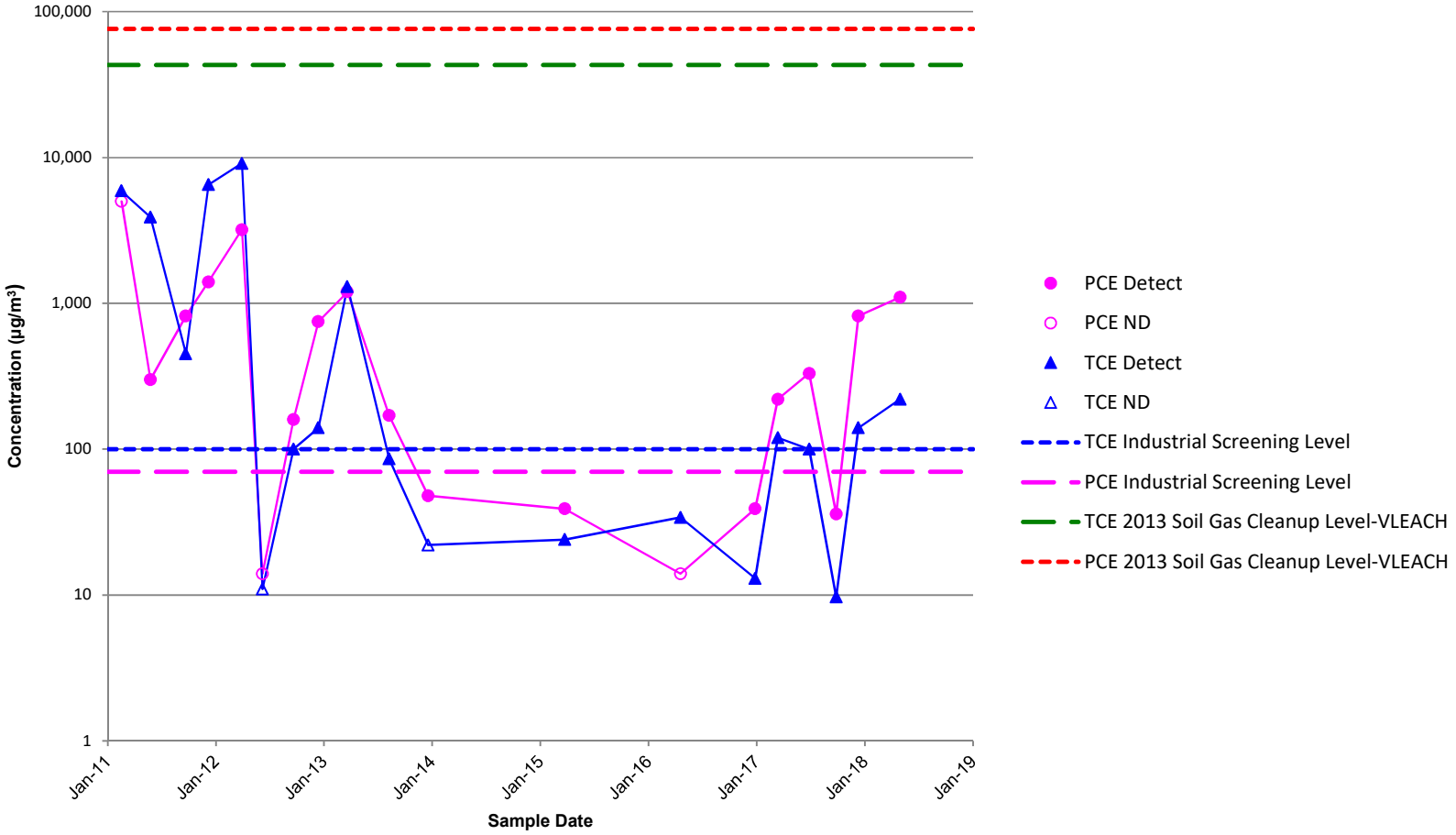
PCE AND TCE VAPOR CONCENTRATION TRENDS AT PZ-5

August 2019 **Figure H-66**



EXPLANATION

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TCE = trichloroethene
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PCE AND TCE VAPOR CONCENTRATION TRENDS AT PZ-6

August 2019 **Figure H-67**