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Removal Action Completion Report

USCG Atwater Facility
Detroit, Michigan

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Detroit, Michigan

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Table of Contents

Executive Summary **1**

1. Introduction **1**

1.1 Background 2

1.2 Chronology of Events 4

1.3 Public Participation and Response to Comments 4

2. Removal Action Activities **5**

2.1 Pre-Removal Action Activities 6

2.1.1 Site Access 6

2.1.2 Site Preparation 6

2.1.2.1 Utility Clearance 6

2.1.2.2 Historic Preservation 7

2.1.2.3 Endangered Species Assessment 7

2.1.2.4 Soil Erosion and Sedimentation Control 7

2.1.3 Site Restriction and Security 8

2.2 Soil Removal 8

2.2.1 Field Screening Results 9

2.2.2 Cultural Artifacts 9

2.2.3 Soil Transport and Disposal Management 9

2.2.4 Shoring and Dewatering 10

2.2.5 Health and Safety 10

2.3 Confirmation Soil Sampling Results 10

2.3.1 Laboratory Results 10

2.3.2 Statistical Analysis of the Data 12

2.3.3 Data Validation 13

2.4 Decontamination Procedures 14

2.5 Site Restoration 14

2.6 Site Survey 14

2.7 Groundwater Response Action 14

3. Conclusions 15

4. References 17

Tables

Table 1a Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance

Table 1b Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance

Table 1c Federal and State Action-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance

Table 2 Confirmation Soil Sample Field Screening Results

Table 3 Confirmation Sample Laboratory Analytical Results

Figures

Figure 1 Site Location

Figure 2 Site Layout

Figure 3 Confirmation Soil Sample Locations and Extent of Excavations Map

Figure 4 Confirmation Sampling Results Greater Than RAOs

Appendices

A Public Participation Correspondence

B Removal Waste Transportation and Disposal Documents

C Removal and Restoration Activities Photographic Documentation

D Laboratory Analytical Reports

E Laboratory Validation Reports

F Statistical Analysis of Data

Executive Summary

As provided in Executive Order 12580 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), the U.S. Coast Guard (USCG) is acting as the lead agency in implementing a Non-Time-Critical Removal Action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at the USCG Atwater Facility (Site) located in Detroit, Michigan (see Figures 1 and 2). The removal action was conducted, and this Removal Action Completion Report was prepared utilizing other supporting documents, including the Engineering Evaluation/Cost Analysis (EE/CA) (Tetra Tech, 2013a), the project-specific Quality Assurance Project Plan (QAPP) (Tetra Tech, 2010), the QAPP Addendum (Tetra Tech, 2011b), the Field Sampling Plan (FSP) (Tetra Tech, 2011a), and the Removal Action Work Plan (RAWP) (Tetra Tech, 2013b).

The removal action was conducted in accordance with the United States Environmental Protection Agency's (USEPA's) Guidance for Conducting Non-Time-Critical Removal Actions Under CERCLA (USEPA, December 1993) and Section 300.415 of the NCP to address soil and groundwater impacted by arsenic, lead, and polynuclear aromatic hydrocarbons (PAHs) at concentrations above site-specific removal action objectives (RAOs). The primary objective of the removal action was to protect public health and welfare and the environment, thereby facilitating the transfer of the Site from the federal inventory to be conveyed to the City of Detroit as part of the River Walk Redevelopment project. The RAOs for soil were identified by the USCG as the Michigan Department of Environmental Quality (MDEQ) risk-based screening levels (RBSLs) for residential exposure. Therefore, the applicable criteria were identified as the site-specific RAOs. Removal and off-site disposal of arsenic-, lead-, and PAH-impacted soil with concentrations greater than the RAOs were consistent with the requirements of Section 300.415 of the NCP and State requirements and eliminates unacceptable risks to human health, welfare, and the environment for current and anticipated future land uses. The shallow groundwater at the Site is an unlikely source of drinking water; therefore, active remediation of the groundwater was not recommended.

Between 2001 and 2012, site assessments and investigations were conducted at the Site. The results of the Phase I and Phase II Environmental Site Assessment soil sampling indicated that individual samples of benzo(a)pyrene, arsenic, lead, and selenium concentrations exceeded the MDEQ residential criteria. However, the average benzo(a)pyrene concentration was less than the MDEQ residential criteria, the concentration of arsenic was within the concentration range for soil in the United States

(as published by the USEPA), and the concentrations of lead and selenium were only slightly greater than the United States soil concentration range (TtNUS, 2002). The results of the soil sampling in another Phase II Environmental Site Assessment investigation indicated elevated PAHs and metals greater than MDEQ Groundwater Surface Water Interface and/or residential direct contact criteria (Enviro Matrix, 2006). The results of the Site Investigation indicated that soil remediation would be required to meet residential use criteria; however, groundwater remediation would not be required (Tetra Tech, 2012).

An EE/CA was prepared and submitted for MDEQ and public comment between February 11, 2013 and March 13, 2013. Plans [QAPP, QAPP Addendum, FSP, RAWP, Health and Safety Plan (HASP)] were prepared and approved prior to implementing the soil removal activities.

The soil removal activities at the USCG Atwater Facility occurred from April 8 through April 23, 2013. Soils were removed to depths of approximately 2.5 or 5 feet below ground surface (bgs). After the soil was excavated to the predetermined horizontal and vertical boundaries, field screening of soil was performed utilizing a hand-held, portable X-ray fluorescence (XRF) analyzer for arsenic and lead, and confirmation soil samples were collected from the excavations for laboratory analysis for PAHs, arsenic, and lead. Field screening results ranged from below 3 parts per million (ppm) to 135 ppm for arsenic and from 4 ppm to 1,172 ppm for lead. Three additional areas were excavated based on the laboratory test results greater than RAOs.

Approximately 2,440 tons or 1,480 cubic yards of non-hazardous impacted soil were excavated and transported to Veolia's Arbor Hills Landfill in Northville, Michigan for disposal. The excavations were backfilled with fine sand, covered with a layer of topsoil, and seeded with grass seed. Based on the laboratory analytical results of the samples collected from the excavation bottoms and sidewalls, there were several locations where confirmation sampling results were greater than RAOs. Four were sidewall locations along the property boundary, and these results are not representative of the soil on the site because the soil on one side of the samples is off-site and soil on the other side has been replaced with clean fill. Two other sidewall locations were adjacent to the slip and additional excavation was not attempted due to concerns about damaging the pier structure. Similar to the property boundary samples, these locations are not representative of the remaining soil. Four excavation bottom samples were left in place that had concentrations greater than the RAOs, but exposure to soil with elevated contaminant concentrations is limited because of the 2.5 feet of clean fill over these locations.

Because the contaminant concentrations were greater than the RAOs in some confirmation samples, a statistical analysis was performed on the data to determine the site exposure point concentrations (EPCs) for arsenic, lead, and benzo(a)pyrene equivalents (BaPEqs). The results of this analysis showed that EPCs are less than the RAOs, so the site meets the residential exposure limit requirements.

1. Introduction

This Removal Action Completion Report (RACR) was prepared by Tetra Tech on behalf of the United States Coast Guard (USCG) for the USCG Atwater Facility (Site) located in Detroit, Michigan.

The federal government currently owns the Site, which covers approximately 1.26 acres of harbor front land in downtown Detroit along the Detroit River, although only approximately 0.5 acre is land (see Figure 1 and Figure 2). No buildings currently exist on the site. The site was predominantly covered with asphalt and concrete with a small grassy area prior to the removal action. A fence with a locked gate is located along Atwater Street and a fence is located on the eastern and western sides of the property to restrict access to the site. The general site location is depicted in Figure 1 (Site Location Map). A site map of the Detroit Atwater Property is provided as Figure 2.

The removal action completed for the USCG Atwater Facility included the excavation and removal of arsenic-, lead-, and PAH-impacted surface soils associated with the former USCG Marine Safety Office (MSO) at the Site. The removal action was conducted in accordance with the United States Environmental Protection Agency's (USEPA's) Guidance for Conducting Non-Time-Critical Removal Actions Under CERCLA (Comprehensive Environmental Response, Compensation and Liability Act; USEPA, December 1993). The primary objective of the removal action was to protect public health and welfare and the environment, thereby facilitating the transfer of the Site from the federal inventory to be conveyed to the City of Detroit as part of the River Walk Redevelopment project. The remedial action objectives (RAOs) for soil were identified by the USCG as the Michigan Department of Environmental Quality (MDEQ) risk-based screening levels (RBSLs) for residential exposure. Therefore, the applicable criteria were identified as the site-specific RAOs. Removal and off-site disposal of arsenic-, lead-, and PAH-impacted soil with concentrations greater than the RAOs was consistent with the requirements of Section 300.415 of the NCP and State requirements and eliminates unacceptable risks to human health, welfare, and the environment for current and anticipated future land uses. The shallow groundwater at the Site is an unlikely source of drinking water; therefore, active remediation was not recommended for the groundwater.

1.1 Background

The USCG Atwater facility was the location of a former USCG Marine Safety Office (MSO) that consisted of two separate buildings: a maintenance building and a six-car garage. Located in the northwestern corner of the property, the maintenance building, constructed in 1932, was a two-story wood and brick structure. The six-car garage, located in the northeastern corner of the property and constructed in the 1930s, was a single-story wood and brick structure. The former maintenance building and garage were both demolished around 2004. Along the southern and western side of the property are boat slips, both of which remain. A boat house once enclosed the eastern slip. The general site location is depicted in Figure 1 (Site Location Map). A site map of the Detroit Atwater Property is provided as Figure 2.

The current surrounding areas of the Site are primarily commercial/industrial. The River Walk zoning overlay allows for certain residential, commercial, and recreational uses, while phasing out most industrial uses. Property located immediately to the east consists of a surface parking lot, to the west is a former cement facility (now open land), to the south is the Detroit River, and to the north is Atwater Street. The City of Detroit River Walk promenade will extend through the properties both to the east and to the west of the Site. The Site is relatively flat and slopes gently toward the Detroit River.

Federal and state government records were searched as a part of the Phase I ESA to determine if the Site had historical or cultural significance and to determine if there are any sensitive environmental areas of significance associated with the Site, and none were found, therefore no cultural resource survey was performed at the Site. Also, no threatened or endangered species assessment has been performed at the Site, although, because of the limited habitat, threatened and endangered species are unlikely to be present.

Listed below are brief summaries of the historical characterizations performed at the Site, including the 2002 Phase I and II Environmental Site Assessment, the 2006 Phase II Environmental Site Assessment, and the 2011 Site Investigation Report. These reports, which provide additional summary and analysis, are included as appendices in the Engineering Evaluation/Cost Analysis (EE/CA) (Tetra Tech, 2013a).

- Phase I and II Environmental Site Assessment for Detroit Atwater, Tetra Tech NUS, December 2002 – The results of the soil sampling in this investigation indicated that individual samples of benzo(a)pyrene, arsenic, lead, and selenium

exhibited concentrations in excess of the MDEQ residential criteria. However, the average benzo(a)pyrene concentration was less than the MDEQ residential criteria, the concentration of arsenic was within the concentration range for soil in the United States (as published by the USEPA), and the concentrations of lead and selenium were only slightly greater than the United States soil concentration range. Additionally, the land use at the Site is zoned as commercial and industrial. Therefore, it was concluded that there were no areas of significant environmental concern requiring rectification prior to transfer of the property, and there were no further recommendations at that time (TtNUS, 2002).

- Phase II Environmental Site Assessment, Enviro Matrix, July 2006 – The results of the soil sampling in this investigation indicated elevated PAHs and metals greater than MDEQ Groundwater Surface Water Interface and/or residential direct contact criteria (Enviro Matrix, 2006).

- Site Investigation Report for Atwater Facility, Tetra Tech, November 2012 –The results of the investigation indicated that soil remediation would be required to meet residential use criteria; however, groundwater remediation would not be required (Tetra Tech, 2012).

The EE/CA also identified applicable or relevant and appropriate requirements (ARARs) and to be considered (TBC) guidance, as required under Section 121 (d) of CERCLA, as amended by the 1986 Superfund Amendments and Reauthorization Act (SARA) and Section 300.400(g) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). A summary of ARARs for the Site is presented in Table 1.

The EE/CA identified removal of the impacted soil as the most effective, implementable, and cost-effective action for the Site. Following this decision, a Removal Action Work Plan (RAWP) was prepared by Tetra Tech (Tetra Tech, 2013b). The RAWP described the removal action activities and standard operating procedures (SOPs) and referenced the Quality Assurance Project Plan (QAPP) developed for the project.

A Field Sampling Plan (FSP) (Tetra Tech, 2011a) was prepared to provide procedures for field sample collection to characterize Site soils, including the nature and extent of lead, arsenic, and PAH impacts in soil. Additionally, the FSP presented procedures for collecting removal confirmation samples to verify the successful removal of the impacted soil.

1.2 Chronology of Events

The following is a brief chronology of events associated with the Site activities.

- May 2001: Tetra Tech conducted a Phase I Environmental Site Assessment for USCG.
- August 2001: Tetra Tech conducted a Phase II Environmental Site Assessment for USCG.
- April 2006: Enviro Matrix (EM) conducted a Phase I and Phase II ESA of the site for the Economic Development Corporation of the City of Detroit.
- March 2010: Quality Assurance Project Plan finalized.
- April 2011: Field Sampling Plan finalized.
- April 2011: Quality Assurance Project Plan Addendum finalized.
- April 2011 to June 2012: Tetra Tech conducted a Site Investigation for USCG.
- January 2013: Engineering Evaluation/Cost Analysis finalized.
- February 11, 2013 through March 13, 2013: Engineering Evaluation/Cost Analysis and Removal Action Work Plan made available for public review and comment.
- April 2013: Tetra Tech performed soil removal action and removal confirmation sampling at the Site for USCG.

1.3 Public Participation and Response to Comments

In accordance with the NCP, a Public Notice (Appendix A) was given by the USCG announcing that the EE/CA and RAWP for the proposed removal action at the USCG Atwater Facility was available for review and comment for a period of 30 days. The purpose of the public participation requirement of the NCP is to promote active communication between the communities affected by the release at the Site and the USCG.

The public notice regarding the proposed soil removal action was published in the Detroit Free Press from February 10, 2013 through February 16, 2013. The EE/CA and the RAWP were made available for public viewing. A written notification of the availability of the documents was provided to the City of Detroit, who is interested in acquiring the property. The documents were posted electronically on the USCG District Nine News website (http://www.d9.uscgnews.com/go/doctype/4007/117211). Each of the final documents was also reproduced in full hardcopy and provided to the Main Branch and the Skillman Branch of the Detroit Public Library in Detroit, Michigan for public viewing. A copy of the EE/CA and RAWP were also submitted to the MDEQ and the City of Detroit for comment. The MDEQ and City of Detroit did not provide any comments on the documents.

The USCG received no significant comments from the community during the 30-day public comment period. Therefore, consistent with provisions [40 Code of Federal Regulations (CFR) 300.415] of the NCP, the USCG proceeded with implementing the removal action as planned.

2. Removal Action Activities

The removal action was conducted in accordance with the USEPA's *Guidance for Conducting Non-Time Critical Removal Actions Under CERCLA* (USEPA, December 1993). The primary objective of the removal action was to protect public health and welfare and the environment, thereby facilitating the transfer of the Site to the City of Detroit. As discussed in the EE/CA and RAWP, the USCG selected RAOs for contaminants of concern (COCs) in soil based on MDEQ RBSLs for residential exposure as shown in the following table:

Soil COC	RAO, mg/kg
Arsenic	7.6
Benzo(a)pyrene equivalents (BaPEqs)	2.0
Lead	400

The removal action activities at the Site occurred from April 8 through April 23, 2013.

2.1 Pre-Removal Action Activities

2.1.1 Site Access

Prior to commencing with the removal action activities, appropriate permits and applications were obtained and prepared. The permits and applications listed below were obtained and prepared, as required (see Appendix B):

- MDEQ Waste and Hazardous Materials Division Generator Site Identification No. MIK112091844.
- Advanced Disposal Arbor Hills Landfill in Northville, Michigan, Non-Hazardous Waste Approval No. MI-687-140328-AH5296-515.
- Usher Oil Company, Detroit, Michigan, Non-Hazardous Waste Approval No. 041713-W.

The USCG Atwater Facility removal action activities were restricted by the adjacent property boundaries, fences along the property boundaries, and the presence of the Detroit River immediately south of the Site.

2.1.2 Site Preparation

Prior to beginning the soil removal activities, the extent of each excavation was surveyed and marked with stakes and paint. Work zones were identified, as well as staging areas for vehicles and equipment. A plan for directly loading and unloading trucks was determined, and traffic patterns were identified.

Surface debris located at the Site was removed and disposed off-site. The surface debris consisted primarily of large rubber tires, scrap metal objects, large concrete pieces, old lumber, and an old parts washer. Concrete debris was disposed of through Recycled Aggregates. Steel debris was disposed of through Winston Brothers of Detroit Michigan. Tires were disposed of at Waddles Tire in Brownstown, MI. Miscellaneous debris was disposed of at Advanced Disposal in Northville, MI.

2.1.2.1 Utility Clearance

In accordance with State law, MISSDIG was contacted on March 27, 2013 for utility clearance, and ticket number B30860211 was issued for the Site. Site plans and

sketches from previous utility clearances associated with site investigations were reviewed to determine the potential for underground utilities at the Site to be affected by the soil removal.

2.1.2.2 Historic Preservation

Federal and state government records, including those of the National Register of Historic Places and the Michigan State Historic Preservation Office, were searched as a part of the Phase I ESA to determine if the Site had historical or cultural significance. The subject property was not identified as a historical or cultural site (TtNUS, 2002). One such historical/cultural site was identified within one-quarter mile of the Site, and several sites were identified within one-half mile and 1 mile of the Site. Prior to demolishing the former maintenance building and six-car garage, the USCG contacted the State of Michigan Department of History, Arts, and Libraries, whose Environmental Review Coordinator provided a letter on January 23, 2004 stating that "no historic properties are affected within the area of potential effects of this undertaking;" this letter is included as an Appendix in the EE/CA (Tetra Tech, 2013a). The USCG determined that the Site had no culturally significant resources. No other evaluation was performed, and the proposed removal action was not expected to affect significant cultural or historical resources.

2.1.2.3 Endangered Species Assessment

As described in the EE/CA, federal and state government records were searched as a part of the Phase I ESA to determine if there were any sensitive environmental areas of significance associated with the Site, including Federal Lands Data (Federal or state wilderness area, preserves, sanctuaries, or refuges; wild and scenic rivers; fish and wildlife; threatened or endangered species; etc.) (TtNUS, 2002). No sensitive environmental areas were identified within 0.125- or 1-mile of the subject site. Because of the limited habitat, no threatened or endangered species are likely to exist at the site, and the removal action would not adversely affect potential habitat for threatened or endangered species. Therefore, the proposed removal action was not expected to pose a risk to potential habitat for threatened or endangered species.

2.1.2.4 Soil Erosion and Sedimentation Control

The Site is relatively flat and is predominantly covered with asphalt and concrete with a small grassy area. Soil erosion and sedimentation control measures applied at the Site included setting up hay bales along the perimeter of the site in accordance with

MDEQ Water Bureau Soil Erosion and Sedimentation Control Program, *Soil Erosion and Sedimentation Control Training Manual* (MDEQ, 2005) and Wayne County Department of Public Services, Land Resource Management Division, *Permit Procedures for Soil Erosion and Sedimentation Control* (Wayne County, 2010).

2.1.3 Site Restriction and Security

Existing fences and gates were deemed sufficient security features for securing the Site during the removal action. This consisted of a fence with a locked gate located along Atwater Street and fences located on the eastern and western sides of the property to restrict Site access.

2.2 Soil Removal

Excavation and removal of the contaminated soil was conducted at the USCG Atwater Facility from April 8 through April 17, 2013. The areas of the Site where soil removal was performed and the excavation depths in each removal area are shown on Figure 3. The total area excavated was approximately 9,200 square feet to depths of 2.5 to 5 feet below ground surface (bgs) and to a depth of 7 feet bgs at one location, for a total of 1,480 cubic yards of soil from 10 separate excavation areas.

The composition of soils encountered during the excavation activities generally consisted of clay or silty clay, although some limited sand, gravel, and silt were also encountered. Most of this material is believed to have originated as fill. The excavation activities were conducted using a backhoe and an excavator.

The northeast side of the large excavation was within 2 to 3 feet of the property line to avoid damage to the fence and to avoid infringing on the adjacent property. A concrete footer was uncovered along part of property line which also prevented excavation beyond the property line. Similarly, the southwest side of the large excavation was limited to within 15 feet of the pier wall to avoid potential damage to the pier structure.

After the anticipated volume of impacted soil was removed from the excavation area, soil samples were collected from the excavation bottom and sidewalls in these areas for field analysis of lead and arsenic utilizing a hand-held, portable X-ray fluorescence (XRF) analyzer as described in the RAWP to help define the extent of the excavations. The XRF field screening results are discussed further in Section 2.2.1. These soil samples were subsequently sent to the laboratory for lead, arsenic, and PAH analyses.

Approximately 2,440 tons of non-hazardous contaminated soil were excavated from the property and transported to a licensed facility for disposal. All excavated material and wastes were removed from the Site and disposed by April 17, 2013. Details regarding the transport and disposal of the wastes are discussed in 2.2.3.

2.2.1 Field Screening Results

Field screening results ranged from below 3 ppm to 135 ppm for arsenic and from 4 ppm to 1,172 ppm for lead. Subsequent laboratory testing of the collected samples showed that for lead, the XRF field screening results were very similar to the laboratory results. However, for arsenic, the XRF field screening results were significantly greater than the laboratory results. The samples collected from the excavation sidewalls were obtained at a depth of approximately 0 to 2 feet bgs for the shallow (2.5 feet) excavations and at a depth of approximately 3 to 5 feet bgs for the deep (5 feet) excavations. The excavation bottom samples were obtained at an approximate depth of 0 to 2 feet below the bottom of the excavation. Confirmation soil sample field screening results are presented in Table 2, and locations are depicted on Figure 3.

2.2.2 Cultural Artifacts

There were no potential historically significant artifacts unearthed during the excavation activities.

2.2.3 Soil Transport and Disposal Management

The impacted soil was live-loaded into trucks during the removal action to minimize the need for stockpiling soil. Approximately 2,440 tons of non-hazardous soil was transported by the removal contractor to Veolia's Arbor Hills Landfill in Northville, Michigan for disposal. Trucks were placarded in accordance with DOT regulations. The trucks followed a prescribed transportation route to the disposal facility.

The USCG reviewed, approved, and signed all waste profiles prior to shipping the soil from the Site in accordance with RCRA and DOT regulations. Manifests were signed by the Tetra Tech on-site representative on behalf of the USCG. The oversight contractor, Tetra Tech, obtained weight tickets, tare/gross weight slips, and manifests from each truckload of non-hazardous soil transported from the Site. Certificates of disposal were obtained from the disposal facilities. Copies of all transport and disposal documentation are provided in Appendix B and will be kept on file by the USCG.

Site photographs documenting the soil removal are included in Appendix C.

2.2.4 Shoring and Dewatering

The depths of most of the excavations were 2.5 to 5 feet bgs and did not extend below the groundwater table which was typically found 3 to 5 feet bgs; therefore, shoring was not necessary. One excavation (Area No. 4) was to a depth of approximately 2 feet below the water table (7 feet bgs). However, the excavation was not close to any structures, so no shoring was needed. Primarily due to rainfall, approximately 21,000 gallons of water were collected from the excavations for off-site disposal to Usher Oil Company in Detroit, MI.

2.2.5 Health and Safety

Field investigation and removal activities were conducted in general accordance with the Health and Safety Plan (HASP) contained in Appendix D of the RAWP. Specifically, the HASP addresses the activities related to soil excavation activities, XRF screening, and soil sampling. Level D personal protective equipment (PPE) consisting of steel toe boots, hard hats, nitrile gloves, and safety goggles) were used for the field activities. Excavation areas were blocked off by Site perimeter fencing to prevent access by trespassers to the excavation. Dust suppression (watering) of the excavated soil was not required because dust generation was limited by soil moisture and rainfall during the excavation activities.

The XRF screening instrument was used in general accordance with the manufacturer's directions to prevent exposure to radiation. The XRF device was registered with the Michigan Department of Licensing and Regulatory Affairs Radiation Safety Section and was calibrated in accordance to the manufactures instructions prior to daily use. Nitrile gloves were used during soil sampling to prevent exposure to the contaminated soil.

2.3 Confirmation Soil Sampling Results

2.3.1 Laboratory Results

As prescribed in Section 2.2 of the RAWP, confirmation samples were collected following the soil removal action using the "biased" sampling approach as described in the Section 4.0 of the FSP (Tetra Tech, 2011a). A total of 46 soil samples were collected from the excavated areas, which included 37 excavation sidewall samples

and 9 excavation bottom samples. The samples were submitted on the same day generated to Trimatrix Laboratories, Inc. located in Grand Rapids, Michigan for analysis of total arsenic, lead, and PAHs in accordance with the QAPP and QAPP Addendum. The excavation laboratory analytical results are presented in Table 3. The laboratory analytical reports are provided in Appendix D.

The total lead laboratory analytical results for the sidewall samples ranged from 2.7 mg/kg to 1,800 mg/kg, and the bottom samples ranged from 13 mg/kg to 720 mg/kg. A 5,900 mg/kg lead bottom sample result (DA-SB-220) is believed to be an anomaly, because the XRF field screening results from this location were less than 30 ppm, and the highest laboratory lead result outside of this sample was 1,800 mg/kg. An aliquot of the sample was re-analyzed, and the lead result was 13 mg/kg which is consistent with the XRF measurements.

The total arsenic laboratory analytical results for the sidewall samples ranged from 2.3 mg/kg to 38 mg/kg, and the bottom samples ranged from 4.2 mg/kg to 18 mg/kg. The laboratory analytical results for BaPEqs for the sidewall samples ranged from 0.014 mg/kg to 7.9 mg/kg, and the bottom samples ranged from 0.13 mg/kg to 7.9 mg/kg.

Based on the laboratory results from some of the original sidewall samples that were greater than RAOs (DASB-209, DASB217, DASB-218, and DASB-243), three additional areas were excavated. The additional excavation areas, shown on Figure 3 as areas A, B, and C, were each excavated to the same depth as the adjacent excavation. A sidewall confirmation sample was collected from each additional excavation and submitted for laboratory analysis. One of these confirmation samples exceeded the RAO for lead, and one other sample exceeded the RAOs for arsenic and lead.

The laboratory analytical results for lead were greater than the RAO of 400 mg/kg for six samples (excluding samples that were removed by the additional excavation). Similarly, the laboratory analytical results for arsenic were greater than the RAO of 7.6 mg/kg for eight samples, and the laboratory analytical results for BaPEqs were greater than the RAO of 2.0 mg/kg for 3 samples. Sample locations where laboratory analytical results exceeded RAOs are shown on Figure 4.

Three samples of the excavation backfill material were collected and submitted for laboratory analysis for arsenic and lead. One sample of the topsoil material was collected and submitted for laboratory analysis for arsenic, lead, and PAHs. All

samples exhibited lead, arsenic, and BaPEq concentrations that were less than their respective RAOs.

The methods and procedures for collecting soil samples were followed as outlined in the QAPP (Tetra Tech, 2010) and the QAPP Addendum (Tetra Tech, 2011b). Soil samples were collected and cooled to 6 degrees Celsius (ºC). In addition to the confirmation samples collected, appropriate quality assurance/quality control (QA/QC) samples were collected and submitted to Trimatrix Laboratories, Inc. located in Grand Rapids, Michigan for analysis of total arsenic, lead, and PAHs as outlined in the QAPP and the QAPP Addendum. QA/QC samples included five field duplicate samples and four matrix spike/matrix spike duplicate samples for analysis.

2.3.2 Statistical Analysis of the Data

Because COC concentrations in some confirmation samples were greater than RAOs, exposure point concentrations (EPCs) were calculated based on data for post-remediation surface soil and subsurface soil samples. Surface soil was defined as the 0-2 feet bgs) soil interval and subsurface soil was defined as the soil interval greater than 2 feet bgs (but above the saturated zone). The dataset evaluated is comprised of the data reported for pre-remediation soil samples and confirmation soil samples not excavated during the removal action. The samples from the property line were also excluded from the calculations because these are not representative of the soil at the site. For purposes of human health risk assessment, an EPC is defined as the concentration in an environmental medium to which a human receptor is exposed. With the exception of lead, the EPC is typically the calculated 95 percent upper confidence limit (UCL) on the arithmetic mean. Per USEPA guidance, the arithmetic mean (versus the 95% UCL) is typically used as the EPC when conducting a human health risk assessment for lead. EPCs were calculated using USEPA's ProUCL version 4.1.01 software. The sample detection limit was used as an input for non-detected results in the EPC calculations.

EPCs were calculated for arsenic, lead, and BaPEqs. The results were compared to the RAOs, but none of the EPCs calculated for the COCs were greater than the RAOs. See Appendix F for details of the calculations. The EPCs and RAOs are summarized below.

COC	EPC FOR SURFACE SOIL, mg/kg	EPC FOR SUBSURFACE SOIL, mg/kg	RAO, mg/kg
Arsenic	6.8	6.9	7.6
Lead	129	93.9	400
BaPEqs	0.68	1.7	2

2.3.3 Data Validation

The laboratory analytical reports were reviewed and validated in accordance with the QAPP for the USCG Atwater Facility removal action, the USEPA *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (October 2002), and Region II SOPs that apply to SW-846 Method 7420, laboratory control limits, and professional judgment. As indicated in the RAWP (Tetra Tech, 2013b), Level 3 analytical reporting was requested for all removal confirmation samples. The laboratory's overall system performance and data quality were acceptable and within the guidelines specified in the analytical method. The laboratory data validation reports are included in Appendix E.

The temperatures of two coolers were greater than 6°C. The first cooler contained samples primarily collected on April 9, 2013 and some samples collected on April 10, 2013, and the second cooler contained samples collected on April 10, 2013. Both coolers were picked up on April 10, 2013 and logged in at the laboratory on April 10, 2013. In the first cooler, the temperature blank was 4.3 °C and the 3-sample average temperature was 6.2 °C. For the second cooler, the temperature blank was 8.9 °C and the 3-sample average temperature was 7.6 °C.

All samples were placed on ice at the time of collection, but because the cooler is opened and closed frequently during sample collection to add samples after they are collected and to remove samples for XRF measurement, the sample cooling is not efficient. Based on the times that the last samples were collected and the coolers finally closed and the times of the log-in at the lab, the samples in the first cooler were undisturbed on ice for over 24 hours, but the samples in the second cooler were undisturbed on ice for about 6 hours. The relatively short period of time is not sufficient to cool the soil samples to the target temperature, but the samples were being stored under conditions to maximize the preservation of the samples.

Note that the samples were being analyzed for PAHs which are extremely persistent in the environment in non-aqueous matrices. The PAHs would not be expected to

degrade significantly over such as short period of time during sample storage. Therefore, the results of the samples in the subject coolers can be used for evaluation of the site. The results were flagged with a "J" qualifier.

2.4 Decontamination Procedures

The equipment utilized by the subcontractor was clean upon arrival at the site. Prior to demobilizing the equipment from the site, soil and sand were removed from the equipment using dry methods. All samples were collected using disposable equipment (such as disposable plastic trowels), so no decontamination water was generated.

2.5 Site Restoration

Restoration of the excavated areas at the Site occurred from April 17 through April 23, 2013. The backfill material consisted of approximately 2 to 4.5 feet of sand and 6 inches of topsoil. Grass seed was then applied and raked into the topsoil. Any areas that do not show vegetative growth following a reasonable amount of time will be reseeded. Photo documentation of site restoration activities is included in Appendix D.

2.6 Site Survey

Following soil removal activities, the locations of the confirmation samples were surveyed using a global positioning system (GPS) unit. The final excavation limits were consistent with the proposed excavation boundaries; no post-excavation survey was performed.

2.7 Groundwater Response Action

In the vicinity of monitoring well MW02 (Excavation Area No. 4) (see Figure 3), the depth of the excavation was extended to 7 feet bgs, approximately 2 feet below the approximate water table as measured in the well and the top of clay in that area, to remove contaminants in the smear zone in order to reduce organic contaminant concentrations in the groundwater. Groundwater was not initially encountered during the excavation, however, rain water and possibly groundwater accumulated in the excavation while waiting for sample analysis to be completed.

New monitoring wells will be installed in the near future to replace MW-01 and MW-02, which were abandoned prior to the excavation.

3. Conclusions

Lead-, arsenic-, and PAH-impacted soil were encountered in the soils at the USCG Atwater Facility presumably resulting from historic activities at the Site. A removal action was conducted in accordance with the USEPA's Guidance for Conducting Non-Time-Critical Removal Actions Under CERCLA (USEPA, December 1993). The primary objective of the removal action was to protect public health and welfare and the environment, thereby facilitating the transfer of the remaining property from the federal inventory to be conveyed to the City of Detroit. RAOs of 400 mg/kg for lead, 7.6 mg/kg for arsenic, and 2.0 mg/kg for BaPEqs were selected for the Site; these RAOs are protective of the anticipated future land use. The removal action activities at the Site occurred from April 8 through April 23, 2013.

The removal of the impacted soils at the USCG Atwater Facility occurred from April 8 through April 17, 2013. Approximately 2,440 tons or 1,480 cubic yards of non-hazardous contaminated soil were excavated from the property and transported to Veolia's Arbor Hills Landfill in Northville, Michigan for disposal. The excavations were backfilled and seeded. Soil samples were collected from the excavations bottoms and sidewalls for laboratory analysis of lead, arsenic, and PAHs. Laboratory analytical results of the soil samples indicated six samples with lead concentrations greater than the lead RAO of 400 mg/kg, eight samples with arsenic concentrations greater than the arsenic RAO of 7.6 mg/kg, and three samples with BaPEq concentrations greater than the BaPEqs RAO of 2.0 mg/kg. Sample locations where laboratory analytical results exceeded RAOs are shown on Figure 4.

The USCG, acting as the lead agency and in compliance with the NCP and CERCLA 120 (h), has removed impacted soils at the USCG Atwater Facility to the extent practicable as outlined in the EE/CA and RAWP. Based on the laboratory analytical results of the samples collected from the excavation bottoms and sidewalls, there were several locations where confirmation sampling results were greater than RAOs. Four were sidewall locations along the property boundary, and these results are not representative of the soil on the site because the soil on one side of the sample is off-site and soil on the other side has been replaced with clean fill. Two other sidewall locations were adjacent to the slip and additional excavation was not attempted due to concerns about damaging the pier structure. Similar to the property boundary samples, these locations are not representative of the remaining soil. Four excavation bottom samples were left in place that had concentrations greater than the RAOs, but exposure is limited because 2.5 feet of clean fill was placed over these locations.

Because of the contaminant concentrations that were greater than the RAOs were detected in confirmation samples, a statistical analysis was performed on the data to determine the site exposure concentrations for arsenic, lead, and BaPEqs. The results of this analysis showed that EPCs less than the RAOs, so the site meets the residential exposure limit requirements.

The current and anticipated future use of this property is recreational. The soil removal action was protective of public health and welfare and the environment for this anticipated land use. Therefore, the USCG Atwater Facility is adequate for transfer based on compliance with the above CERCLA requirements.

4. References

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Table 1a. Potential Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance, United States Coast Guard Atwater Facility, Detroit, Michigan

Constituent of Concern and Media	Authority	Act	Statute, Regulation, Administrative Code, or Guidance Document	Status	Synopsis of Requirement, Criteria, or Guidance
PAHs, Arsenic, and/or Lead in Soil	Federal Advisories, Guidance, and Training Material.	NA	Recommendations of the Technical Review Workgroup (TRW) for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil. Technical Review Workgroup for Lead (TRW), Washington, D.C. (United States Environmental Protection Agency 1996.) USEPA Technical Working Group for Lead 1996	To Be Considered.	This is non-promulgated guidance that describes a methodology for assessing risks associated with non-residential adult exposures to lead in soil.
		NA	United States Environmental Protection Agency (USEPA) Integrated Exposure Uptake Biokinetic (IEUBK) Model for lead. And Adult Lead Models (ALM). IEUBK and ALM Models	To Be Considered.	These values are non-promulgated models used to assess risks associated with lead.
		NA	EPA Human Health Assessment Cancer Slope Factors (CSFs)	To Be Considered.	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants. Were used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.
		NA	Reference Dose (RfD)	To Be Considered.	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media. Were used to calculate potential non-carcinogenic hazards caused by exposure to contaminants.
		NA	Guidelines for Carcinogen Risk Assessment EPA/630/P-03/001F (March 2005)	To Be Considered.	Guidance for assessing cancer risk. Were used to calculate potential carcinogenic risks caused by exposure to contaminants.
		NA	Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens EPA/630/R-03/003F (March 2005)	To Be Considered.	Guidance of assessing cancer risks to children. Were used to calculate potential carcinogenic risks to children caused by exposure to contaminants.
	State Requirements and/or Criteria.	Natural Resources Environmental Protection Act of 1994, Public Act 451 as amended (NREPA)	Michigan Compiled Law 324, Part 201, Michigan Administrative Code (MAC) Rules 299.5706, 299.5707, 299.5718 through 299.5726, 299.5732, 299.5746, 299.5748, 299.5750, and 299.5752. MAC Rules for Part 201	Relevant and Appropriate.	These are promulgated statues and rules associated with cleanup criteria. See Table 2 in the MAC Rules for Generic Criteria and Screening Levels for each land use category. Only Residential exposure values are relevant and appropriate.
	State Advisories, Guidance, and Training Material.	NA	Michigan Department of Environmental Quality (MDEQ) Remediation and Redevelopment Divisions (RRD) Operational Memorandum Number 1 (Part 201 Cleanup Criteria). MDEQ RRD Op Memo 1	To Be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide guidance on satisfying the cleanup criteria requirements under NREPA Part 201; it defines land-use categories and provides updated and interim cleanup criteria and screening levels. The attachments to the operational memorandum provide technical support documentation for the chemical physical data and algorithms used to calculate the criteria.
		NA	MDEQ RRD Operational Memorandum Number 2 (Part 201Sampling and Analysis Guidance). MDEQ RRD Op Memo 2	To Be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide guidance on target detection limits and designated analytical methods; soil leaching methods; sample preservation; sampling, handling, and holding times; and the collection of samples for comparison to generic Criteria

Table 1a. Potential Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance, United States Coast Guard Atwater Facility, Detroit, Michigan

Constituent of Concern and Media	Authority	Act	Statute, Regulation, Administrative Code, or Guidance Document	Status	Synopsis of Requirement, Criteria, or Guidance
PAHs, Arsenic, and/or Lead in Air	Federal Regulatory Requirement and/or Criteria.	Clean Air Act (CAA)	42 USC 7409 42 USC 7409 40 CFR 50.12 and Appendix G to Part 50. 40 CFR 50.12 Appendix G to Part 50	Applicable.	These rules establish emissions limits for lead and describe test methods and procedures to determine emissions. The national primary and secondary ambient air quality standards for lead and its compounds, measured as elemental lead by a reference method based on Appendix G to 40 CFR 50, or by an equivalent method, are 1.5 micrograms per cubic meter ($\mu g/m^3$), maximum arithmetic mean averaged over a calendar quarter. There are no ambient air quality standards for PAHs and arsenic.
	Federal Advisories, Guidance, and Training Material.	NA	None.	None.	None.
	State Regulatory Requirement and/or Criteria.	NA	Michigan Air Pollution Control Rules Part 2. Air Use Approval Exemptions R336.1290. Part 2 Air Use Approval Exemptions	Applicable.	Establishes exemption from permit to install for emission units with limited emissions. Establishes thresholds and limits by pollutant type and recordkeeping requirements.
	State Advisories and Guidance.	NA	None.	None.	None.
PAHs, Arsenic, and/or Lead in Water (Groundwater and Surface Water)	Federal Regulatory Requirement and/or Criteria.	Safe Drinking Water Act (SDWA) Act 399 of 1976 (SDWA)	42 USC Chapter 6A Public Health Section 300g. 42 USC 300g National Primary Drinking Water Standards-Maximum Contaminant Levels (MCLs) (40 CFR 141). 40 CFR 141	Relevant and Appropriate.	MCLs have been promulgated for a number of common organic and inorganic contaminants. These levels regulate the concentration of contaminants in public drinking water supplies based on health effects and technical capabilities. MCLs may also be considered relevant and appropriate for groundwater aquifers potentially used for drinking water sources. The MCL for benzo(a)pyrene is 0.0002 milligrams per liter (mg/L). The MCL for arsenic in drinking water is 0.010 mg/L. The MCL for lead in drinking water is 0.015 mg/L.
	State Regulatory Requirement.	NREPA, Act 451 of 1994	Michigan Compiled Laws Chapter 324, Part 201. MAC Rules, Groundwater Clean-up Criteria. R299.5706, R299.5708, R299.5709, R299.5710. R299.5712, R299.5716, R299.5730, R299.5732, and R299.5744. MAC Part 201 Rules	Relevant and Appropriate.	See Table1 in the MAC Part 201 Rules for Generic Criteria and Screening Levels. These values were only used in absence of MCLs. Only the reseidential exposure values are relevant and appropriate.

Table 1a. Potential Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Guidance, United States Coast Guard Atwater Facility, Detroit, Michigan

Constituent of Concern and Media	Authority	Act	Statute, Regulation, Administrative Code, or Guidance Document	Status	Synopsis of Requirement, Criteria, or Guidance
PAHs, Arsenic, and/or Lead in Water (Groundwater and Surface Water) Continued	State Advisories, Guidance, and Training Material.	NA	RRD Operational Memorandum Number 1 (Part 201 Cleanup Criteria). MDEQ RRD Op Memo 1	To be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide guidance on satisfying the cleanup criteria requirements under NREPA Part 201; it defines land-use categories and provides updated and interim cleanup criteria and screening levels. The attachments to the operational memorandum provide technical support documentation for the chemical/physical data and algorithms used to calculate the criteria.
		NA	MDEQ RRD Operational Memorandum Number 2 (Part 201 Sampling and Analysis Guidance). MDEQ RRD Op Memo 2	To be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide guidance on target detection limits and designated analytical methods; soil leaching methods; sample preservation; sampling, and handling and holding times; and the collection of samples for comparison to generic criteria.

Notes:

NA Not Applicable.

Table 1b. Potential Location-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Requirements, United States Coast Guard Atwater Facility, Detroit, Michigan

Location	Authority	Act	Statute, Regulation, Administrative Code, or Guidance Document	Status	Synopsis of Requirement, Criteria, or Guidance
Within or directly adjacent to a protected coastal area or wetland; Federally owned property; Registered National Historic Site; Within or directly adjacent to a wildlife refuge; Within or directly adjacent to Habitat for Endangered or Threatened Species; Within or directly adjacent to stop-over for migratory birds.	Federal Regulatory Requirement.	None.	None.	None.	None.
	Federal Advisories, Guidance, and Training Material.	None.	None.	None.	None.
Activities near Great Lakes Shorelines	State Regulatory Requirement and/or Criteria.- Land and Water Management Division	NREPA	Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). (MCL 324.32301, et seq.) Michigan Administrative Code: R 281.21, et. seq. Formerly Know as Act 245 (1970)	Relevant and Appropriate	Regulates the alteration of the soil and vegetation within a great Lakes shoreland environmental area without a permit. Regulates activities in high-risk erosion areas and flood risk areas (administered by local units of government through the federal flood insurance program) as well as environmental areas. May be applied to environmental sites of contamination that may affect the protection and management of Great Lake shoreland areas.
Within or directly adjacent to Habitat for Endangered or Threatened Species		NREPA.	Michigan Compiled Law 324 Part 365 Endangered Species Protection - Programs; cooperative agreements (Section 324.36504). Part 365 Section 324.36504 MAC R322.2.1 through 322.73.1 R322.2.1 - 322.73.1	Relevant and Appropriate.	The department may establish programs, including acquisition of land or aquatic habitat, as is considered necessary for the management of endangered or threatened species. The rules list the specific land and aquatic habit. No endangered or threatened species are likely to inhabit the site.
		NREPA.	Michigan Compiled Law 324 Part 365 Endangered Species Protection – Prohibitions; exceptions (Section 324.36505). Part 365 Section 324.36505	Relevant and Appropriate.	Actions taken or funded involving the transport and possession of endangered or threatened species are unlawful.
	State Advisories, Guidance, and Training Material.	None.	None.	None.	None.

Table 1c. Potential Action-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Requirements, United States Coast Guard Atwater Facility, Detroit, Michigan

Action	Authority	Act or Statute	Regulation, Administrative Code, or Guidance Document	Status	Synopsis
Excavation of contaminated soil and monitoring or remediation related to impacts to groundwater.	Federal Regulatory Requirement.	Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the 1986 Superfund Amendments and Reauthorization Act (SARA).	Federal Facilities 42 United States Code (USC) 9620 42 USC 9620 Reporting Hazardous Substance Activity When Selling or Transferring Federal Real Property (Title 40 Code of Federal Regulations [CFR] 373) 40 CFR 373	Applicable.	These rules require notifications related to hazardous substances prior to the sale or transfer of real property owned by the federal government. This is applicable if a property with residual contamination is transferred.
		CERCLA as amended by the 1986 SARA.	National Contingency Plan (42 USC 9605). 42 USC 9605 National Contingency Plan (40 CFR Section 300.400 through 300.415). 40 CFR 300	Applicable.	These promulgated rules require performing a Removal Site Evaluation and a Removal Action including preparing certain documents (a Quality Assurance Project Plan [QAPP], a field sampling plan [FSP], and an engineering evaluation and cost assessment [EE/CA]), considering federal and state ARARs, soliciting community involvement, and providing notifications prior to the removal action.
		Executive Order 12580 of January 23, 1987, Superfund Implementation.	Executive Order 12580- Superfund Implementation Executive Order 12580	Applicable.	The Executive Order provides federal agencies, including the United States Coast Guard, the authority to carry out their CERLCA responsibilities under the National Contingency Plan as a lead agency.
		Resource Conservation and Recovery Act of 1976 (RCRA).	Identification and Listing of Hazardous Waste 42 USC 6921. 42 USC 6921 Identification and Listing of Hazardous Waste (40 CFR 261). 40 CFR 261 Land Disposal Restrictions 40 Part 268. 40 CFR 268	Applicable.	These regulations establish requirements for identifying any hazardous wastes that may be generated in the course of the Removal action. No wastes are anticipated to be hazardous.
		RCRA.	Standards Applicable to Generators of Hazardous Waste 42 USC 6922. 42 USC 6922 Standards Applicable to Generators of Hazardous Waste (40 CFR 262). 40 CFR 262 Standards Applicable to Transporters of Hazardous Waste (40 CFR 263). 40 CFR 263	Applicable.	These regulations establish requirements for the on-site management of any hazardous wastes that may be generated in the course of the removal action. No wastes are anticipated to be hazardous.
		RCRA.	Standards Applicable to Generators of Hazardous Waste. (42 USC 6923). 42 USC 6921 Standards Applicable to Transporters of Hazardous Waste (40 CFR 263). 40 CFR 263 Standards for Universal Waste Management (40 CFR 273). 40 CFR 273	Applicable.	These regulations establish requirements for the off-site transportation of any hazardous wastes that may be generated in the course of the removal action. No wastes are anticipated to be hazardous.

Table 1c. Potential Action-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Requirements, United States Coast Guard Atwater Facility, Detroit, Michigan

Action	Authority	Act or Statute	Regulation, Administrative Code, or Guidance Document	Status	Synopsis
Excavation of contaminated soil and monitoring or remediation related to impacts to groundwater.		Hazardous Materials Transport Act (HMTA) as Amended by the Hazardous Materials Transport Uniform Safety Act of 1990.	Transportation of Hazardous Materials (49 USC 5101-5127). 49 USC Chapter 51 Hazardous Materials Regulations - General Information, Regulations and Definitions (49 CFR 171). 49 CFR 171 Hazardous Materials Regulations - Hazardous materials table, special provisions, hazardous materials communications, emergency response information, and training requirements (49 CFR 172). 49 CFR 172 Hazardous Materials Regulations Shippers – General Requirements for Shipments and Packages (49 CFR 173) 49 CFR 173	Applicable.	These regulations establish requirements for the off-site transportation of any hazardous wastes that may be generated in the course of the remedial action. No wastes are anticipated to be hazardous.
		Clean Air Act of 1970.	National primary and secondary ambient air quality standards 42 USC 7409. 42 USC 7409 National Primary and Secondary Ambient Air Quality Standards (40 CFR 50) 40 CFR 50	Applicable.	Engineering controls are required to reduce emissions associated with excavation and transportation, as needed, to maintain ambient air quality standards.
		Clean Water Act (CWA).	Water Pollution Prevention and Control, Standards and Enforcement, 33 USC 1313 through 1314. USC 33 National Pollution Discharge Elimination System (NPDES) (40 CFR 122 – 125). 40 CFR Parts 122-125	Applicable.	This regulation establishes requirements for storm-water discharges associated with industrial activity, including waste disposal areas. Soil remediation may require consideration of storm-water regulations.
		Occupational Safety & Health Administration Act (OSHA) of 1970.	Occupational Safety & Health Administration Act (Public Law 91-596 84 STAT. 1590). PL 91-596 OSHA Occupational Safety & Health Administration (29 CFR 1910). 29 CFR 1910	Applicable.	These regulations specify requirements for health and safety protection for workers potentially exposed to contaminants during hazardous waste site remediation.
		OSHA.	Occupational Safety & Health Administration Act (Public Law 91-596 84 STAT. 1590). PL 91-596 OSHA ACT Occupational Safety & Health Administration (29 CFR 1926). 29 CFR 1926	Applicable.	These regulations specify requirements for health and safety protection for workers at construction sites.

Table 1c. Potential Action-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Requirements, United States Coast Guard Atwater Facility, Detroit, Michigan

Action	Authority	Act or Statute	Regulation, Administrative Code, or Guidance Document	Status	Synopsis
Excavation of contaminated soil and monitoring or remediation related to impacts to groundwater.	State Regulatory Requirement.	Natural Resources Environmental Protection Act of 1994, Public Act 451 as amended (NREPA).	Soil Conservation, Erosion, and Sedimentation Control Part 91 Michigan Administrative Code (MAC) R323.1702(1), R323.1709 (2), R323.1709 (3), R323.1709 (4), R323.1709 (5). Part 91	Relevant and Appropriate.	These regulations specify requirements for earth change actions including erosion and sedimentation control measures that will effectively reduce accelerated soil erosion and resulting sedimentation. These regulations require the construction of temporary or permanent control measures to remove sediment from run-off water before it leaves the site.
		NREPA.	Michigan Compiled Law 324, Part 55 Section 324.5524 Air Pollution Control. MCL 324 Part 55 MAC Air Pollution Control Rules 336.1370 through 336.1374. Michigan Air Pollution Control Rules	Relevant and Appropriate.	These promulgated statues and rules are associated with fugitive dust emissions. Dust from excavations and handling will be controlled using measures such as water sprays.
		NREPA.	Michigan Compiled Law 324, Part 111 Hazardous Waste Management Sections 324.11138 and 324.11132a. Section 324.11138 Section 324.11132a MAC R299.9208, R299.9209, R299.9212, R299.9216, R299.9217, R299.9301- 9308, R299.9311, R299.9401-9413. Part 111 Rules	Relevant and Appropriate.	Defines hazardous waste and establishes requirements for hazardous waste generators, transporters, and treatment/storage/disposal facilities. Regulates the generation, transport, treatment, storage, and disposal of hazardous wastes from site remediation. Regulates closure, post-closure, and corrective action for hazardous waste treatment, storage, and disposal facilities. Remedial action may generate hazardous waste and involve management of hazardous waste. May be applied to off-site disposal of hazardous waste. Used for determining how and in what type of disposal facility contaminated media may be removed to. May be applied to construction and operation of on-site treatment, storage or disposal units relative to requirements for characterization and handling of hazardous waste. Applied to the excavation of certain contaminated media. Note: The State of Michigan has authorization to administer Federal RCRA Subtitle C in the State. No wastes are anticipated to be hazardous.
		NREPA.	Michigan Compiled Law 324, Part 121 Sections 324.12103, 324.12109. Part 121 Section 324.12103 Part 121 Section 324.12109	Relevant and Appropriate.	These are promulgated statues and rules associated with liquid industrial waste management, such as decontamination fluid.

Table 1c. Potential Action-Specific Applicable or Relevant and Appropriate Requirements and To Be Considered Requirements, United States Coast Guard Atwater Facility, Detroit, Michigan

Action	Authority	Act or Statute	Regulation, Administrative Code, or Guidance Document	Status	Synopsis
Excavation of contaminated soil and monitoring or remediation related to impacts to groundwater.	Federal Advisories and Guidance.	None.	None.	NA.	NA.
	State Advisories and Guidance.	NA.	MDEQ Water Bureau Soil Erosion and Sedimentation (SES) Control Program, Soil Erosion and Sedimentation Training Manual SES Training Manual	To Be Considered.	This document includes non-promulgated guidance material prepared to assist in the design and construction of erosion and sedimentation control measures.
		NA.	MDEQ Remediation and Redevelopment Division (RRD) Operational Memorandum Number 2 (Part 201 Sampling and Analysis Guidance) MDEQ RRD Op Memo 2	To Be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide guidance on target detection limits and designated analytical methods; soil leaching methods; sample preservation, sampling, and handling and holding times; and the collection of samples for comparison to generic criteria.
			MDEQ RRD Operational Memorandum Number 4 (Site Characterization and Remediation Verification) MDEQ RRD Op Memo 4	To Be Considered.	This document is a non-promulgated memorandum prepared by the MDEQ to provide direction for generating data for facility characterization (nature, extent, and impact of a release or threat of a release) and monitoring to support remedial decisions and assessing exposure pathways for compliance with cleanup criteria. The sampling strategies identified in this document represent acceptable approaches and ranges of appropriate assumptions that are intended to support consistent exercise of professional judgment in a manner that produces satisfactory outcomes. Alternative approaches may be used if the person proposing the alternative demonstrates that the approach meets all requirements of the statute and rules.

Notes:
NA Not Applicable.

TABLE 2

CONFIRMATION SOIL SAMPLE FIUELD SCREENING RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

Sample Location	Sample Identification	Excavation Area Location	XRF Analysis Date	Analyte	1st XRF Reading (ppm)	2nd XRF Reading (ppm)	3rd XRF Reading (ppm)	XRF Limit of Detection (ppm)	Automatically Generated XRF Average (ppm)	Fixed-Base Laboratory Analysis (mg/kg)	COMMENTS
DA-SB-201	DA-SB-201	Area 1	4/11/2013	Lead	132	49	27	4	69	66	dk grey silty clay - wet
				Arsenic	11	10	7	3	9	6.7	
DA-SB-202	DA-SB-202	Area 1	4/11/2013	Lead	30	23	40	4	31	39	dk grey silty clay - wet
				Arsenic	7	6	7	3	7	6.3	
DA-SB-203	DA-SB-203	Area 1	4/11/2013	Lead	23	18	25	4	22	29	dk grey silty clay - wet
				Arsenic	7	12	11	3	10	5.2	
DA-SB-204	DA-SB-204	Area 1	4/11/2013	Lead	37	104	29	4	57	40	dk grey silty clay - wet
				Arsenic	6	26	7	3	13	6.2	
DA-SB-205	DA-SB-205	Area 1	4/11/2013	Lead	35	27	20	4	27	21	dk grey silty clay - wet
				Arsenic	9	8	11	3	9	6.1	
DA-SB-206	DA-SB-206	Area 1	4/11/2013	Lead	450	642	297	4	463	410	dk grey silty clay - wet
				Arsenic	27	21	13	3	20	8.9	
DA-SB-207	DA-SB-207	Area 1	4/11/2013	Lead	141	140	90	4	124	99	dk grey silty clay - wet
				Arsenic	17	11	10	3	13	6.1	
DA-SB-208	DA-SB-208	Area 2	4/14/2013	Lead	297	140	165	4	201	340	grey, rocky silty clay
				Arsenic	15	22	14	3	17	7.7	
DA-SB-209	DA-SB-209	Area 2	4/14/2013	Lead	536	581	621	4	579	510	grey, silty clay
				Arsenic	20	22	32	3	25	11	
DA-SB-210	DA-SB-210	Area 2	4/14/2013	Lead	5.4	5.5	5.5	4	5	2.7	brn, tan sand (fill around drain pipe)
				Arsenic	4.5	4.5	4.5	3	5	2.3	
DA-SB-211	DA-SB-211	Area 2	4/14/2013	Lead	96	24	423	4	181	43	duplicate, grey clay
				Arsenic	12	9	15	3	12	5.8	
DA-SB-212	DA-SB-212	Area 2	4/14/2013	Lead	111	206	112	4	143	220	black silty soil, some clay
				Arsenic	17	13	15	3	15	5.4	
DA-SB-213	DA-SS-213-0002	Area 3	4/10/2013	Lead	446	715	605	4	589	720	black rocky soil w someclay
				Arsenic	19	37	34	3	30	8.3	
DA-SB-214	DA-SS-214-0002	Area 3	4/10/2013	Lead	332	336	219	4	296	290	black rocky soil w someclay
				Arsenic	23	16	14	3	18	8.7	

TABLE 2

CONFIRMATION SOIL SAMPLE FIUELD SCREENING RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

Sample Location	Sample Identification	Excavation Area Location	XRF Analysis Date	Analyte	1st XRF Reading (ppm)	2nd XRF Reading (ppm)	3rd XRF Reading (ppm)	XRF Limit of Detection (ppm)	Automatically Generated XRF Average (ppm)	Fixed-Base Laboratory Analysis (mg/kg)	COMMENTS
DA-SB-215	DA-SS-215-0002	Area 3	4/10/2013	Lead	1172	426	441	4	680	370	black rocky soil w someclay
				Arsenic	53	62	46	3	54	7.2	
DA-SB-216	DA-SS-216-0002	Area 3	4/10/2013	Lead	250	416	202	4	289	180	black rocky soil w someclay
				Arsenic	26	16	30	3	24	6.8	
DA-SB-217	DA-SS-217-0002	Area 3	4/10/2013	Lead	285	647	672	4	535	530	black rocky soil w someclay
				Arsenic	37	42	40	3	40	9.0	
DA-SB-218	DA-SS-218-0002	Area 3	4/10/2013	Lead	578	648	675	4	634	660	black rocky soil w someclay
				Arsenic	28	23	34	3	28	9.2	
DA-SB-219	DA-SS-219-0002	Area 3	4/10/2013	Lead	300	361	206	4	289	270	hard blue-grey clay
				Arsenic	31	25	25	3	27	6.0	
DA-SB-220	DA-SS-220-0002	Area 3	4/10/2013	Lead	20	26	19	4	22	5900/13	hard blue-grey clay
				Arsenic	7	7	7	3	7	18	
DA-SB-221	DA-SS-221-0002	Area 3	4/10/2013	Lead	107	58	83	4	83	35	hard blue-grey clay
				Arsenic	14	11	17	3	14	5.1	
DA-SB-222	DA-SS-222-0002	Area 3	4/10/2013	Lead	977	794	26	4	599	720	hard blue-grey clay
				Arsenic	78	22	5.9	3	35	5.9	
DA-SB-222	DA-SS-222-0002	Area 3	4/10/2013	Lead	609	505	1042	4	719	720	Duplicate read SB222 after thoroughly mixing the sample
				Arsenic	21	21	68	3	37	5.9	
DA-SB-223	DA-SS-223-0002	Area 3	4/10/2013	Lead	27	23	62	4	37	16	hard blue-grey clay
				Arsenic	9	8	10	3	9	4.2	
DA-SB-224	DA-SB-224	Area 4	4/11/2013	Lead	17	51	42	4	37	63	hard blue-grey clay
				Arsenic	6	11	13	3	10	5.1	
DA-SB-225	DA-SB-225	Area 4	4/11/2013	Lead	22	56	54	4	44	31	hard blue-grey clay
				Arsenic	5.9	10	10	3	9	2.6	
DA-SB-226	DA-SB-226	Area 4	4/11/2013	Lead	25	28	27	4	27	35	hard blue-grey clay
				Arsenic	8	6	5.8	3	7	4.2	
DA-SB-227	DA-SB-227	Area 4	4/11/2013	Lead	79	96	123	4	99	72	hard blue-grey clay
				Arsenic	10	9	12	3	10	5.9	

TABLE 2

CONFIRMATION SOIL SAMPLE FIUELD SCREENING RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

Sample Location	Sample Identification	Excavation Area Location	XRF Analysis Date	Analyte	1st XRF Reading (ppm)	2nd XRF Reading (ppm)	3rd XRF Reading (ppm)	XRF Limit of Detection (ppm)	Automatically Generated XRF Average (ppm)	Fixed-Base Laboratory Analysis (mg/kg)	COMMENTS
DA-SB-228	DA-SB-228	Area 5	4/11/2013	Lead	8	8	14	4	10	6.9	blue-gray clay
				Arsenic	6	6	11	3	8	5.1	
DA-SB-229	DA-SB-229	Area 5	4/11/2013	Lead	11	7	12	4	10	6.5	blue-gray clay
				Arsenic	9	5.6	6	3	7	6.1	
DA-SB-230	DA-SB-230	Area 5	4/11/2013	Lead	8	18	7	4	11	6.9	blue-gray clay
				Arsenic	8.7	7	5.4	3	7	4.3	
DA-SB-231	DA-SB-231	Area 5	4/11/2013	Lead	17	31	19	4	22	7.5	blue-gray clay
				Arsenic	7	9	6	3	7	5.1	
DA-SB-232	DA-SB-232	Area 6	4/14/2013	Lead	4.6	5.8	8.8	4	6	7.0	grey hardclay
				Arsenic	3.6	4.6	7	3	5	6.1	
DA-SB-233	DA-SB-233	Area 6	4/14/2013	Lead	7.1	19	17	4	14	16	grey hard clay
				Arsenic	7	7	10	3	8	5.8	
DA-SB-234	DA-SB-234	Area 6	4/14/2013	Lead	145	151	130	4	142	220	black silty soil
				Arsenic	8	9	8	3	8	6.6	
DA-SB-235	DA-SB-235	Area 6	4/14/2013	Lead	1113	1162	703	4	993	1800	rocky, black silty soil
				Arsenic	134	135	66	3	112	38	
DA-SB-236	DA-SB-236	Area 6	4/14/2013	Lead	24	31	13	4	23	26	lt grey crushedshell
				Arsenic	5.7	5.8	7.8	3	6	4.9	
DA-SB-237	DA-SB-237	Area 6	4/14/2013	Lead	15	9	178	4	67	31	grey hard clay
				Arsenic	12	6	11	3	10	2.5	
DA-SB-238	DA-SB-238-0305	Area 7	4/9/2013	Lead	62	36	52	4	50	56	black soil with clay and rocky
				Arsenic	ND	ND	ND	3	2	4.5	
DA-SB-239	DA-SB-239-0305	Area 7	4/9/2013	Lead	21	18	22	4	20	13	black soil with clay and rocky
				Arsenic	17	ND	12	3	10	5.5	
DA-SB-240	DA-SB-240-0305	Area 7	4/9/2013	Lead	276	146	179	4	200	120	black soil with clay and rocky
				Arsenic	30	15	13	3	19	7.2	
DA-SB-241	DA-SB-241-0305	Area 7	4/9/2013	Lead	631	198	246	4	358	320	black soil with clay and rocky
				Arsenic	22	25	ND	3	16	7.7	

TABLE 2

CONFIRMATION SOIL SAMPLE FIUELD SCREENING RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

Sample Location	Sample Identification	Excavation Area Location	XRF Analysis Date	Analyte	1st XRF Reading (ppm)	2nd XRF Reading (ppm)	3rd XRF Reading (ppm)	XRF Limit of Detection (ppm)	Automatically Generated XRF Average (ppm)	Fixed-Base Laboratory Analysis (mg/kg)	COMMENTS
DA-SB-242	DA-SB-242-0305	Area 7	4/9/2013	Lead	14	18	23	4	18	18	Extremely strong petroleum-like odor.
				Arsenic	11	14	12	3	12	7.0	
DA-SB-243	DA-SB-243-0305	Area 7	4/9/2013	Lead	44	45	144	4	78	38	black soil with clay and rocky
				Arsenic	9	12	29	3	17	6.2	

Field screening of confirmation soil samples was performed with an X-ray fluorescence (XRF) analyzer for arsenic and lead.

ND = Not Detected.

ppm = Parts per Million.

mg/kg = Milligrams per Kilogram.

TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB201	DASB202	DASB203			DASB204	DASB205
SAMPLE IDENTIFICATION		DASS201-0002	DASS202-0002	DASS203-0002	DASS203-0002-AVG	DASS203-0002-D	DASS204-0002	DASS205-0002
SAMPLE DATE		20130411	20130411	20130411	20130411	20130411	20130411	20130411
TOP DEPTH, FEET BGS		0	0	0	0	0	0	0
BOTTOM DEPTH, FEET BGS		2	2	2	2	2	2	2
NOTES								
METALS (MG/KG)								
ARSENIC	7.6	6.7	6.3	5.2	5.25	5.3	6.2	6.1
LEAD	400	66	39	29	29	29	40	21
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	0.32	0.94	0.28	0.62	0.96	0.25	1.0
2-METHYLNAPHTHALENE	NC	0.1 U	0.037 J	0.1 U	0.1 U	0.1 U	0.11 U	0.081 J
ACENAPHTHENE	NC	0.1 U	0.26	0.1 U	0.064 J	0.064 J	0.11 U	0.23
ACENAPHTHYLENE	NC	0.1 U	0.11 U	0.1 U	0.046 J	0.046 J	0.11 U	0.1 U
ANTHRACENE	NC	0.055 J	0.68	0.093 J	0.2815	0.47 J	0.078 J	0.51
BENZO(A)ANTHRACENE	NC	0.27	0.82	0.22 J	0.57	0.92 J	0.18	0.89
BENZO(A)PYRENE	NC	0.23	0.64	0.2 J	0.415	0.63 J	0.18	0.74
BENZO(B)FLUORANTHENE	NC	0.28	0.76	0.23 J	0.52	0.81 J	0.23	0.95
BENZO(G,H,I)PERYLENE	NC	0.11	0.27	0.097 J	0.1985	0.3 J	0.11 J	0.35
BENZO(K)FLUORANTHENE	NC	0.18	0.46	0.14 J	0.27	0.4 J	0.11	0.5
CHRYSENE	NC	0.26	0.91	0.24 J	0.515	0.79 J	0.22	0.84
DIBENZO(A,H)ANTHRACENE	NC	0.026 J	0.11	0.022 J	0.071	0.12	0.021 J	0.084 J
FLUORANTHENE	NC	0.42	1.6	0.41 J	1.055	1.7 J	0.31	1.5
FLUORENE	NC	0.028 J	0.37	0.1 U	0.085	0.12	0.11 U	0.19
INDENO(1,2,3-CD)PYRENE	NC	0.095 J	0.26	0.081 J	0.1855	0.29 J	0.088 J	0.32
NAPHTHALENE	NC	0.1 U	0.052 J	0.1 U	0.1 U	0.1 U	0.11 U	0.42
PHENANTHRENE	NC	0.28	1.9	0.21 J	0.855	1.5 J	0.17	1.5
PYRENE	NC	0.49	1.6	0.44 J	1.17	1.9 J	0.36	1.8

Shaded cell indicates concentration greater than Removal Action Objective.
BGS - Below ground surface.
D - Duplicate sample.
J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
NC - No criterion (Removal Action Objective).
U - Below detection limit at detection limit shown.

TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION SAMPLE IDENTIFICATION SAMPLE DATE TOP DEPTH, FEET BGS BOTTOM DEPTH, FEET BGS NOTES	Removal Action Objective	DASB206 DASS206-0002 20130411 2.5 4.5	DASB207 DASS207-0002 20130411 2.5 4.5	DASB208 DASS208-0002 20130412 0 2	DASB209 DASS209-0002 20130412 0 2 EXCAVATED	DASB210 DASS210-0002 20130412 0 2	DASB211 DASS211-0002 20130412 2.5 4.5	DASB212 DASS212-0002 20130412 2.5 4.5
METALS (MG/KG)								
ARSENIC	7.6	**8.9**	6.1	**7.7**	**11**	2.3	5.8	5.4
LEAD	400	**410**	99	340	**510**	2.7	43	220
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	0.39	0.28	0.38	0.85	0.019 U	0.13	0.37
2-METHYLNAPHTHALENE	NC	0.11 U	0.0067 J	0.096 U	0.034 J	0.019 U	0.099 U	0.013 J
ACENAPHTHENE	NC	0.035 J	0.016 J	0.033 J	0.079	0.019 U	0.099 U	0.21
ACENAPHTHYLENE	NC	0.11 U	0.014 J	0.096 U	0.017 J	0.019 U	0.099 U	0.013 J
ANTHRACENE	NC	0.18	0.057	0.089 J	0.18	0.019 U	0.099 U	0.1
BENZO(A)ANTHRACENE	NC	0.29	0.26	0.32	0.63	0.019 U	0.052 J	0.36
BENZO(A)PYRENE	NC	0.26	0.2	0.27	0.57	0.019 U	0.068 J	0.26
BENZO(B)FLUORANTHENE	NC	0.35	0.23	0.32	0.65	0.019 U	0.049 J	0.33
BENZO(G,H,I)PERYLENE	NC	0.13	0.093	0.16	0.34	0.019 U	0.039 J	0.091
BENZO(K)FLUORANTHENE	NC	0.21	0.12	0.14	0.38	0.019 U	0.039 J	0.17
CHRYSENE	NC	0.35	0.22	0.29	0.65	0.019 U	0.052 J	0.35
DIBENZO(A,H)ANTHRACENE	NC	0.055 J	0.025	0.031 J	0.12	0.019 U	0.099 U	0.027
FLUORANTHENE	NC	0.49	0.31	0.43	0.99	0.019 U	0.07 J	0.51
FLUORENE	NC	0.057 J	0.02	0.033 J	0.068	0.019 U	0.099 U	0.14
INDENO(1,2,3-CD)PYRENE	NC	0.1 J	0.089	0.12	0.31	0.019 U	0.039 J	0.11
NAPHTHALENE	NC	0.11 U	0.02 U	0.096 U	0.03 J	0.019 U	0.099 U	0.024
PHENANTHRENE	NC	0.41	0.2	0.32	0.84	0.019 U	0.049 J	0.45
PYRENE	NC	0.57	0.41	0.61	1.1	0.019 U	0.11	0.7

Shaded cell indicates concentration greater than Removal Action (
BGS - Below ground surface.
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J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
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TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB213	DASB214	DASB215	DASB216	DASB217	DASB218	DASB219
SAMPLE IDENTIFICATION		DASS213-0002	DASS214-0002	DASS215-0002	DASS216-0002	DASS217-0002	DASS218-0002	DASS219-0002
SAMPLE DATE		20130410	20130410	20130410	20130410	20130410	20130410	20130410
TOP DEPTH, FEET BGS		0	0	0	0	0	0	2.5
BOTTOM DEPTH, FEET BGS		2	2	2	2	2	2	4.5
NOTES		PROPERTY LINE	PROPERTY LINE	EXCAVATED	PIER WALL	EXCAVATED	EXCAVATED	
METALS (MG/KG)								
ARSENIC	7.6	**8.3**	**8.7**	7.2	6.8	**9**	**9.2**	6
LEAD	400	**720**	290	370	180	**530**	**660**	270
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	1.8	0.60	0.41	0.35	**2.9**	**2.5**	**7.9**
2-METHYLNAPHTHALENE	NC	0.19 UJ	0.21 UJ	0.19 UJ	0.21 UJ	0.96 UJ	0.2 UJ	0.42 UJ
ACENAPHTHENE	NC	0.14 J	0.21 UJ	0.19 UJ	0.21 UJ	0.96 UJ	0.27 J	0.92 J
ACENAPHTHYLENE	NC	0.069 J	0.21 UJ	0.19 UJ	0.21 UJ	0.96 UJ	0.2 UJ	0.42 UJ
ANTHRACENE	NC	0.44 J	0.091 J	0.17 J	0.21 UJ	0.48 J	0.92 J	3.5 J
BENZO(A)ANTHRACENE	NC	1.1 J	0.31 J	0.24 J	0.18 J	2 J	2 J	7 J
BENZO(A)PYRENE	NC	1.2 J	0.38 J	0.25 J	0.2 J	2.1 J	1.8 J	5.6 J
BENZO(B)FLUORANTHENE	NC	1.3 J	0.58 J	0.26 J	0.17 J	2.2 J	2.1 J	6.1 J
BENZO(G,H,I)PERYLENE	NC	0.69 J	0.32 J	0.1 J	0.12 J	1.4 J	1.1 J	2.9 J
BENZO(K)FLUORANTHENE	NC	0.9 J	0.4 J	0.21 J	0.15 J	1.2 J	1.1 J	4.7 J
CHRYSENE	NC	1.2 J	0.46 J	0.3 J	0.2 J	2.1 J	2.1 J	6 J
DIBENZO(A,H)ANTHRACENE	NC	0.25 J	0.1 J	0.19 UJ	0.21 UJ	0.28 J	0.22 J	0.64 J
FLUORANTHENE	NC	2.5 J	0.47 J	0.36 J	0.27 J	3.7 J	3.9 J	13 J
FLUORENE	NC	0.12 J	0.21 UJ	0.19 UJ	0.21 UJ	0.96 UJ	0.25 J	1.4 J
INDENO(1,2,3-CD)PYRENE	NC	0.61 J	0.25 J	0.19 UJ	0.091 J	1 J	0.9 J	2.7 J
NAPHTHALENE	NC	0.085 J	0.21 UJ	0.19 UJ	0.21 UJ	0.96 UJ	0.2 UJ	0.42 UJ
PHENANTHRENE	NC	1.9 J	0.26 J	0.24 J	0.11 J	1.8 J	3 J	8.9 J
PYRENE	NC	2.4 J	0.73 J	0.53 J	0.35 J	4.9 J	5 J	14 J

Shaded cell indicates concentration greater than Removal Action (
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CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB220	DASB221	DASB222			DASB223	DASB224
SAMPLE IDENTIFICATION		DASS220-0002	DASS221-0002	DASS222-0002	DASS222-0002-AVG	DASS222-0002-D	DASS223-0002	DASB224-0507
SAMPLE DATE		20130410	20130410	20130410	20130410	20130410	20130410	20130411
TOP DEPTH, FEET BGS		2.5	2.5	2.5	2.5	2.5	2.5	5
BOTTOM DEPTH, FEET BGS		4.5	4.5	4.5	4.5	4.5	4.5	7
NOTES								
METALS (MG/KG)								
ARSENIC	7.6	**18**	5.1	5.9 J	5.35	4.8	4.2	5.1
LEAD	400	13	35	**720**	**595**	**470**	16	63
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	0.38	0.15	1.00	1.5	2.0	1.8	0.046
2-METHYLNAPHTHALENE	NC	0.0068 J	0.019 UJ	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.02 U
ACENAPHTHENE	NC	0.061 J	0.013 J	0.2 UJ	0.155	0.21 J	0.2 UJ	0.015 J
ACENAPHTHYLENE	NC	0.0068 J	0.0054 J	0.2 UJ	0.058 J	0.058 J	0.2 UJ	0.02 U
ANTHRACENE	NC	0.25 J	0.036 J	0.12 J	0.325	0.53 J	0.22 J	0.014 J
BENZO(A)ANTHRACENE	NC	0.38 J	0.11 J	0.6 J	1	1.4 J	1.4 J	0.041
BENZO(A)PYRENE	NC	0.27 J	0.1 J	0.72 J	1.06	1.4 J	1.3 J	0.033
BENZO(B)FLUORANTHENE	NC	0.27 J	0.11 J	0.78 J	1.19	1.6 J	1.6 J	0.039
BENZO(G,H,I)PERYLENE	NC	0.13 J	0.066 J	0.44 J	0.65	0.86 J	0.7 J	0.02
BENZO(K)FLUORANTHENE	NC	0.16 J	0.084 J	0.45 J	0.685	0.92 J	0.79 J	0.019 J
CHRYSENE	NC	0.29 J	0.11 J	0.62 J	0.91	1.2 J	1.5 J	0.039
DIBENZO(A,H)ANTHRACENE	NC	0.031 J	0.017 J	0.097 J	0.1435	0.19 J	0.16 J	0.0037 J
FLUORANTHENE	NC	0.61 J	0.19 J	0.89 J	1.595	2.3 J	2.4 J	0.067
FLUORENE	NC	0.091 J	0.013 J	0.2 UJ	0.19 J	0.19 J	0.2 UJ	0.0069 J
INDENO(1,2,3-CD)PYRENE	NC	0.12 J	0.051 J	0.37 J	0.565	0.76 J	0.63 J	0.013 J
NAPHTHALENE	NC	0.019 UJ	0.019 UJ	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.02 U
PHENANTHRENE	NC	0.65 J	0.13 J	0.37 J	1.035	1.7 J	0.21 J	0.058
PYRENE	NC	0.71 J	0.22 J	1.1 J	1.85	2.6 J	2.4 J	0.081

Shaded cell indicates concentration greater than Removal Action (
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TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB225	DASB226	DASB227	DASB228	DASB229		
SAMPLE IDENTIFICATION		DASB225-0507	DASB226-0507	DASB227-0507	DASB228-0305	DASB229-0305	DASB229-0305-AVG	DASB229-0305-D
SAMPLE DATE		20130411	20130411	20130411	20130411	20130411	20130411	20130412
TOP DEPTH, FEET BGS		5	5	5	3	3	3	3
BOTTOM DEPTH, FEET BGS		7	7	7	5	5	5	5
NOTES								
METALS (MG/KG)								
ARSENIC	7.6	2.6	4.2	5.9	5.1	6.1	5.85	5.6
LEAD	400	31	35	72	6.9	6.5	6.8	7.1
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	0.090	0.43	0.25	0.021	0.014	0.014	0.019 U
2-METHYLNAPHTHALENE	NC	0.021 U	0.11 U	0.013 J	0.019 U	0.018 U	0.0185 U	0.019 U
ACENAPHTHENE	NC	0.19	0.15	0.034	0.019 U	0.018 U	0.0185 U	0.019 U
ACENAPHTHYLENE	NC	0.0061 J	0.11 U	0.012 J	0.019 U	0.018 U	0.0185 U	0.019 U
ANTHRACENE	NC	0.037	0.32	0.064 J	0.019 U	0.018 U	0.0185 U	0.019 U
BENZO(A)ANTHRACENE	NC	0.067	0.41	0.21 J	0.0036 J	0.0038 J	0.0038 J	0.019 U
BENZO(A)PYRENE	NC	0.066	0.3	0.18	0.019 U	0.0034 J	0.0034 J	0.019 U
BENZO(B)FLUORANTHENE	NC	0.071	0.34	0.22 J	0.0032 J	0.0038 J	0.0038 J	0.019 U
BENZO(G,H,I)PERYLENE	NC	0.034	0.16	0.084	0.0036 J	0.0042 J	0.0043	0.0044 J
BENZO(K)FLUORANTHENE	NC	0.037	0.17	0.12	0.019 U	0.018 U	0.0185 U	0.019 U
CHRYSENE	NC	0.063	0.35	0.19 J	0.0052 J	0.018 U	0.0185 U	0.019 U
DIBENZO(A,H)ANTHRACENE	NC	0.007 J	0.038 J	0.019 J	0.019 U	0.018 U	0.0185 U	0.019 U
FLUORANTHENE	NC	0.13	0.98	0.33 J	0.0068 J	0.0061 J	0.0061 J	0.019 U
FLUORENE	NC	0.068	0.11 J	0.051	0.019 U	0.018 U	0.0185 U	0.019 U
INDENO(1,2,3-CD)PYRENE	NC	0.032	0.14	0.082	0.019 U	0.018 U	0.0185 U	0.019 U
NAPHTHALENE	NC	0.018 J	0.04 J	0.016 J	0.019 U	0.018 U	0.0185 U	0.019 U
PHENANTHRENE	NC	0.09	0.5	0.23 J	0.0052 J	0.0053 J	0.0053 J	0.019 U
PYRENE	NC	0.15	0.97	0.4 J	0.008 J	0.008 J	0.008 J	0.019 U

Shaded cell indicates concentration greater than Removal Action (
BGS - Below ground surface.
D - Duplicate sample.
J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
NC - No criterion (Removal Action Objective).
U - Below detection limit at detection limit shown.

TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB230	DASB231			DASB232	DASB233	DASB234
SAMPLE IDENTIFICATION		DASB230-0305	DASB231-0305	DASB231-0305-AVG	DASB231-0305-D	DASB232-0305	DASB233-0305	DASB234-0305
SAMPLE DATE		20130411	20130411	20130411	20130412	20130412	20130412	20130412
TOP DEPTH, FEET BGS		3	3	3	3	3	3	3
BOTTOM DEPTH, FEET BGS		5	5	5	5	5	5	5
NOTES								PROPERTY LINE
METALS (MG/KG)								
ARSENIC	7.6	4.3	5.1	5.05	5	6.1	5.8	6.6
LEAD	400	6.9	7.5	8.35	9.2	7	16	220
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	0.02 U	0.021	0.018	0.014	0.021	0.024	**7.9**
2-METHYLNAPHTHALENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.12 J
ACENAPHTHENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.26 J
ACENAPHTHYLENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.16 J
ANTHRACENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.81
BENZO(A)ANTHRACENE	NC	0.02 U	0.019 U	0.004 J	0.004 J	0.019 U	0.011 J	5.9
BENZO(A)PYRENE	NC	0.02 U	0.019 U	0.0028 J	0.0028 J	0.019 U	0.011 J	5.7
BENZO(B)FLUORANTHENE	NC	0.02 U	0.0023 J	0.00235	0.0024 J	0.0024 J	0.0097 J	6.6
BENZO(G,H,I)PERYLENE	NC	0.0028 J	0.0034 J	0.0039	0.0044 J	0.0051 J	0.0081 J	2.8
BENZO(K)FLUORANTHENE	NC	0.02 U	0.019 U	0.0028 J	0.0028 J	0.019 U	0.0077 J	3.6
CHRYSENE	NC	0.02 U	0.0045 J	0.00485	0.0052 J	0.019 U	0.014 J	5.8
DIBENZO(A,H)ANTHRACENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.66
FLUORANTHENE	NC	0.02 U	0.019 U	0.006 J	0.006 J	0.019 U	0.015 J	5
FLUORENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.35
INDENO(1,2,3-CD)PYRENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.0041 J	2.7
NAPHTHALENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.02 U	0.24 J
PHENANTHRENE	NC	0.02 U	0.019 U	0.019 U	0.019 U	0.019 U	0.011 J	2.4
PYRENE	NC	0.02 U	0.0057 J	0.00705	0.0084 J	0.019 U	0.018 J	9.2

Shaded cell indicates concentration greater than Removal Action (
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TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION SAMPLE IDENTIFICATION SAMPLE DATE TOP DEPTH, FEET BGS BOTTOM DEPTH, FEET BGS NOTES	Removal Action Objective	DASB235 DASB235-0305 20130412 3 5 PROPERTY LINE	DASB236 DASB236-0305 20130412 3 5	DASB237 DASB237-0305 20130412 3 5	DASB238 DASB238-0305 20130409 3 5 PROPERTY LINE	DASB239 DASB239-0305 20130409 3 5 PROPERTY LINE	DASB240 DASB240-0305 20130409 3 5
METALS (MG/KG)							
ARSENIC	7.6	**38**	4.9	2.5	4.5	5.5	7.2
LEAD	400	**1800**	26	31	56	13	120
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)							
BAP EQUIVALENT	2	**2.1**	0.15	0.016	0.18	0.018	1.9
2-METHYLNAPHTHALENE	NC	0.23 U	0.02 U	0.021 U	0.02 UJ	0.02 UJ	0.2 UJ
ACENAPHTHENE	NC	0.11 J	0.015 J	0.021 U	0.011 J	0.07 J	0.13 J
ACENAPHTHYLENE	NC	0.092 J	0.02 U	0.021 U	0.007 J	0.02 UJ	0.083 J
ANTHRACENE	NC	0.46	0.037	0.021 U	0.015 J	0.02 UJ	0.53 J
BENZO(A)ANTHRACENE	NC	1.5	0.11	0.0058 J	0.11 J	0.0062 J	1.6 J
BENZO(A)PYRENE	NC	1.3	0.1	0.0037 J	0.13 J	0.0066 J	1.4 J
BENZO(B)FLUORANTHENE	NC	1.8	0.11	0.0058 J	0.12 J	0.0046 J	1.5 J
BENZO(G,H,I)PERYLENE	NC	0.87	0.057	0.0025 J	0.088 J	0.0029 J	0.65 J
BENZO(K)FLUORANTHENE	NC	1	0.081	0.0025 J	0.083 J	0.0046 J	0.76 J
CHRYSENE	NC	1.4	0.11	0.0049 J	0.1 J	0.0066 J	1.6 J
DIBENZO(A,H)ANTHRACENE	NC	0.42	0.019 J	0.021 U	0.02 J	0.02 UJ	0.15 J
FLUORANTHENE	NC	2.7	0.21	0.0099 J	0.13 J	0.01 J	2.9 J
FLUORENE	NC	0.12 J	0.011 J	0.021 U	0.0065 J	0.02 UJ	0.15 J
INDENO(1,2,3-CD)PYRENE	NC	0.82	0.049	0.021 U	0.076 J	0.0033 J	0.61 J
NAPHTHALENE	NC	0.23 U	0.02 U	0.021 U	0.02 UJ	0.02 UJ	0.2 UJ
PHENANTHRENE	NC	1.7	0.12	0.0074 J	0.066 J	0.0091 J	1.6 J
PYRENE	NC	2.5	0.22	0.01 J	0.19 J	0.012 J	2.9 J

Shaded cell indicates concentration greater than Removal Action (
BGS - Below ground surface.
D - Duplicate sample.
J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
NC - No criterion (Removal Action Objective).
U - Below detection limit at detection limit shown.

TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB241			DASB242	DASB243	DASB244	DASB245
SAMPLE IDENTIFICATION		DASB241-0305	DASB241-0305-AVG	DASB241-0305-D	DASB242-0305	DASB243-0305	DASS244-0002	DASS245-0002
SAMPLE DATE		20130409	20130409	20130409	20130409	20130409	20130417	20130417
TOP DEPTH, FEET BGS		3	3	3	3	3	0	0
BOTTOM DEPTH, FEET BGS		5	5	5	5	5	2	2
NOTES						EXCAVATED	PIER WALL	PIER WALL
METALS (MG/KG)								
ARSENIC	7.6	**7.7**	**7.85**	**8**	7	6.2	6.3	**9.4**
LEAD	400	320	295	270	18	38	**430**	**620**
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)								
BAP EQUIVALENT	2	1.5	1.0	0.51	0.022	**5.7**	0.38	0.71
2-METHYLNAPHTHALENE	NC	0.21 UJ	0.02 J	0.02 J	0.51 J	0.41 UJ	0.38 U	0.2 U
ACENAPHTHENE	NC	0.23 J	0.1475	0.065 J	0.018 J	0.85 J	0.38 U	0.084 J
ACENAPHTHYLENE	NC	0.21 UJ	0.023 J	0.023 J	0.02 UJ	0.41 UJ	0.38 U	0.2 U
ANTHRACENE	NC	0.57 J	0.365	0.16 J	0.031 J	2.4 J	0.38 U	0.2 J
BENZO(A)ANTHRACENE	NC	1.3 J	0.93	0.56 J	0.033 J	4.5 J	0.15 J	0.51 J
BENZO(A)PYRENE	NC	1.1 J	0.72	0.34 J	0.013 J	4.2 J	0.14 J	0.47 J
BENZO(B)FLUORANTHENE	NC	1.2 J	0.835	0.47 J	0.023 J	4 J	0.17 J	0.59 J
BENZO(G,H,I)PERYLENE	NC	0.57 J	0.385	0.2 J	0.011 J	2.6 J	0.083 J	0.14 J
BENZO(K)FLUORANTHENE	NC	0.64 J	0.435	0.23 J	0.016 J	2.2 J	0.11 J	0.29
CHRYSENE	NC	1.3 J	0.845	0.39 J	0.033 J	4.5 J	0.15 J	0.39
DIBENZO(A,H)ANTHRACENE	NC	0.11 J	0.077	0.044 J	0.0028 J	0.42 J	0.38 U	0.2 U
FLUORANTHENE	NC	2.3 J	1.52	0.74 J	0.098 J	8.7 J	0.26 J	1 J
FLUORENE	NC	0.26 J	0.173	0.086 J	0.027 J	0.68 J	0.38 U	0.1 J
INDENO(1,2,3-CD)PYRENE	NC	0.55 J	0.36	0.17 J	0.0073 J	2 J	0.38 U	0.22 J
NAPHTHALENE	NC	0.21 UJ	0.017 J	0.017 J	0.75 J	0.41 UJ	0.38 U	0.2 U
PHENANTHRENE	NC	2.1 J	1.39	0.68 J	0.1 J	6.9 J	0.11 J	0.83 J
PYRENE	NC	3 J	1.925	0.85 J	0.1 J	11 J	0.22 J	0.78 J

Shaded cell indicates concentration greater than Removal Action (
BGS - Below ground surface.
D - Duplicate sample.
J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
NC - No criterion (Removal Action Objective).
U - Below detection limit at detection limit shown.

TABLE 3

CONFIRMATION SAMPLE LABORATORY ANALYTICAL RESULTS
REMOVAL ACTION COMPLETION REPORT
USCG ATWATER FACILITY
DETROIT, MICHIGAN

LOCATION	Removal Action Objective	DASB246	DASBCF			
SAMPLE IDENTIFICATION		DASS246-0002	DASB-CF-01	DASB-CF-02	DASB-CF-03	DASB-CF-04
SAMPLE DATE		20130417	20130417	20130417	20130419	20130423
TOP DEPTH, FEET BGS		0	NA	NA	NA	NA
BOTTOM DEPTH, FEET BGS		2	NA	NA	NA	NA
NOTES			FILL	FILL	FILL	FILL - TOPSOIL
METALS (MG/KG)						
ARSENIC	7.6	5.6	3.3	3.6	3.3	3.2
LEAD	400	52	3.4	3.6	3.3	12
POLYCYCLIC AROMATIC HYDROCARBONS (MG/KG)						
BAP EQUIVALENT	2	0.24	NA	NA	NA	0.13
2-METHYLNAPHTHALENE	NC	0.2 U	NA	NA	NA	0.08 U
ACENAPHTHENE	NC	0.2 U	NA	NA	NA	0.08 U
ACENAPHTHYLENE	NC	0.2 U	NA	NA	NA	0.08 U
ANTHRACENE	NC	0.2 U	NA	NA	NA	0.08 U
BENZO(A)ANTHRACENE	NC	0.13 J	NA	NA	NA	0.067 J
BENZO(A)PYRENE	NC	0.095 J	NA	NA	NA	0.07 J
BENZO(B)FLUORANTHENE	NC	0.14 J	NA	NA	NA	0.099
BENZO(G,H,I)PERYLENE	NC	0.046 J	NA	NA	NA	0.028 J
BENZO(K)FLUORANTHENE	NC	0.079 J	NA	NA	NA	0.052 J
CHRYSENE	NC	0.099 J	NA	NA	NA	0.07 J
DIBENZO(A,H)ANTHRACENE	NC	0.2 U	NA	NA	NA	0.08 U
FLUORANTHENE	NC	0.18 J	NA	NA	NA	0.13
FLUORENE	NC	0.2 U	NA	NA	NA	0.08 U
INDENO(1,2,3-CD)PYRENE	NC	0.13 J	NA	NA	NA	0.02 J
NAPHTHALENE	NC	0.2 U	NA	NA	NA	0.08 U
PHENANTHRENE	NC	0.12 J	NA	NA	NA	0.06 J
PYRENE	NC	0.15 J	NA	NA	NA	0.13

Shaded cell indicates concentration greater than Removal Action (
BGS - Below ground surface.
D - Duplicate sample.
J - Estimated concentration.
MG/KG - Milligrams per kilogram.
NA - Not analyzed.
NC - No criterion (Removal Action Objective).
U - Below detection limit at detection limit shown.

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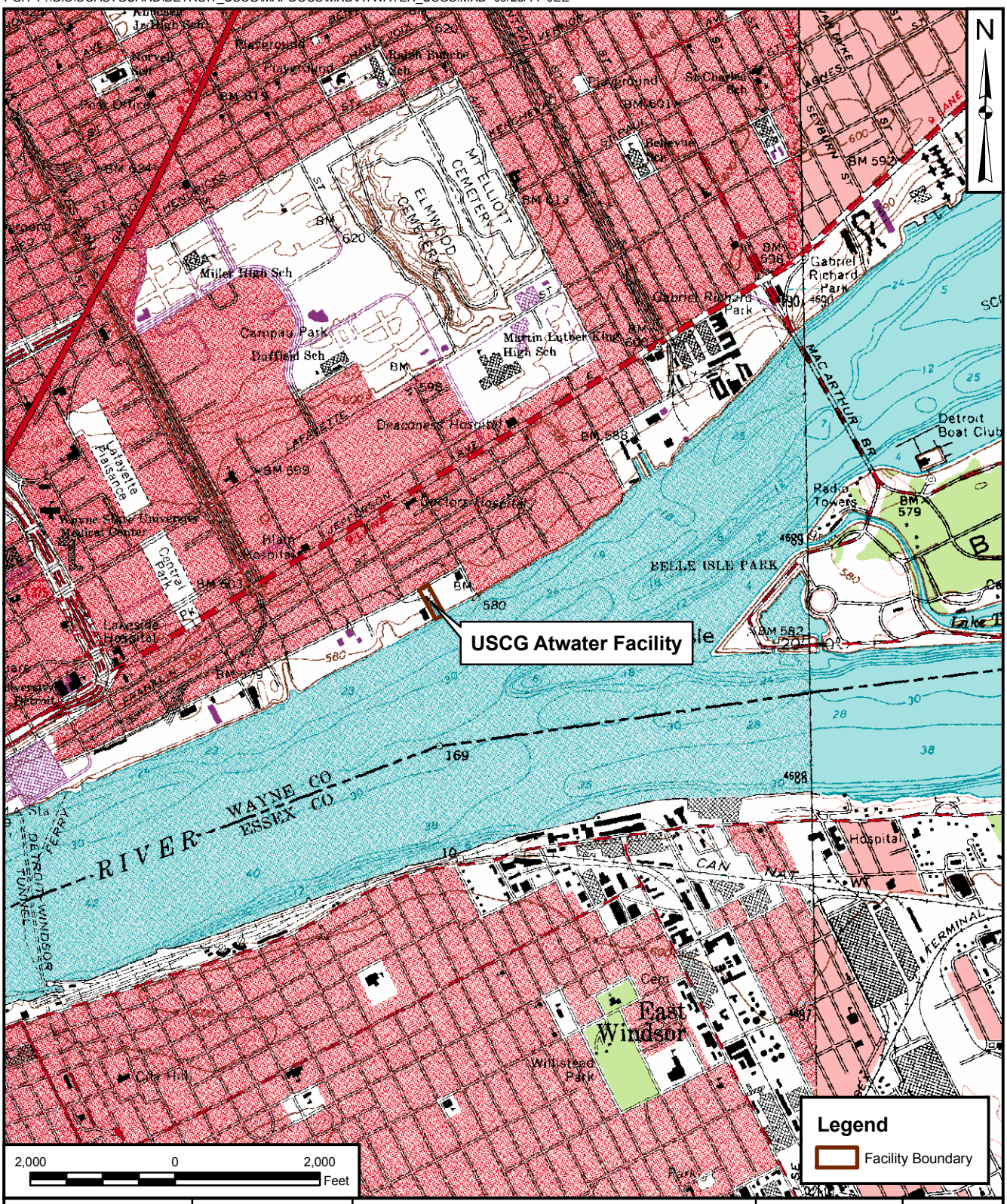

DRAWN BY	DATE
J. ENGLISH	07/27/11
CHECKED BY	DATE
S. HILL	09/23/11
REVISED BY	DATE
SCALE AS NOTED	

SITE LOCATION MAP
ATWATER FACILITY
DETROIT, MICHIGAN

CONTRACT NUMBER	CTO NUMBER
02435	—
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO.	REV
FIGURE 1	0

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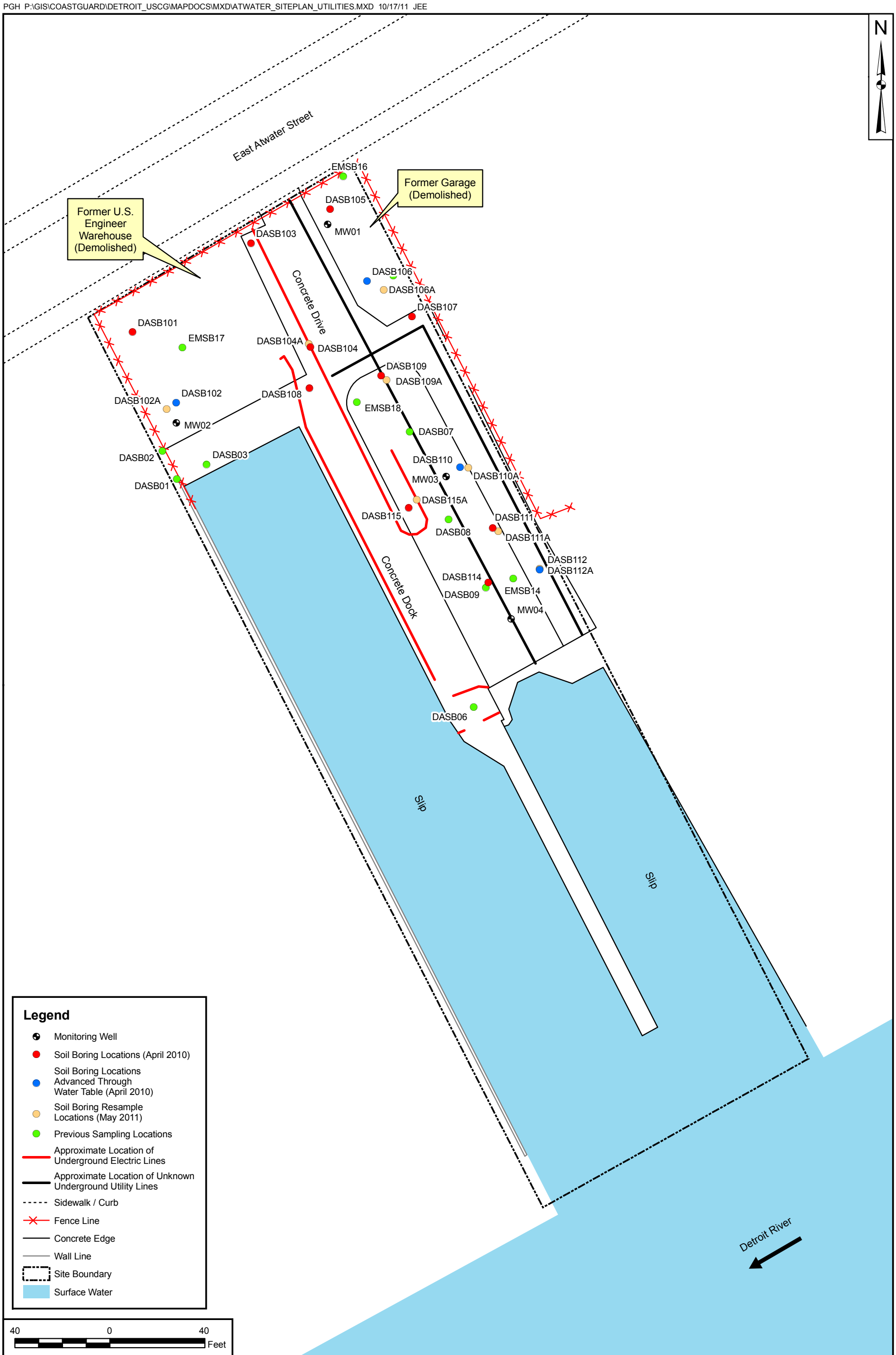

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J. ENGLISH	09/23/11
CHECKED BY	DATE
S. VASKO	10/17/11
REVISED BY	DATE
SCALE	
AS NOTED	

SITE PLAN AND UTILITIES
ATWATER FACILITY
DETROIT, MICHIGAN

CONTRACT NUMBER	CTO NUMBER
02435	
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 2	REV 0

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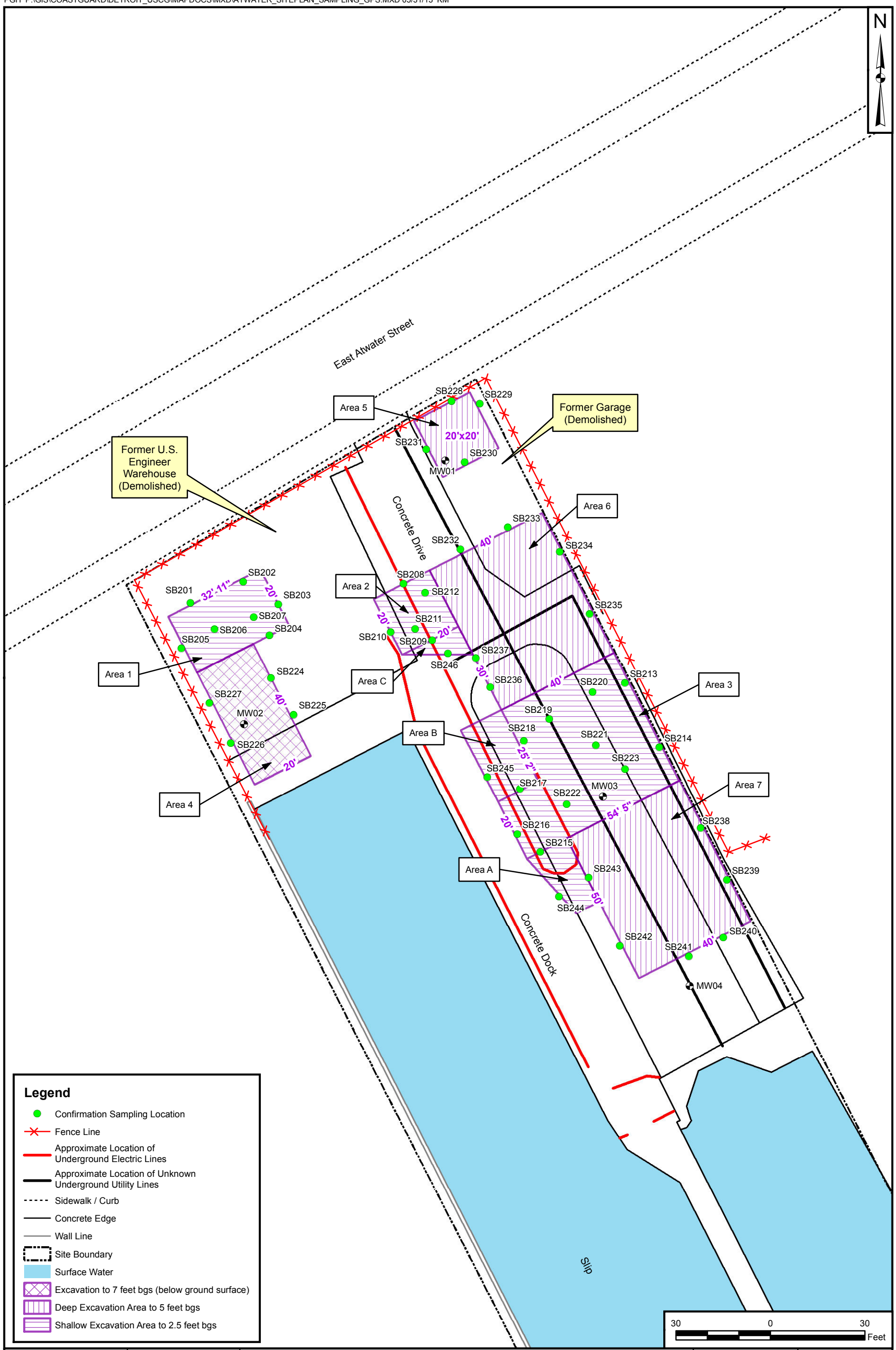
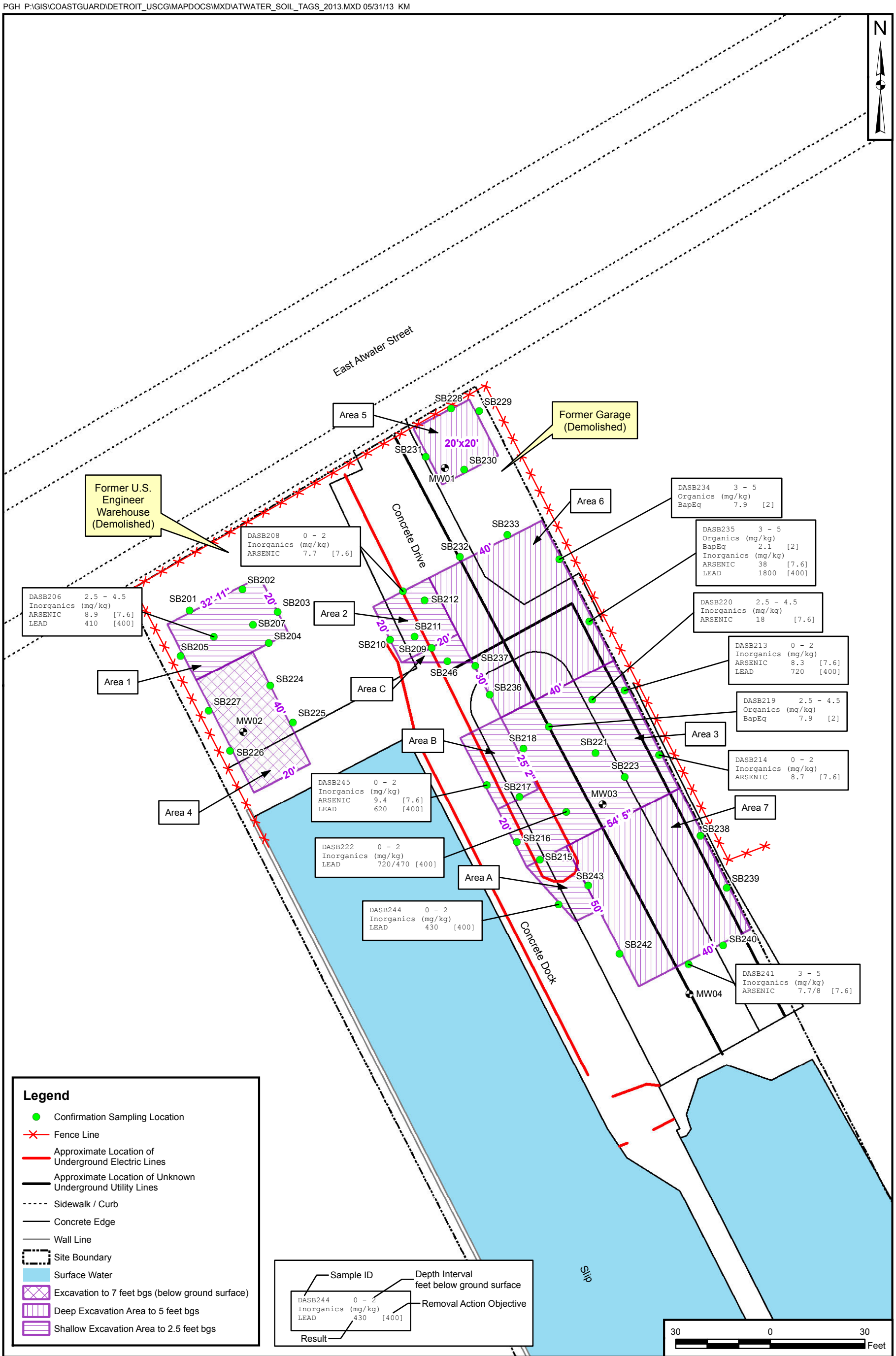


DRAWN BY	DATE
J. ENGLISH	11/14/12
CHECKED BY	DATE
J. LOGAN	5/23/13
REVISED BY	DATE
K. MOORE	5/13/13
SCALE	
AS NOTED	

CONFIRMATION SOIL SAMPLE LOCATIONS AND
EXTENT OF EXCAVATIONS
ATWATER FACILITY
DETROIT, MICHIGAN

CONTRACT NUMBER	CTO NUMBER
02435	—
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO.	REV
FIGURE 3	0

PGH P:\GIS\COASTGUARD\DETROIT_USCG\MAPDOCS\MXD\ATWATER_SOIL_TAGS_2013.MXD 05/31/13 KM



DRAWN BY	DATE
K. MOORE	5/24/13
CHECKED BY	DATE
J. LOGAN	5/31/13
REVISED BY	DATE
—	—
SCALE	
AS NOTED	

CONFIRMATION SOIL SAMPLE RESULTS
GREATER THAN REMOVAL ACTION OBJECTIVES
ATWATER FACILITY
DETROIT, MICHIGAN

CONTRACT NUMBER	CTO NUMBER
02435	—
APPROVED BY	DATE
—	—
APPROVED BY	DATE
—	—
FIGURE NO. FIGURE 4	REV 0

Appendix A

Public Participation Correspondence

State of Michigan } ss
County of Macomb

Affidavit of Publication

IN

Tetra Tech, Inc.
661 Andersen Driver Foster Plaza 7
Pittsburgh, PA 15220

Debbie Verschueren

Being duly sworn deposes and says that the above advertisement(s) appeared in the Detroit News and Free Press on Feb. 10-16, 2013, invoice 2318663. As an authorized employee of The Detroit Newspapers he/she knows well the facts stated herein.

Signed Debbie Verschueren

Sworn and subscribed to me, a notary Public in and for Macomb County, State of Michigan.

On This 18th Day of February 2013

Meghan E. Ditrapani

DNA 623 REV 10/00 Creator

MEGHAN E. DITRAPANI
Notary Public, State of Michigan
County of Wayne
My Commission Expires May. 31, 2014
Acting in the County of Macomb

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ANNOUNCEMENTS

UNEMPLOYED? BORED? Read BEEF U. Not for the one percent, the self-righteous or softies. Available at amazon.com

LEGAL NOTICE/ BIDS/PROPOSALS

DETROIT - Joy Preparatory Academy is accepting enrollment applications for 2013-14, March 1-31, grades K-2 at 1129 Oakman Blvd., grades 3-8 at 15055 Dexter Ave. If necessary, a public lottery will take place on April 19, at 12 p.m. at the Dexter location.

INVITATION TO BID NOTICE: Community Development Institute Head Start serving Detroit MI (CDI HS) is soliciting bids from qualified contractors for life/safety and lead abatement repairs and asbestos removal for 2 centers located in Detroit, MI. Bids must be received by 9 a.m., on March 5, 2013 at CDI HS, 5555 Conner /3S Detroit, MI 48213 when the bids will be publicly opened and read. Contractors may obtain the contract documents, including conditions and bid forms from the Project Supervisor: John Stephenson 970-749-7341 or by email beavercreekrun@yahoo.com.CDI HS reserves the right to accept or reject any or all bids. The bid may be held by CDI HS for up to thirty days from the opening date, to investigate the qualifications of the bidders prior to awarding any contract. Awards are subject to receipt of federal funds.

LEGAL NOTICE/ BIDS/PROPOSALS

Public Notice

The U. S. Coast Guard, Civil Engineering Unit Cleveland, in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act, is announcing the availability of the Engineering Evaluation and Cost Analysis and the Removal Action Work Plan for the proposed soil removal action at the U.S. Coast Guard Atwater Facility on 2660 East Atwater Street in Detroit, Michigan in Wayne County.

For additional information on this proposed action, please view a copy of the U.S. Coast Guard Atwater Facility Engineering Evaluation and Cost Analysis and the Removal Action Work Plan posted at the below listed locations from February 11 through March 13, 2013:

United States Coast Guard District 9 Public Affairs Web Site: http://www.uscg.mil/ceuCleveland

Detroit Public Library - Skillman Branch
121 Gratiot
Detroit, MI 48226
(313) 481-1850
Monday - Thursday: 10 AM to 6 PM
Saturday: 10 AM to 6 PM

Detroit Public Library - Main Branch
5201 Woodward Ave.
Detroit, MI 48202
(313) 481-1300
Tuesday - Wednesday: Noon to 8 PM
Thursday - Saturday: 10 AM to 6 PM

Interested parties should provide written comments on this proposed action no later than March 13, 2013 to:

United States Coast Guard
Civil Engineering Unit Cleveland
1240 East Ninth Street, Rm. 2179
Cleveland, Ohio 44199-2060
Attn: Mr. Gregory Carpenter, Chief of Environmental Section

If you have any questions, please contact Mr. James Cook at (216) 902-6255.

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MACOMB

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Appendix B

Removal Waste Transportation and Disposal Documents

MDEQ EQP5150 SITE IDENTIFICATION NUMBER

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

February 22, 2013

James Cook
United States Coast Guard
1240 E 9th St
Cleveland, OH 44199-2001

Dear James:

SUBJECT: Application Submitted to Obtain a Site Identification (ID) Number

This letter confirms that the Michigan Department of Environmental Quality (MDEQ) received the information you submitted on form EQP5150 to obtain a Site ID number issued under Part 111, Hazardous Waste Management, or Part 121, Liquid Industrial Waste, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

The Site ID number **MIK112091844** has been issued for the site located at: **2660 E Atwater St; Detroit, MI 48207.** Please note you may be contacted for additional information.

If you wish to review the information on record regarding this site you can log onto the MDEQ Web site at http://www.michigan.gov/deq. Click on WASTE, then under Featured Online Services click on Waste Data System. Enter the Site ID number in the "Quick Search" and click on "GO". This will bring up all of the information for this site under the hazardous waste or liquid industrial waste programs.

If you need to make any corrections, changes, or additions to the site data, for example, or change the site contact information; you can do so on a Site ID Form and fax, e-mail, or mail it to us. If you need to obtain a new Site ID number because the business moved to another location (Site ID number is assigned to the physical location), please go to the 'Waste Data System' as noted above and follow the instructions on the first page to print a EQP5150 Site ID form and pay on-line with a credit card. Then fax your completed Site ID form and Credit Card Receipt to 517-335-7145.

If you do not have access to the Internet you can obtain a blank copy of the form by contacting the MDEQ at 517-335-5139 and ask that a paper copy of the Site ID form EQP5150 be sent or faxed to you.

If you have any questions feel free to contact Mr. Gerry Kelly at 517-335-5139 or kellyg@michigan.gov.

Sincerely,

Jack Schinderle

Jack Schinderle, Chief
Management and Tracking Unit
Hazardous Waste Section
Office of Waste Management and Radiological Protection

cc: Southeast Michigan District Office

SOIL MANIFESTS AND DISPOSAL DOCUMENTATION

#1

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163065

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 615

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Generator Authorized Agent Name: USCG — Signature: Tetra Tech for USCG - Atwater — Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford Mi

c. Driver Name/Title: Brad Woodell (PRINT/TYPE)

d. Phone No.: e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#2

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163066

417469

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Tetra Tech for USCG Atwater — Generator Authorized Agent Name

Signature — for USCG

Shipment Date: 040913

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford M.

c. Driver Name/Title: KYLE DRAHEIM (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB 68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 040913

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#3

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163067
417226

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

TetraTech on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford Mi.

c. Driver Name/Title: LEMAND FADS (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 026

f. Vehicle License No./State: AC 89841 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#6

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163068
416214

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 887 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt
for USCG
Generator Authorized Agent Name

Signature

Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: Brad Rundell (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#7

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163069
417470

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00040 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goardton
behalf USCG
Generator Authorized Agent Name

Signature

040913
Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI

c. Driver Name/Title: KYLE DRAHEIM
PRINT/TYPE

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB68116 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature

040913
Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:
PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#8

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163070
417227

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 667 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00040 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goevald on behalf of USCG — Generator Authorized Agent Name

Signature

040913 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T. K. M. S.

b. Address: OXFORD MI

c. Driver Name/Title: LEEMOND EADS
PRINT/TYPE

d. Phone No.:

e. Truck No.: 026

f. Vehicle License No./State: AC 89841 MI.

Acknowledgment of Receipt of Materials:

g. [signature] — Driver Signature

040913 — Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:
PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#11

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163071
416215

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerald on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: Brad Rundell (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#12

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163072
417471

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater
Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goulton on behalf of USCG
Generator Authorized Agent Name — Signature — Shipment Date: 040913

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.
b. Address: Oxford MI.
c. Driver Name/Title: VYLE DOAHFM (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 002
f. Vehicle License No./State: AB68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 040913

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

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GENERATOR RETAIN

#13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163073

417228

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2860 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goodall on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.I.

b. Address: OXFORD MI.

c. Driver Name/Title: LEMMOND FORD (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 026

f. Vehicle License No./State: AC8984 / MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#16

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163074
416216

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 040913

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: Brad Rundell (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 040913

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#17

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163075

417472

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00040 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf USCG — Generator Authorized Agent Name

Signature

040913 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: KYLE DRAHEM (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — 040913 Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#18

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163076
417229

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TK

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: LEERMOND FADS (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 026

f. Vehicle License No./State: AC89841 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#15

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163077

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Gorski on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date: 04 09 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H.M. Enviro

b. Address: Mt Clemens Mi.

c. Driver Name/Title: Patrick J Blair (PRINT/TYPE)

d. Phone No.: e. Truck No.: 121

f. Vehicle License No./State: RA28257 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04 09 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#1
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163078
416218

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 087 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name
Signature
Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.
b. Address: OXFORD M.
c. Driver Name/Title: Brad Pundell (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 004
f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041013

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#2
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163079

417473

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: KYLE DETHEIM (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 041013

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#3
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163080
417235

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG

Signature:

Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford MI.

c. Driver Name/Title: LEFMOND EADS (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 026

f. Vehicle License No./State: AC 89841 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature: Shipment Date: 041013

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature: Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: Signature: Receipt Date:

#4
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163081
416219

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2880 Atwater, Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG
Signature:
Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.
b. Address: Oxford MI.
c. Driver Name/Title: Brad Rundell (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 004
f. Vehicle License No./State: AC 55929 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature: Bradley A. Rundell
Shipment Date: 041013

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature:
Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent:
Signature:
Receipt Date:

#5
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163082
417474

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater
Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name
Signature
Shipment Date: 04 10 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.
b. Address: OXFORD MI.
c. Driver Name/Title: KYLE DRAHAM (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 002
f. Vehicle License No./State: AB 68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature
Shipment Date: 04 10 13

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature
Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent
Signature
Receipt Date

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GENERATOR RETAIN

#6
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163083
417236

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 887 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name / Signature — Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K. M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: LEFMID EADS (PRINT/TYPE)

d. Phone No.: e. Truck No.: 026

f. Vehicle License No./State: AC 89841 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041013

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#7
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163084

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name / Signature — Shipment Date: 04/16/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H.M. Enviro

b. Address: Mt. Clemens MI.

c. Driver Name/Title: Patrick J Blair (PRINT/TYPE)

d. Phone No.: e. Truck No.: 121

f. Vehicle License No./State: RA28257 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/18/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48169

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#8
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163085

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/01/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H.M. Enviro

b. Address: Mt Clemens MI.

c. Driver Name/Title: Patrick J Blair (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 121

f. Vehicle License No./State: RA28257 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04/01/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#9
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163086
416220

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 60040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/10/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: OXFORD MI.

c. Driver Name/Title: Brad Rundell (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature: Bradley L. Rundell — Shipment Date: 04/10/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#10
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163087

417475

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00046 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent-Name

Signature

Shipment Date: 04/10/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K. M.S.

b. Address: Oxford MI.

c. Driver Name/Title: KYLE DRAHEIM (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB 68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/10/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#11
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163088
417237

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2680 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/01/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford MI.

c. Driver Name/Title: LEEMOND FADS (PRINT/TYPE)

d. Phone No.: e. Truck No.: 026

f. Vehicle License No./State: AC 89841 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/01/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10600 W. SIX MILE RD
NORTHVILLE, MI. 48169

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#13
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163089
416221

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 10 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford MI.

c. Driver Name/Title: Brad Rundell (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 004

f. Vehicle License No./State: AC55929 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04 10 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#14
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163090

417476

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2880 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00040 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Goerdt on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: T.K.M.S.

b. Address: Oxford MI.

c. Driver Name/Title: KYLE DRAHEIM (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 002

f. Vehicle License No./State: AB 68116 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041013

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#12
4-10-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163091

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date: 041013

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H. Mi Enviro

b. Address: Mt Clemens MI.

c. Driver Name/Title: Patrick J Blair (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 121

f. Vehicle License No./State: RA28257 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041013

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#1
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163092

6K1922

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00030 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

04/11/13 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Jim Schmoll (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 572

f. Vehicle License No./State: AC 22259 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature — 04/11/13 Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#2
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163093

637872

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 040 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Gorrell on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: LOU'S

b. Address: PONTIAC MI

c. Driver Name/Title: AL HAGS (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 848

f. Vehicle License No./State: AC22261 MI

Acknowledgment of Receipt of Materials:

g. AL HAGS (Driver Signature) — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48169

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#3
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163094
633872

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Gorski on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI

c. Driver Name/Title: Daniel McClelland (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 122

f. Vehicle License No./State: AB 93399 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature: McClelland — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#4
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163095
631996

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste Contaminated Soil

k. Quantity 00030 Units 4 Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Gocrald on behalf of USCG — Generator Authorized Agent Name

Signature

041113 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Don Taylor (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 371

f. Vehicle License No./State: AC 77537 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature — 041113 Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#5
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163096

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 30 | Units Y | Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goodall on behalf of USCG — Generator Authorized Agent Name

Signature

041113 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac Mi

c. Driver Name/Title: Ronnie Smith (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 934

f. Vehicle License No./State: AC17792 MI

Acknowledgment of Receipt of Materials:

g. Ron Smith — Driver Signature

041113 — Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#6
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163097

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 667 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 20030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Gosnell on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: LOU'S

b. Address: Pontiac MI.

c. Driver Name/Title: STEVE SHEFFIELD / DRIVER (PRINT/TYPE)

d. Phone No.: (248) 332-5687 e. Truck No.: 837

f. Vehicle License No./State: AA46747 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#7
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163098

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00030 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG
Generator Authorized Agent Name

Signature

041113
Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac Mi.

c. Driver Name/Title: Jim Goerdt
PRINT/TYPE

d. Phone No.:

e. Truck No.: 572

f. Vehicle License No./State: AC22259 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature

041113
Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:
PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#8
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

2827

4163099

632575

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 887 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 11 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Al Haus (PRINT/TYPE)

d. Phone No.: e. Truck No.: 848

f. Vehicle License No./State: AG2226 MI.

Acknowledgment of Receipt of Materials:

g. Al Haus (Driver Signature) Shipment Date: 04 11 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent Signature Receipt Date

#9
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163654
633813

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater, Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE: MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG
Signature:
Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's
b. Address: Pontiac MI
c. Driver Name/Title: Daniel McClelland (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 122
f. Vehicle License No./State: AB 93399 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature: McClelland
Shipment Date: 04/11/13

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature:
Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent:
Signature:
Receipt Date:

#10
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163655
631946

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2880 Atwater, Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent-Name
Signature
Shipment Date: 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's
b. Address: Pontiac MI.
c. Driver Name/Title: Don Taylor (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 371
f. Vehicle License No./State: AC77537 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature
Shipment Date: 041113

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature
Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD, NORTHVILLE, MI. 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent
Signature
Receipt Date

#11
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163656
632717

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI

c. Driver Name/Title: Ronnie Smith (PRINT/TYPE)

d. Phone No.: e. Truck No.: 934

f. Vehicle License No./State: AC 17792 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041113

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#12
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163657

7 1x #627573

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 11 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MT

c. Driver Name/Title: Steve Sheffield (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 837

f. Vehicle License No./State: AA 46747

Acknowledgment of Receipt of Materials:

g. Driver Signature: S. Sheffield

Shipment Date: 04 11 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#13
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163658
618924

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goeralt on behalf of USCG — Generator Authorized Agent Name
Signature
Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac Mi.

c. Driver Name/Title: Jim Schwall (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 572

f. Vehicle License No./State: AC 22259 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#14
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163659
633874

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater
Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity	Units	Type
00030	Y	TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name
Signature
Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's
b. Address: Pontiac MI.
c. Driver Name/Title: Daniel McClelland (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 122
f. Vehicle License No./State: AB 93399

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168
c. Phone No.: 248-349-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#15
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163660
631947

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater, Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste: Contaminated Soil

k. Quantity	Units	Type
00030	Y	TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goevat on behalf of USCG — Generator Authorized Agent Name
Signature
Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport
b. Address:
c. Driver Name/Title: Don Taylor (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 371
f. Vehicle License No./State: AC 77537 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature
Shipment Date: 04/11/13

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature
Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
b. Physical Address: 10690 W. SIX MILE RD, NORTHVILLE, MI 48168
c. Phone No.: 248-348-7230
d. Mailing Address: SAME
e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent
Signature
Receipt Date

#16
4-1-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163661
632718

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard
b. Generating Location: Same
c. Address: 2660 Atwater Detroit, MI 48207
d. Address:
e. Phone No.:
f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TK

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Generator Authorized Agent Name: [illegible] Signature: [illegible] Shipment Date: 04/1/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lous
b. Address: Pontiac MI
c. Driver Name/Title: Ron + Smith (PRINT/TYPE)
d. Phone No.:
e. Truck No.: 934
f. Vehicle License No./State: AC17792 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature: Ron Smith Shipment Date: 04/1/13

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature: Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL
c. Phone No.: 248-349-7230
b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168
d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: Signature: Receipt Date:

#17
4-11-13

27.94

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163662

TIV # 627374

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00030 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date 04 11 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Steve Sheffield (PRINT/TYPE)

d. Phone No.: e. Truck No.: 837

f. Vehicle License No./State: AA 46747

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date 04 11 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#10
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163663
618425

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goeydt on behalf of USCG — Generator Authorized Agent Name — Signature — Shipment Date 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI

c. Driver Name/Title: Jim Schmidt (PRINT/TYPE)

d. Phone No.: e. Truck No.: 572

f. Vehicle License No./State: AC22259 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date 041113

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

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GENERATOR RETAIN

#19
4-11-13

29.09

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163664
633875

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG
Generator Authorized Agent Name — Signature — Shipment Date 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI

c. Driver Name/Title: Daniel McClelland (PRINT/TYPE)

d. Phone No.: e. Truck No.: 122

f. Vehicle License No./State: AB 93399

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date 041113

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#20
4-11-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

30 78

4163666
631948

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goeralt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Don Thelen (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 371

f. Vehicle License No./State: AC77537

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 041113

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#21
4-11-13

29.73

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163667
632719

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name / Signature — Shipment Date: 04/11/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Ronnie Smith (PRINT/TYPE)

d. Phone No.: e. Truck No.: 934

f. Vehicle License No./State: AC17792 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/11/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

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GENERATOR RETAIN

#22
4-11-13

28.73

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163668

616426

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 041113

Section II — TRANSPORTER

TRANSPORTER I

a. Name:

b. Address:

c. Driver Name/Title: Jim Schroeder (PRINT/TYPE)

d. Phone No.: e. Truck No.: 572

f. Vehicle License No./State: AC22259 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041113

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163015
Tix # 632147

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity | Units | Type

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/21/3

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport

b. Address: Pontiac, MI

c. Driver Name/Title: Steve Sh[illegible] / Driver (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 837

f. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

g. Driver Signature: Steve Sh[illegible]

Shipment Date: 04/21/3

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent | Signature | Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163016
628760

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 24 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name / Signature

Shipment Date: 04/21/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport

b. Address: 1780 Highwood
Pontiac, MI

c. Driver Name/Title: Gary Forsyth (PRINT/TYPE)

d. Phone No.: 332-5687 e. Truck No.: 22

f. Vehicle License No./State: AA51802

Acknowledgment of Receipt of Materials:

g. Gary Forsyth (Driver Signature) Shipment Date: 04/21/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent Signature Receipt Date

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GENERATOR RETAIN

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163017

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 887 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity | Units | Type

TYPE	
DM	METAL DRUM
DP	PLASTIC DRUM
DF	FIBRE DRUM
B	BAG
TR	TRUCK
O	OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 040 CFR Part 261.

UNITS	
P	POUNDS
Y	YARDS
T	TONS
Y3	CUBIC YARDS
O	OTHER

Jim Goertz on behalf of USCG

Generator Authorized Agent Name | Signature | Shipment Date 041213

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lous

b. Address: Port

c. Driver Name/Title: Jim Buchner (PRINT/TYPE)

d. Phone No.: e. Truck No.: 215

f. Vehicle License No./State: AC72256

Acknowledgment of Receipt of Materials:

g. Driver Signature | Shipment Date 041213

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature | Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent | Signature | Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163018
633753

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity | Units | Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goevat on behalf of USCG — Generator Authorized Agent Name

[signature] — Signature

04 12 13 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport

b. Address: 1780 Highwood

c. Driver Name/Title: Jose — PRINT/TYPE

d. Phone No.: e. Truck No.: 53

f. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

g. Castillo — Driver Signature

04 12 13 — Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: — PRINT/TYPE

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. — Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. — Name of Authorized Agent

map — Signature

04 12 13 — Receipt Date

1232045

2032

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GENERATOR RETAIN

632970
4163020

NON-HAZARDOUS SPECIAL WASTE MANIFEST

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity | Units | Type

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Gerdt on behalf of USCG

Generator Authorized Agent Name | Signature | Shipment Date 04/12/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lous Transport

b. Address: 1780 E Highwood Pontiac Mi

c. Driver Name/Title: Dave Scroggins (PRINT/TYPE)

d. Phone No.: 248-332-5697 e. Truck No.: 571

f. Vehicle License No./State: AC22258

Acknowledgment of Receipt of Materials:

g. Dave Scroggins (Driver Signature) | Shipment Date 04/12/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature | Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent | Signature | Receipt Date

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GENERATOR RETAIN

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163021
TN# 632149

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2860 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 518

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name — Signature — Shipment Date: 041213

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI

c. Driver Name/Title: Steve Sheffield / DRIVER (PRINT/TYPE)

d. Phone No.: e. Truck No.: 837

f. Vehicle License No./State: AA 46747

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041213

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163022

5635 76

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00030 Units 4 Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

04 12 13 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Louis

b. Address: Pontiac MI.

c. Driver Name/Title: Jim Buchner (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 285

f. Vehicle License No./State: AC 22256

Acknowledgment of Receipt of Materials:

g. Driver Signature — 4 12 13 Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163023
628761

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 887 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 04/12/13 Jim Goerdt on behalf of USCG

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG

Signature:

Shipment Date: 04/12/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport

b. Address: Pontiac MI
1780 Highwood

c. Driver Name/Title: Gary Forsyth (PRINT/TYPE)

d. Phone No.: 332 5680 e. Truck No.: 22

f. Vehicle License No./State: AA 51802

Acknowledgment of Receipt of Materials:

g. Driver Signature: Gary Forsyth Shipment Date: 04/12/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature: Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent: Signature: Receipt Date:

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163058
633889

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00030 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/2/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI.

c. Driver Name/Title: Joe (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 53

f. Vehicle License No./State: AC22246 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature: Castillo — Shipment Date: 04/2/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD.
NORTHVILLE, MI 48168

c. Phone No.: 248-348-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

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GENERATOR RETAIN

632968
4163059
1231927

NON-HAZARDOUS SPECIAL WASTE MANIFEST

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 616

j. Description of Waste Contaminated Soil 30.87

k. Quantity 00030 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goardt on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date 04/12/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's

b. Address: Pontiac MI
1780 E Highwood

c. Driver Name/Title: DAVE Scroggins (PRINT/TYPE)

d. Phone No. 248-332-5687 e. Truck No.: 571

f. Vehicle License No./State: AC22258

Acknowledgment of Receipt of Materials:

g. Dave Scroggins (Driver Signature) — Shipment Date 04/12/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48169

c. Phone No.: 248-349-7230

d. Mailing Address: SAME
1231927

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date 4/12/13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163060
631811

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 24 Units: Y Type: TT

TYPE	
DM	- METAL DRUM
DP	- PLASTIC DRUM
DF	- FIBRE DRUM
B	- BAG
TR	- TRUCK
O	- OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS	
P	- POUNDS
Y	- YARDS
T	- TONS
Y3	- CUBIC YARDS
O	- OTHER

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04/12/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Luc Transport Inc

b. Address: 1786 E. Highwood
Pontiac MI

c. Driver Name/Title: Wayne (PRINT/TYPE)

d. Phone No.: 248 332-5653 e. Truck No.: 804

f. Vehicle License No./State: AC 24631

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 04/12/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163061
Tix# 632148

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity | Units | Type

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG

Generator Authorized Agent Name | Signature | Shipment Date 04/21/3

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lee's Transport

b. Address: Pontiac, MI

c. Driver Name/Title: [illegible] / Driver (PRINT/TYPE)

d. Phone No.: e. Truck No.: 237

f. Vehicle License No./State: AA46747

Acknowledgment of Receipt of Materials:

g. Driver Signature | Shipment Date 04/21/3

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature | Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent | Signature | Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163062

628759

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2880 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 24 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerat on behalf USCG — Generator Authorized Agent Name

Signature

Shipment Date 04/12/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Low's Transport

b. Address: 1780 Highwood
Pontiac MI

c. Driver Name/Title: Gary Forsyth (PRINT/TYPE)

d. Phone No.: 3325687 e. Truck No.: 22

f. Vehicle License No./State: AA51802

Acknowledgment of Receipt of Materials:

g. Gary Forsyth (Driver Signature) — Shipment Date 04/12/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163063

~~628759~~

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 516

j. Description of Waste: Contaminated Soil

k. Quantity | Units | Type

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Gerdt on behalf of USCG

Generator Authorized Agent Name — Signature — Shipment Date 04/2/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lous

b. Address: Port

c. Driver Name/Title: Jim Buchner (PRINT/TYPE)

d. Phone No.: e. Truck No.: 215

f. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date 04/2/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163064
633 996

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 28.45 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goerdt on behalf of USCG — Generator Authorized Agent Name

Signature

04 12 13 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: Lou's Transport

b. Address: 1780 Highwood

c. Driver Name/Title: Jose
PRINT/TYPE

d. Phone No.:

e. Truck No.: 53

f. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

g. Castillo J. — Driver Signature

04 12 13 — Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:
PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#1
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163024

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2680 Atwater Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 587 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00028 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG

Signature

Shipment Date: 04 17 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H. MI Enviro

b. Address: Mt. Clemens

c. Driver Name/Title: Loren Black (PRINT/TYPE)

d. Phone No.: 810 650 3626 e. Truck No.: 109

f. Vehicle License No./State: AA92177 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04 17 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS - ARBOR HILLS LANDFILL

c. Phone No.: 248-349-7230

b. Physical Address: 10690 W. SIX MILE RD NORTHVILLE, MI. 48168

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#2
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163025

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00028 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goeldt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 04 17 13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H. MI Enviro.

b. Address: Mt. Clemens MI.

c. Driver Name/Title: Loren Black (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 109

f. Vehicle License No./State: AA 92177 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature

Shipment Date: 04 17 13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#3
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163026

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00028 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goerdt on behalf of USCG
Generator Authorized Agent Name

Signature

041713
Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H. M. Enviro

b. Address: Mt. Clemens MI

c. Driver Name/Title: Loren Black
PRINT/TYPE

d. Phone No.:

e. Truck No.: 109

f. Vehicle License No./State: AA 92177

Acknowledgment of Receipt of Materials:

g. Driver Signature

041713
Shipment Date

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title:
PRINT/TYPE

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature

Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent

Signature

Receipt Date

#4
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163027

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00028 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, If the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Generator Authorized Agent Name: Jim Goerdt on behalf of USCG

Signature:

Shipment Date: 04/17/13

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H.M. Gurnd

b. Address: Mt. Clemens MI

c. Driver Name/Title: JACK R. (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 124

f. Vehicle License No./State: RA 62107 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature:

Shipment Date: 4/17/13

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature:

Shipment Date:

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI. 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent:

Signature:

Receipt Date:

#5
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163028

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste: Contaminated Soil

k. Quantity: 00028 Units: Y Type: TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

Jim Goeckt on behalf of USCG — Generator Authorized Agent Name

Signature

Shipment Date: 041713

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H. M. Evans

b. Address: Mt. Clemens MI.

c. Driver Name/Title: Loren Black (PRINT/TYPE)

d. Phone No.: e. Truck No.: 109

f. Vehicle License No./State: AA 92177 MI

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date: 041713

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.: l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 10690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

#6
4-17-13

NON-HAZARDOUS SPECIAL WASTE MANIFEST

4163029

Section I — GENERATOR (Generator completes all of Section I)

a. Generator Name: United States Coast Guard

b. Generating Location: Same

c. Address: 2660 Atwater
Detroit, MI 48207

d. Address:

e. Phone No.:

f. Phone No.:

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:

h. Owner's Phone No.:

h. WASTE CODE MI - 687 - 140328 - AH5296 - 515

j. Description of Waste Contaminated Soil

k. Quantity 00028 Units Y Type TR

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
DF - FIBRE DRUM
B - BAG
TR - TRUCK
O - OTHER

UNITS
P - POUNDS
Y - YARDS
T - TONS
Y3 - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations: **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

Jim Goardton behalf of USCG — Generator Authorized Agent Name

Signature

041713 — Shipment Date

Section II — TRANSPORTER

TRANSPORTER I

a. Name: H.M. Enviro

b. Address: Mt. Clemens M.

c. Driver Name/Title: JACK R (PRINT/TYPE)

d. Phone No.:

e. Truck No.: 124

f. Vehicle License No./State: RA 62107 MI.

Acknowledgment of Receipt of Materials:

g. Driver Signature — Shipment Date 41713

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgment of Receipt of Materials:

n. Driver Signature — Shipment Date

Section III — DESTINATION

a. Site Name: ADS ARBOR HILLS LANDFILL

b. Physical Address: 18690 W. SIX MILE RD
NORTHVILLE, MI 48168

c. Phone No.: 248-349-7230

d. Mailing Address: SAME

e. TICKET No.:

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

f. Name of Authorized Agent — Signature — Receipt Date

586.772.8860 • E-mail: orders@metcom-inc.com

GENERATOR RETAIN

ARBOR HILLS LA
10690 W SIX MILE R
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230820**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163065	4/9/13 8:19 am	4/9/13 8:19 am

CONTRACT: AH5296
BOL:

GROSS 150,580.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 97,860.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
48.93	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

CUSTOMER COPY

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230819**	66750

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163066	4/9/13 8:19 am	4/9/13 8:19 am

CONTRACT: AH5296
BOL:

GROSS 141,620.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 89,340.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
44.67	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

CUSTOMER COPY

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230822**	43967

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163067	4/9/13 8:26 am	4/9/13 8:26 am

CONTRACT: AH5296
BOL:

GROSS 149,620.00LBS Scale In
TARE 54,360.00LBS Tare Out
NET 95,260.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
47.63	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

CUSTOMER COPY

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230899**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163068	4/9/13 10:33 am	4/9/13 10:33 am

CONTRACT: AH5296
BOL:

GROSS 147,660.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 94,940.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
47.47	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Brad

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230910**	43967

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163069	4/9/13 10:43 am	4/9/13 10:43 am

CONTRACT: AH5296
BOL:

GROSS 130,960.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 78,680.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
39.34	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1230924**	43967

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163070	4/9/13 11:04 am	4/9/13 11:04 am

CONTRACT: AH5296
BOL:

GROSS 153,180.00LBS Scale In
TARE 54,360.00LBS Tare Out
NET 98,820.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
49.41	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Lemond

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231000**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163071	4/9/13 12:49 pm	4/9/13 12:49 pm

CONTRACT: AH5296
BOL:

GROSS 146,200.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 93,480.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
46.74	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Brad

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231010**	66750

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163072	4/9/13 1:00 pm	4/9/13 1:00 pm

CONTRACT: AH5296
BOL:

GROSS 156,340.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 104,060.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
52.03	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_____

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004623
VESNA PURCHASING & SHARED SERVICE CENTER
15 S 84TH ST STE 175
30420 FORD STERLING
MILWAUKEE, WI 53214

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231027**	66750

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163073	4/9/13 1:25 pm	4/9/13 1:25 pm

CONTRACT: AH5196
BOL:

GROSS 162,500.00LBS Scale In
TARE 52,500.00LBS Tare Out
NET 110,000.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
40.00	FY	C&D BY YARD (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231084**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163074	4/9/13 2:54 pm	4/9/13 2:54 pm

CONTRACT: AH5296
BOL:

GROSS 142,040.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 89,320.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
44.66	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

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Brad

SIGNATURE:_____

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NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231102**	66750

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163075	4/9/13 3:13 pm	4/9/13 3:13 pm

CONTRACT: AH5296
BOL:

GROSS 151,120.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 98,840.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
49.42	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231127**	43967

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163076	4/9/13 3:50 pm	4/9/13 3:50 pm

CONTRACT: AH5296
BOL:

GROSS 165,660.00LBS Scale In
TARE 52,500.00LBS Tare Out
NET 113,160.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
56.58	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231096**	66750

TRUCK	CONTAINER	LICENSE
HM121-30		

REFERENCE	IN	OUT
4163077	4/9/13 2:41 pm	4/9/13 3:06 pm

CONTRACT: AH5296
BOL:

GROSS 92,540.00LBS Scale In
TARE 42,000.00LBS Scale Out
NET 50,540.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
25.27	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231221**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163078	4/10/13 8:07 am	4/10/13 8:07 am

CONTRACT: AH5296
BOL:

GROSS 166,940.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 114,220.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
57.11	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231235**	43967

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163079	4/10/13 8:20 am	4/10/13 8:20 am

CONTRACT: AH5296
BOL:

GROSS 159,220.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 106,940.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
53.47	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231247**	66750

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163080	4/10/13 8:40 am	4/10/13 8:40 am

CONTRACT: AH5296
BOL:

GROSS 158,620.00LBS Scale In
TARE 52,500.00LBS Tare Out
NET 106,120.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
53.06	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231313**	43967

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163081	4/10/13 10:24 am	4/10/13 10:24 am

CONTRACT: AH5296
BOL:

GROSS 151,540.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 98,820.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
49.41	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Brad

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2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231324**	66750

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163082	4/10/13 10:39 am	4/10/13 10:39 am

CONTRACT: AH5296
BOL:

GROSS 149,180.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 96,900.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
48.45	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231354**	66750

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163083	4/10/13 11:25 am	4/10/13 11:25 am

CONTRACT: AH5296
BOL:

GROSS 159,940.00LBS Scale In
TARE 52,500.00LBS Tare Out
NET 107,440.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
53.72	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231297**	66750

TRUCK	CONTAINER	LICENSE
HM121-30		

REFERENCE	IN	OUT
4163084	4/10/13 10:05 am	4/10/13 10:05 am

CONTRACT: AH5296
BOL:

GROSS 100,500.00LBS Scale In
TARE 42,000.00LBS Tare Out
NET 58,500.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.25	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231404**	43967

TRUCK	CONTAINER	LICENSE
HM121-30		

REFERENCE	IN	OUT
4163085	4/10/13 12:25 pm	4/10/13 12:25 pm

CONTRACT: AH5296
BOL:

GROSS 95,120.00LBS Scale In
TARE 42,000.00LBS Tare Out
NET 53,120.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.56	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

004671
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42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		1231409	43967

TRUCK	CONTAINER	LICENSE
TKM5004		

REFERENCE	IN	OUT
4163086	4/10/13 12:37 pm	4/10/13 12:37 pm

CONTRACT: AH5296
BOL:

GROSS 127,900.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 75,180.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
37.59	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		1231423	43967

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163067	4/10/13 1:02 pm	4/10/13 1:02 pm

GROSS 121,220.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 68,940.00LBS

CONTRACT: AH5296
BOL:

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
34.47	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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10690 W SIX MILE RD
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2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231455	66750

TRUCK	CONTAINER	LICENSE
TKMS26*		

REFERENCE	IN	OUT
4163088	4/10/13 2:01 pm	4/10/13 2:01 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 150,920.00LBS Scale In
TARE 52,500.00LBS Tare Out
NET 98,420.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
49.21	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231487	66750

TRUCK	CONTAINER	LICENSE
TKMS004		

REFERENCE	IN	OUT
4163089	4/10/13 3:05 pm	4/10/13 3:05 pm

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

GROSS 153,340.00LBS Scale In
TARE 52,720.00LBS Tare Out
NET 100,620.00 LBS

CONTRACT: AH5296
BOL:

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
50.31	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

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ARBOR HILLS LANDFILL
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NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231494	66750

TRUCK	CONTAINER	LICENSE
TKMS002		

REFERENCE	IN	OUT
4163090	4/10/13 3:25 pm	4/10/13 3:25 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

GROSS 146,320.00LBS Scale In
TARE 52,280.00LBS Tare Out
NET 94,040.00 LBS

CONTRACT: AHS296
BOL:

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
47.02	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231472**	43967

TRUCK	CONTAINER	LICENSE
HM121-30		

REFERENCE	IN	OUT
4163091	4/10/13 2:36 pm	4/10/13 2:36 pm

CONTRACT: AH5296
BOL:

GROSS 93,280.00LBS Scale In
TARE 42,000.00LBS Tare Out
NET 51,280.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
25.64	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231587**	66750

TRUCK	CONTAINER	LICENSE
LOU572		

REFERENCE	IN	OUT
4163092	4/11/13 8:00 am	4/11/13 8:00 am

CONTRACT: AH5296
BOL:

GROSS 90,400.00LBS Scale In
TARE 42,520.00LBS Tare Out
NET 47,880.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
23.94	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231592**	66750

TRUCK	CONTAINER	LICENSE
LOU848		-

REFERENCE	IN	OUT
4163093	4/11/13 8:14 am	4/11/13 8:14 am

CONTRACT: AH5296
BOL:

GROSS 90,320.00LBS Scale In
TARE 41,280.00LBS Tare Out
NET 49,040.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
24.52	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231609	66750

TRUCK	CONTAINER	LICENSE
LOU122		

REFERENCE	IN	OUT
4163094	4/11/13 8:22 am	4/11/13 8:46 am

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

GROSS 90,580.00LBS Scale In
TARE 43,000.00LBS Scale Out
NET 47,580.00 LBS

CONTRACT: AH5296
BOL:

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
23.79	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231602**	66750

TRUCK	CONTAINER	LICENSE
LOU371		

REFERENCE	IN	OUT
4163095	4/11/13 8:34 am	4/11/13 8:34 am

CONTRACT: AH5296
BOL:

GROSS 94,780.00LBS Scale In
TARE 42,780.00LBS Tare Out
NET 52,000.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.00	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: DON

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231628**	66750

TRUCK	CONTAINER	LICENSE
LOU934-L		

REFERENCE	IN	OUT
4163096	4/11/13 9:21 am	4/11/13 9:21 am

CONTRACT: AH5296
BOL:

GROSS 90,460.00LBS Scale In
TARE 42,160.00LBS Tare Out
NET 48,300.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
24.15	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Ron

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

Tex# 627372

SITE	CELL	TICKET #	OPERATOR
01		**1231634**	66750

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4163097	4/11/13 9:31 am	4/11/13 9:31 am

CONTRACT: AH5296
BOL:

GROSS 92,560.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 49,940.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
24.97	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: STEVE

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231656**	66750

TRUCK	CONTAINER	LICENSE
LOU572		

REFERENCE	IN	OUT
4163098	4/11/13 10:02 am	4/11/13 10:02 am

CONTRACT: AH5296
BOL:

GROSS 92,560.00LBS Scale In
TARE 42,520.00LBS Tare Out
NET 50,040.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
25.02	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231727	66750

TRUCK	CONTAINER	LICENSE
LOU848		

REFERENCE	IN	OUT
4163099	4/11/13 11:59 am	4/11/13 11:59 am

004671
MM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 94,620.00LBS Scale In
TARE 41,280.00LBS Tare Out
NET 53,340.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.67	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

633823

SITE	CELL	TICKET #	OPERATOR
01		**1231674**	66750

TRUCK	CONTAINER	LICENSE
LOU122		

REFERENCE	IN	OUT
4163654	4/11/13 10:34 am	4/11/13 10:34 am

CONTRACT: AH5296
BOL:

GROSS 99,220.00LBS Scale In
TARE 43,000.00LBS Tare Out
NET 56,220.00 LBS

2811

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.11	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Pam

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231677**	66750

TRUCK	CONTAINER	LICENSE
LOU371		

REFERENCE	IN	OUT
4163655	4/11/13 10:40 am	4/11/13 10:40 am

CONTRACT: AH5296
BOL:

GROSS 95,440.00LBS Scale In
TARE 42,780.00LBS Tare Out
NET 52,660.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.33	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

Lou's 632717

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231705**	66750

TRUCK	CONTAINER	LICENSE
LOU934-L		

REFERENCE	IN	OUT
4163656	4/11/13 11:29 am	4/11/13 11:29 am

CONTRACT: AH5296
BOL:

GROSS 99,700.00LBS Scale In
TARE 42,160.00LBS Tare Out
NET 57,540.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.77	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Ron

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

Tm# 627373

SITE	CELL	TICKET #	OPERATOR
01		**1231712**	66750

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4161657	4/11/13 11:39 am	4/11/13 11:39 am

CONTRACT: AH5296
BOL:

GROSS 102,100.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 59,480.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.74	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Steve

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231728**	66750

TRUCK	CONTAINER	LICENSE
LOU572		

REFERENCE	IN	OUT
4163658	4/11/13 12:00 pm	4/11/13 12:00 pm

CONTRACT: AH5296
BOL:

GROSS 99,040.00LBS Scale In
TARE 42,520.00LBS Tare Out
NET 56,520.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.26	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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NORTHVILLE, MI 48168
2483497230

004671
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42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

633874

SITE	CELL	TICKET #	OPERATOR
01		**1231759**	66750

TRUCK	CONTAINER	LICENSE
LOU122		

REFERENCE	IN	OUT
4163659	4/11/13 12:45 pm	4/11/13 12:45 pm

CONTRACT: AH5296
BOL:

GROSS 98,780.00LBS Scale In
TARE 43,000.00LBS Tare Out
NET 55,780.00 LBS

27.89

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
27.89	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: DAN

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231764**	66750

TRUCK	CONTAINER	LICENSE
LOU371		

REFERENCE	IN	OUT
4163660	4/11/13 12:50 pm	4/11/13 12:50 pm

CONTRACT: AH5296
BOL:

GROSS 100,860.00LBS Scale In
TARE 42,780.00LBS Tare Out
NET 58,080.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.04	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: DON

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

632718

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231783**	66750

TRUCK	CONTAINER	LICENSE
LOU934-L		

REFERENCE	IN	OUT
4163661	4/11/13 1:31 pm	4/11/13 1:31 pm

CONTRACT: AH5296
BOL:

GROSS 103,000.00LBS Scale In
TARE 42,160.00LBS Tare Out
NET 60,840.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.42	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Ron

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		1231790	43967

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4163662	4/11/13 1:43 pm	4/11/13 1:43 pm

CONTRACT: AH5296
BOL:

GROSS 97,600.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 54,980.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
27.49	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231794**	66750

TRUCK	CONTAINER	LICENSE
LOU572		

REFERENCE	IN	OUT
3 416.663	4/11/13 1:49 pm	4/11/13 1:49 pm

CONTRACT: AH5296
BOL:

GROSS 99,980.00LBS Scale In
TARE 42,520.00LBS Tare Out
NET 57,460.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.73	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231824	66750

TRUCK	CONTAINER	LICENSE
LOU122		

REFERENCE	IN	OUT
4163664	4/11/13 2:50 pm	4/11/13 2:50 pm

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 101,180.00LBS Scale In
TARE 43,000.00LBS Tare Out
NET 58,180.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.09	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231830	66750

TRUCK	CONTAINER	LICENSE
LOU371		

REFERENCE	IN	OUT
4163666	4/11/13 2:57 pm	4/11/13 2:57 pm

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HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 104,340.00LBS Scale In
TARE 42,780.00LBS Tare Out
NET 61,560.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.78	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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SIGNATURE:_____

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231837	66790

TRUCK	CONTAINER	LICENSE
LOU934-L		

REFERENCE	IN	OUT
4163667	4/11/13 3:25 pm	4/11/13 3:28 pm

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 101,620.00LBS Scale In
TARE 42,160.00LBS Tare Out
NET 59,460.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.73	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231848	66750

TRUCK	CONTAINER	LICENSE
LOU572		

REFERENCE	IN	OUT
4163668	4/11/13 3:46 pm	4/11/13 3:46 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 99,060.00LBS Scale In
TARE 42,520.00LBS Tare Out
NET 56,540.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.27	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

TK#632147

SITE	CELL	TICKET #	OPERATOR
01		**1232021**	66750

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4163015	4/12/13 10:30 am	4/12/13 10:30 am

CONTRACT: AH5296
BOL:

GROSS 100,320.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 57,700.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.85	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Steve

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1232037	43967

TRUCK	CONTAINER	LICENSE
TKMS22L		

REFERENCE	IN	OUT
4163016	4/12/13 10:57 am	4/12/13 10:57 am

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 91,600.00LBS Scale In
TARE 34,500.00LBS Tare Out
NET 57,100.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.55	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1232030**	66750

TRUCK	CONTAINER	LICENSE
LOU215		

REFERENCE	IN	OUT
4163017	4/12/13 10:46 am	4/12/13 10:46 am

CONTRACT: AH5296
BOL:

GROSS 93,240.00 LBS Scale In
TARE 42,900.00 LBS Tare Out
NET 50,340.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
25.17	TN	Contaminated Soils (Ext)	WY	100.00			

	Tax Total
County Fee	$4.91
ENVIRONMENTAL FEE	$6.54
FUEL FEE	$13.22
MDEQ SURCHARGE - TON	$9.06
Township Fee	$4.50

Total
Paid
Change
Check#
Recpt #

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1232045**	66750

TRUCK	CONTAINER	LICENSE
TKMS53		

REFERENCE	IN	OUT
4163018	4/12/13 11:06 am	4/12/13 11:06 am

CONTRACT: AH5296
BOL:

GROSS 94,560.00 LBS Scale In
TARE 53,920.00 LBS Tare Out
NET 40,640.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
20.32	TN	Contaminated Soils (Ext)	WY	100.00			

	Tax Total
County Fee	$3.96
ENVIRONMENTAL FEE	$5.28
FUEL FEE	$10.67
MDEQ SURCHARGE - TON	$7.32
Township Fee	$3.63

Total
Paid
Change
Check#
Recpt #

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1232067	43967

TRUCK	CONTAINER	LICENSE
LOU571		

REFERENCE	IN	OUT
4163020	4/12/13 11:38 am	4/12/13 11:38 am

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

GROSS 89,560.00LBS Scale In
TARE 43,500.00LBS Tare Out
NET 46,060.00 LBS

CONTRACT: AH5296
BOL:

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
23.03	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1232099	66750

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4163021	4/12/13 12:31 pm	4/12/13 12:31 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 96,520.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 53,900.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.95	TN	Contaminated Soils (Ext)	WA	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

REPRINT

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		1232116	66750

TRUCK	CONTAINER	LICENSE
LOU215		

REFERENCE	IN	OUT
4163022	4/12/13 12:53 pm	4/12/13 12:53 pm

CONTRACT: AHS296
BOL:

GROSS 93,080.00LBS Scale In
TARE 42,900.00LBS Tare Out
NET 50,180.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
25.09	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1232128	43967

TRUCK	CONTAINER	LICENSE
TKMS22		

REFERENCE	IN	OUT
4163023	4/12/13 1:06 pm	4/12/13 1:06 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AH5296
BOL:

GROSS 106,220.00LBS Scale In
TARE 53,380.00LBS Tare Out
NET 52,840.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.42	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

CUSTOMER COPY

SIGNATURE:_____

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1232136	66750

TRUCK	CONTAINER	LICENSE
TKMS53-L		

REFERENCE	IN	OUT
4163058	4/12/13 1:21 pm	4/12/13 1:21 pm

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AHS296
BOL:

GROSS 110,280.00LBS Scale In
TARE 42,760.00LBS Tare Out
NET 67,520.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
33.76	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

SIGNATURE:_____

Township Fee

FACILITY COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231927	43967

TRUCK	CONTAINER	LICENSE
LOU571		

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

REFERENCE	IN	OUT
4163059	4/12/13 8:16 am	4/12/13 8:16 am

CONTRACT: AH5296
BOL:

GROSS 105,240.00LBS Scale In
TARE 43,500.00LBS Tare Out
NET 61,740.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.87	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

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SIGNATURE:_____

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ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231954	43967

TRUCK	CONTAINER	LICENSE
LOU804		

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

REFERENCE	IN	OUT
4163060	4/12/13 8:55 am	4/12/13 8:55 am

CONTRACT: AH5296
BOL:

GROSS 98,700.00LBS Scale In
TARE 43,480.00LBS Tare Out
NET 55,220.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
27.61	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_____

CUSTOMER COPY

SIGNATURE:_____

FACILITY COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1231935	43967

TRUCK	CONTAINER	LICENSE
LOU837		

REFERENCE	IN	OUT
4163061	4/12/13 8:24 am	4/12/13 8:24 am

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

CONTRACT: AHS296
BOL:

GROSS 102,420.00LBS Scale In
TARE 42,620.00LBS Tare Out
NET 59,800.00LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
29.90	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

CUSTOMER COPY

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

628759

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231943**	66750

TRUCK	CONTAINER	LICENSE
TKMS22L		

REFERENCE	IN	OUT
4163062	4/12/13 8:36 am	4/12/13 8:36 am

CONTRACT: AH5296
BOL:

GROSS	94,780.00	LBS	Scale In
TARE	34,500.00	LBS	Tare Out
NET	60,280.00	LBS	

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.14	TN	Contaminated Soils (Ext)	WY	100.00			

	Tax Total
County Fee	$5.88
ENVIRONMENTAL FEE	$7.84
FUEL FEE	$15.83
MDEQ SURCHARGE - TON	$10.85
Township Fee	$5.39

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_____

FACILITY COPY

SIGNATURE:_____

FACILITY COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

REPRINT

SITE	CELL	TICKET #	OPERATOR
01		1281940	43967

TRUCK	CONTAINER	LICENSE
LOU215		

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

REFERENCE	IN	OUT
4163063	4/12/13 8:32 am	4/12/13 8:32 am

CONTRACT: AH5296
BOL:

GROSS 98,880.00LBS Scale In
TARE 42,900.00LBS Tare Out
NET 55,980.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
27.99	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_____

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1231950**	66750

TRUCK	CONTAINER	LICENSE
TKMS53-L		

REFERENCE	IN	OUT
4163064	4/12/13 8:47 am	4/12/13 8:47 am

CONTRACT: AH5296
BOL:

GROSS 99,660.00 LBS Scale In
TARE 42,760.00 LBS Tare Out
NET 56,900.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.45	TN	Contaminated Soils (Ext)	WY	100.00			

I hereby certify that this load does not contain any unauthorized hazardous waste.

	Tax Total
County Fee	$5.55
ENVIRONMENTAL FEE	$7.40
FUEL FEE	$14.94
MDEQ SURCHARGE - TON	$10.24
Township Fee	$5.09

Total
Paid
Change
Check#
Recpt #

FACILITY COPY

SIGNATURE:_____

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1233362**	40219

TRUCK	CONTAINER	LICENSE
HM109-20M		

REFERENCE	IN	OUT
4163024	4/17/13 8:50 am	4/17/13 8:50 am

CONTRACT: AH5296
BOL:

GROSS 104,180.00LBS Scale In
TARE 43,140.00LBS Tare Out
NET 61,040.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.52	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Loren

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	
01		**1233451**	4021

TRUCK	CONTAINER	LICENSE
HM109-20M		

REFERENCE	IN	OUT
4163025	4/17/13 11:05 am	4/17/13 11:05 am

CONTRACT: AH5296
BOL:

GROSS 104,120.00LBS Scale In
TARE 43,140.00LBS Tare Out
NET 60,980.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.49	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1233568**	40219

TRUCK	CONTAINER	LICENSE
HM109-20M		

REFERENCE	IN	OUT
4163026	4/17/13 1:29 pm	4/17/13 1:29 pm

CONTRACT: AH5296
BOL:

GROSS 103,320.00LBS Scale In
TARE 43,140.00LBS Tare Out
NET 60,180.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.09	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_____

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1233612**	40219

TRUCK	CONTAINER	LICENSE
HM124-20		

REFERENCE	IN	OUT
4163027	4/17/13 2:08 pm	4/17/13 2:08 pm

CONTRACT: AH5296
BOL:

GROSS 99,540.00LBS Scale In
TARE 42,820.00LBS Tare Out
NET 56,720.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
28.36	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Jack

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1233667**	40219

TRUCK	CONTAINER	LICENSE
HM109-20M		

REFERENCE	IN	OUT
4163028	4/17/13 3:32 pm	4/17/13 3:32 pm

CONTRACT: AH5296
BOL:

GROSS 96,560.00LBS Scale In
TARE 43,140.00LBS Tare Out
NET 53,420.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
26.71	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE: Loren

CUSTOMER COPY

ARBOR HILLS LANDFILL
10690 W SIX MILE RD
NORTHVILLE, MI 48168
2483497230

004671
HM ENVIRONMENTAL (T)
42826 N WALNUT
MT CLEMENS, MI 48043

INVOICE
INBOUND

SITE	CELL	TICKET #	OPERATOR
01		**1233681**	40219

TRUCK	CONTAINER	LICENSE
HM124-20		

REFERENCE	IN	OUT
4163029	4/17/13 4:00 pm	4/17/13 4:00 pm

CONTRACT: AH5296
BOL:

GROSS 103,880.00LBS Scale In
TARE 42,820.00LBS Tare Out
NET 61,060.00 LBS

QTY	UNIT	DESCRIPTION	ORIGIN	%	RATE	TAX	TOTAL
30.53	TN	Contaminated Soils (Ext)	WY	100.00			

Total
Paid
Change
Check#
Recpt #

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:

CUSTOMER COPY

CONCRETE DISPOSAL DOCUMENTATION

#4

RECYCLED AGG.-HIGHLAND PARK

Plant:3618
Date:4/9/2013 Time:08:24
Customer:03990
Name:HM ENVIROMENTAL SERVICES I
Load#: 1

Ticket # 236049
Truck#: HM121 H.M. ENVIROMENTAL

I hereby certify that aggregate as delivered from MDOT 82-25 meets specification requirements, for stated Michigan series and class in quantity stated.
Signature_____

Picked Up
Job: 3618-05869 US COAST GUARD
Phase: P.O. #:
Name/Site: GW:80680 TW:42000 NW:38680
Product: 900 PER AXLE/DROP OFF FEE

38680

0.00 Check #

		POUNDS:	TONS	TONNES
* *	GROSS:			
	TARE:			
	NET:	6.00		

Cumulative Prior Ticket: 0.00
Cumulative This Ticket: 6.00

Driver Name:_____

Weighed By: RENEE B.

#5

RECYCLED AGG.-HIGHLAND PARK

Plant:3618
Date:4/9/2013 Time:09:15 Ticket # 236054
Customer:03990 Truck#: HM121 H.M. ENVIROMENTAL
Name:HM ENVIROMENTAL SERVICES I
Load#: 2

I hereby certify that aggregate as delivered from MDOT 82-25 meets specification requirements, for stated Michigan series and class in quantity stated.
Signature_____

Picked Up
Job: 3618-05869 US COAST GURAD
Phase: P.O. #:
Name/Site: GW:86020 TW:42000 NW:44020
Product: 900 PER AXLE/DROP OFF FEE

44020

0.00 Check #

		POUNDS:	TONS	TONNES
* *	GROSS:			
	TARE:			
	NET:	6.00		

Cumulative Prior Ticket: 6.00
Cumulative This Ticket: 12.00

Driver Name:_____

Weighed By: RENEE B.

#9

RECYCLED AGG.-HIGHLAND PARK

Plant:3618
Date:4/9/2013 Time:10:47 Ticket # 236063
Customer:03990 Truck#: HM121 H.M. ENVIROMENTAL
Name:HM ENVIROMENTAL SERVICES I
Load#: 3

I hereby certify that aggregate as delivered from MDOT 82-25 meets specification requirements, for stated Michigan series and class in quantity stated.
Signature_____

Picked Up
Job: 3618-05869 US COAST GURAD
Phase: P.O. #:
Name/Site: GW:02500 TW:42000 NW:40500
Product: 900 PER AXLE/DROP OFF FEE

40580

0.00 Check #

		POUNDS:	TONS	TONNES
* *	GROSS:			
	TARE:			
	NET:	6.00		

Cumulative Prior Tickets: 12.00
Cumulative This Ticket: 18.00

Driver Name:_____ Weighed By: RENEE B.

#10

RECYCLED AGG.-HIGHLAND PARK

Plant:3618
Date:4/9/2013 Time:11:47
Customer:03990
Name:HM ENVIROMENTAL SERVICES I-
Load#: 4

Ticket # 236071
Truck#: HM121 H.M. ENVIROMENTAL

I hereby certify that aggregate as delivered from MDOT 82-25 meets specification requirements, for stated Michigan series and class in quantity stated.
Signature _____

Picked Up
Job: 3618-05869 US COAST GURAD
Phase: P.O. #:
Name/Site: GW:89080 TW:42000 NW:47080
Product: 900 PER AXLE/DROP OFF FEE

47080

0.00 Check #

	POUNDS:	TONS	TONNES
* * GROSS:			
TARE:			
NET:	6.00		

Cumulative Prior Ticket: 18.00
Cumulative This Ticket: 24.00

Driver Name: _____

Weighed By: RENEE B.

#14

RECYCLED AGG.-HIGHLAND PARK

Plant:3618
Date:4/9/2013 Time:13:11
Customer:03990
Name:HM ENVIROMENTAL SERVICES I
Load#: 5

Ticket # 236080
Truck#: HM121 H.M. ENVIROMENTAL

I hereby certify that aggregate as delivered from MDOT 82-25 meets specification requirements, for stated Michigan series and class in quantity stated.
Signature_____

Picked Up
Job: 3618-05869 US COAST GURAD
Phase: P.O. #:
Name/Site: GW:84000 TW:42000 NW:42000
Product: 900 PER AXLE/DROP OFF FEE

42800

0.00 Check #
POUNDS: TONS TONNES

* * GROSS:
TARE:
NET: 6.00

Cumulative Prior Ticket: 24.00
Cumulative This Ticket: 30.00

Driver Name:_____

Weighed By: RENEE B.

WATER DISPOSAL MANIFESTS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: M I K 1 1 2 0 9 1 8 4 4
2. Page 1 of: 1
3. Emergency Response Phone: 216-902-6255
4. Manifest Tracking Number: 010683919 JJK

5. Generator's Name and Mailing Address
US COAST GUARD
1240 EAST NINTH STREET RM 2179
CLEVELAND OH 48207
Att: JAMES COOK
Generator's Phone: 2 1 6 9 0 2 6 2 5 5

Generator's Site Address (if different than mailing address)
US COAST GUARD
2660 EAST ATWATER ST
DETROIT MI 48207
265472

6. Transporter 1 Company Name: HM Environmental Services, Inc
U.S. EPA ID Number: M I R 0 0 0 0 1 7 0 7 9

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
USHER OIL
9000 ROSELAWN
DETROIT MI 48204
Facility's Phone: 313 934-7096
U.S. EPA ID Number: M I D 0 1 6 9 8 5 8 1 4

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON REGULATED LIQUIDS	001	TT	6,000	G	029L
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) APPROVAL # 041713-W

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jim Goerall on behalf-USCG
Signature:
Month 4 Day 19 Year 17

GENERATOR

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Larry Ellis
Signature:
Month 4 Day 19 Year 17
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name
Signature
Month 04 Day 17 Year 15

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: M I K 1 1 2 0 0 1 8 4 4

2. Page 1 of: 1

3. Emergency Response Phone: 216-902-6255

4. Manifest Tracking Number: **010683921 JJK**

5. Generator's Name and Mailing Address
US COAST GUARD
1240 EAST NINTH STREET RM 2179
CLEVELAND OH 48207
Generator's Phone: 2 1 6 9 0 2 6 2 5 5

Attn: JAMES COOK

Generator's Site Address (if different than mailing address)
US COAST GUARD
2660 EAST ATWATER ST
DETROIT MI 48207

265480

6. Transporter 1 Company Name: HM Environmental Services, Inc
U.S. EPA ID Number: M I R 0 0 0 0 1 7 0 7 9

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
USHER OIL
9000 ROSELAWN
DETROIT MI 48204
Facility's Phone: 313 834 7056
U.S. EPA ID Number: M I D 0 1 8 9 8 5 8 1 4

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON-REGULATED LIQUIDS	001	TT	6000	G	029L		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1) APPROVAL # 041713-W

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jim Goerdt on behalf - USCG
Signature:
Month 4 Day 15 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JACK KOMANCHEK
Signature:
Month 4 Day 15 Year 13

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month 04 Day 19 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: M I K 1 1 2 0 9 1 8 4 4

2. Page 1 of 1

3. Emergency Response Phone: 216-902-6265

4. Manifest Tracking Number: 010683920 JJK

5. Generator's Name and Mailing Address
US COAST GUARD
1240 EAST NINTH STREET RM 2179
CLEVELAND OH 48207
Generator's Phone: 2 1 6 9 0 2 6 2 6 5

Att: JAMES COOK

Generator's Site Address (if different than mailing address)
US COAST GUARD
2660 EAST ATWATER ST
DETROIT MI 48207

265483

6. Transporter 1 Company Name: HM Environmental Services, Inc.
U.S. EPA ID Number: M I R 0 0 0 0 1 7 0 7 9

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
USHER OIL
9000 ROSELAWN
DETROIT MI 48204
Facility's Phone: 313 834 7055
U.S. EPA ID Number: M I D 0 1 6 9 8 5 8 1 4

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-REGULATED LIQUIDS	001	TT	9000	G	029L
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) APPROVAL # 04713-W

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Jim Cook Asst Industrial Hygiene Officer
Signature:
Month 4 Day 19 Year 13

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert Black
Signature:
Month 4 Day 19 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: J Ward
Signature:
Month 04 Day 19 Year 13

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

Appendix C

Removal and Restoration Activities
Photographic Documentation

USCG – ATWATER REMOVAL ACTION

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southwest	**DESCRIPTION:** Entrance to the site prior to initiating any removal actions.	#1 04/08/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Northwest	**DESCRIPTION:** Straw bales placed along perimeter of site for erosion/sediment control.	#2 04/08/13

USCG – ATWATER REMOVAL ACTION

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southeast	**DESCRIPTION:** Concrete and misc. other debris to be removed from the site prior to initiating excavation activities.	#3 04/08/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Northwest	**DESCRIPTION:** All excavation corners were professionally surveyed prior to initiating removal activities.	#4 04/08/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** North	Well abandonment activities prior to excavating.	#5 04/08/13

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** West	Heavy equipment mobilizing to the site.	#6 04/08/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Southeast	Loading of broken concrete into disposal truck.	#7 04/09/13

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** East	Large concrete footer discovered within the southern portion of the Area 7 excavation.	#8 04/09/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southeast	**DESCRIPTION:** Area 7 excavation.	#9 04/09/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** ---	**DESCRIPTION:** Large wooden pilings were found in majority of excavations at the site.	#10 04/09/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Northwest	**DESCRIPTION:** Concrete curbing was limit of excavations along eastern side of the site.	#11 04/10/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southeast	**DESCRIPTION:** Excavation Area 6 (foreground), Area 3 (central), and Area 7 (background).	#12 04/11/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** South	**DESCRIPTION:** Water accumulation in Area 1 (foreground) and Area 4 (background) from both heavy rains and groundwater recharge.	#13 04/12/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southeast	**DESCRIPTION:** Additional areas marked for excavation along Area 3 based on analytical results.	#14 04/16/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Northwest	Excavation Area 7 (foreground), Area 3 (central) and Area 6 (background).	#15 04/16/13

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Southeast	Clean fill (Class 2 sand) being distributed across the site.	#16 04/18/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Southeast	Clean fill (Class 2 sand) spread evenly across the site.	#17 04/18/13

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Northwest	Water being pumped from Area 4.	#18 04/19/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Northeast	Fill compaction within Area 5.	#19 04/19/13

SITE:	PHOTOGRAPHER:	DESCRIPTION:	
USCG - Atwater Removal Action	J. Goerdt **VIEW:** Northwest	Final grade of clean fill (Class 2 sand).	#20 04/22/13

USCG – ATWATER REMOVAL ACTION

DETROIT, MI

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Southeast	**DESCRIPTION:** Distribution of top soil.	#21 04/23/13

SITE: USCG - Atwater Removal Action	**PHOTOGRAPHER:** J. Goerdt **VIEW:** Northwest	**DESCRIPTION:** Top soil application complete. Site seeded and lightly raked.	#22 04/23/13

Appendix D

Laboratory Analytical Reports

WASTE CHARACTERIZATION ANALYSES

TRACE
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phone 231.773.5998
toll-free 800.733.5998
fax 231.773.6537

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673
info@trace-labs.com
www.trace-labs.com

March 26, 2013

Mr. Bob Borst
HM Environmental Services, Inc.
42826 N. Walnut
Mt. Clemens, MI 48043

Phone: (586) 469-0041
Fax: (586) 469-1014

RE: Trace Project T13C270
Client Project USCG Atwater

Dear Mr. Borst:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Senior Project Manager

Enclosures

ACCREDITED IN ACCORDANCE WITH nelac

NJDEP Accreditation No. MI008 PADEP Accreditation No. 68-04471

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info@trace-labs.com
www.trace-labs.com

SAMPLE SUMMARY

Trace Project ID: T13C270
Client Project ID: USCG Atwater

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T13C270-01	Soil Composite North End of Property	Solid	sm	03/20/13 09:00	03/20/13 15:30
T13C270-02	Soil Grab South End of Property	Solid	sm	03/20/13 09:00	03/20/13 15:30

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

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ANALYTICAL RESULTS

Trace Project ID: T13C270
Client Project ID: USCG Atwater

Trace ID: T13C270-01 | Date Collected: 03/20/13 09:00 | Matrix: Solid
Sample ID: Soil Composite North End of Property | Date Received: 03/20/13 15:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TCLP										
Analysis Method: EPA 6010B										
Batch: T035889										
Arsenic	<0.30	mg/L	0.30	1	03/22/13	jan	03/22/13	mes		5.0
Barium	**1.2**	**mg/L**	**1.0**	**1**	**03/22/13**	**jan**	**03/22/13**	**mes**		**100**
Cadmium	<0.10	mg/L	0.10	1	03/22/13	jan	03/22/13	mes		1.0
Chromium	<0.50	mg/L	0.50	1	03/22/13	jan	03/22/13	mes		5.0
Lead	<0.50	mg/L	0.50	1	03/22/13	jan	03/22/13	mes		5.0
Selenium	<0.60	mg/L	0.60	1	03/22/13	jan	03/22/13	mes		1.0
Silver	<0.10	mg/L	0.10	1	03/22/13	jan	03/22/13	mes		5.0
Analysis Method: EPA 7470A										
Batch: T035882										
Mercury	<0.010	mg/L	0.010	1	03/22/13	jan	03/22/13	mes		0.20

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ANALYTICAL RESULTS

Trace Project ID: T13C270
Client Project ID: USCG Atwater

Trace ID: T13C270-02 | Date Collected: 03/20/13 09:00 | Matrix: Solid
Sample ID: Soil Grab South End of Property | Date Received: 03/20/13 15:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TCLP										
Analysis Method: EPA 6010B										
Batch: T035889										
Arsenic	<0.30	mg/L	0.30	1	03/22/13	jan	03/22/13	mes		5.0
Barium	**1.5**	**mg/L**	**1.0**	**1**	**03/22/13**	**jan**	**03/22/13**	**mes**		**100**
Cadmium	<0.10	mg/L	0.10	1	03/22/13	jan	03/22/13	mes		1.0
Chromium	<0.50	mg/L	0.50	1	03/22/13	jan	03/22/13	mes		5.0
Lead	**0.60**	**mg/L**	**0.50**	**1**	**03/22/13**	**jan**	**03/22/13**	**mes**		**5.0**
Selenium	<0.60	mg/L	0.60	1	03/22/13	jan	03/22/13	mes		1.0
Silver	<0.10	mg/L	0.10	1	03/22/13	jan	03/22/13	mes		5.0
Analysis Method: EPA 7470A										
Batch: T035882										
Mercury	<0.010	mg/L	0.010	1	03/22/13	jan	03/22/13	mes		0.20

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QUALITY CONTROL RESULTS

Trace Project ID: T13C270

Client Project ID: USCG Atwater

QC Batch: T035889
QC Batch Method: EPA 3015 Microwave Assisted Digestions for Liquids

Analysis Description: Lead, TCLP
Analysis Method: EPA 6010B

METHOD BLANK: T035889-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.10	0.10	
Arsenic	mg/L	<0.30	0.30	
Barium	mg/L	<1.0	1.0	
Cadmium	mg/L	<0.10	0.10	
Chromium	mg/L	<0.50	0.50	
Lead	mg/L	<0.50	0.50	
Selenium	mg/L	<0.60	0.60	

METHOD BLANK: T035889-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.10	0.10	
Arsenic	mg/L	<0.30	0.30	
Barium	mg/L	<1.0	1.0	
Cadmium	mg/L	<0.10	0.10	
Chromium	mg/L	<0.50	0.50	
Lead	mg/L	<0.50	0.50	
Selenium	mg/L	<0.60	0.60	

LABORATORY CONTROL SAMPLE: T035889-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0278	<0.10	95	80-120	
Arsenic	mg/L	0.0556	<0.30	100	80-120	
Barium	mg/L	0.889	<1.0	106	80-120	
Cadmium	mg/L	0.0278	<0.10	104	80-120	
Chromium	mg/L	0.0278	<0.50	111	80-120	
Lead	mg/L	0.0556	<0.50	100	80-120	
Selenium	mg/L	0.0556	<0.60	88	80-120	

Trace Project ID: T13C270

Client Project ID: USCG Atwater

QC Batch: T035882
QC Batch Method: EPA 7470A Prep

Analysis Description: Mercury, TCLP
Analysis Method: EPA 7470A

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METHOD BLANK: T035882-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.010	0.010	

METHOD BLANK: T035882-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T035882-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	<0.010	106	80-120	

Trace Project ID: T13C270
Client Project ID: USCG Atwater

QC Batch: T035872
QC Batch Method: Leaching proceedures

Analysis Description: TCLP Extraction, Metals
Analysis Method: EPA 1311

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CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

TRACE ID NO. T13C270

TRACE USE ONLY

Logged By: [illegible] Checked By: [illegible]

Received on ice: Yes (No) Preservative Checked: Yes No (N/A)

Soil Volatiles Preserved: MeOH Low Level Lab Sampling Time:

Report Results To:

Client Name: HM ENVIRONMENTAL SERVICES, INC.
Contact Person: BOB BORST
Mailing Address: 42826 N. WALNUT
City, State, Zip Code: MT. CLEMENS, MI
Phone: 586-469-0041 Fax: 586-469-1014
Email Address: bborst@hmenv.com
Cell #: 248-978-3839 Sampled by: S. MATTHEES
Project Name & #: USCG ATWATER

Bill To:

Billing Address (if different) SAME
City, State, Zip Code
Attn: Phone: PO #:

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard	☒	S = Soil	WI = Wipes
Drinking Water	☐	3-4 Day (RUSH)*	☐	W = Water	LW = Liquid Waste
NPDES	☐	24-48 Hour (RUSH)*	☐	SE = Sediment	A = Air
USACE	☐	* Requires prior approval		OI = Oil	D = Drinking Water
Special	☐			SO = Solid Waste	SL = Sludge

Request for Analytical Services

ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	8-TCLP METALS										REMARKS	Possible Health Hazard
01	3/20	9:00am		~~Composite~~ SOIL COMPOSITE	S	1	X										ICE	
	3/20			NORTH END OF PROPERTY														
				SOIL GRAB SOUTH END OF	S	1	X											
02	3/20	9:00am		PROPERTY														

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) R. Borst		3/20/13	3:30		3) UPS	[illegible]	3/21/13	10:05
	2)	UPS				4)			

In executing this Chain of Custody, the client acknowledges acceptance of the terms and conditions of the agreement as set forth at http://www.trace-labs.com/cocterms.php

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SAMPLE LOG IN CHECKLIST

Date: 3/21/13 Client Name: HM Environmental # of Coolers: 1

Trace ID #: T13C270 Project Name: _____ Cooler #s: _____

Logged in by: [illegible] Cooler #s: _____

Cooler Receipt

Cooler/samples delivered by: Trace courier ☐ Hand delivered ☐ Commercial courier ☑ Name of delivery person: _____ UPS ☑ DHL ☐ FED EX ☐ US Mail ☐

Did cooler come with a bill of lading? No ☐ Yes ☐ ☑ Not Applicable Way Bill or Tracking #: _____

COC Seals present and intact on cooler? No ☐ Yes ☐ ☑ Not Applicable

Custody seals signed by Client? No ☐ Yes ☐ Client custody seal # (if applicable): _____

Coolant and Temperature

Type of Coolant Used

	Yes	No
Slurry w/ crushed, cubed, or chip ice?	☐	☐
Multiple bags of ice around samples?	☐	☐
Ice Packs/ Blue Ice :	☐	☐
No Coolant Present:	☑	

Cooler Temperature

Correction Factor 0.1 °C

Date: 3/21/13 Time: 10:05

Temperature Blank: _____ °C (Use Digital Stick Thermometer)

Range of 3 samples: 9.5 °C (Use IR Thermometer)

Melt Water: _____ °C (IR or Stick Therm. - circle one)

Ice still present upon receipt: ☐ Yes ☑ No

General

	Yes	No	NA
COC taped to inside of cooler lid?	☐	☑	☐
All bottles arrived unbroken with labels in good condition?	☑	☐	☐
Each sample point is in a sealed plastic bag?	☐	☑	☐
Labels filled out completely?	☑	☐	☐
All bottle labels agree with Chain of Custody (COC)?	☑	☐	☐
Sufficient sample to run tests requested?	☑	☐	☐
pH checked and samples at correct pH? See Below*	☐	☐	☑
Correct preservative added to samples?	☐	☐	☑
DRO/GRO samples received and appropriate check in form completed?	☐	☐	☑
Air bubbles absent from VOAs?	☐	☐	☑
COC filled out properly and signed by client?	☑	☐	☐
COC signed in by TRACE sample custodian?	☑	☐	☐
Was project manager called and samples discussed?	☐	☐	☐

Contact: _____ Date: _____

Notes:

*EMD pH Test Strips Used:

☐ pH 0-2.5 Lot: HC932215

☐ pH 11.0-13.0 Lot: HC949254

☐ Other: _____

Form 70-A.9
Effective 7/31/12

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CONFIRMATION SAMPLE AND BACKFILL ANALYSES

April 16, 2013

TETRA TECH NUS - Pittsburgh
Attn: Mr. Joe Logan
661 Anderson Drive, Foster Plaza 7
Pittsburgh, PA 15220

Project: USCG Atwater Facility

Dear Mr. Joe Logan,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1304171	04/10/2013	112G02435

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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Individual sample results relate only to the sample tested.
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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB238-0305**	Sampled:	04/09/13 13:50
Lab Sample ID:	**1304171-01**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	83		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.011J**	0.020	0.0055
208-96-8	Acenaphthylene	**0.0070J**	0.020	0.0050
120-12-7	Anthracene	**0.015J**	0.020	0.0048
56-55-3	Benzo(a)anthracene	**0.11**	0.020	0.0033
50-32-8	Benzo(a)pyrene	**0.13**	0.020	0.0028
*205-99-2	Benzo(b)fluoranthene	**0.12**	0.020	0.0023
*207-08-9	Benzo(k)fluoranthene	**0.083**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.088**	0.020	0.0023
218-01-9	Chrysene	**0.10**	0.020	0.0047
53-70-3	Dibenz(a,h)anthracene	**0.020**	0.020	0.0023
206-44-0	Fluoranthene	**0.13**	0.020	0.0054
86-73-7	Fluorene	**0.0065J**	0.020	0.0048
193-39-5	Indeno(1,2,3-cd)pyrene	**0.076**	0.020	0.0032
91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0055
91-20-3	Naphthalene	0.020U	0.020	0.0067
*85-01-8	Phenanthrene	**0.066**	0.020	0.0049
*129-00-0	Pyrene	**0.19**	0.020	0.0052

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*79*	*35-100*
2-Fluorobiphenyl	*80*	*45-105*
o-Terphenyl	*79*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB238-0305**	Sampled:	04/09/13 13:50
Lab Sample ID:	**1304171-01**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	83		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.5**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:25	DSC	1303272
***Lead**	**56**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/12/13 11:54	DSC	1303272

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB238-0305**	Sampled:	04/09/13 13:50
Lab Sample ID:	**1304171-01**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**83**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB239-0305**	Sampled:	04/09/13 13:53
Lab Sample ID:	**1304171-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	82		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.070**	0.020	0.0056
208-96-8	Acenaphthylene	0.020U	0.020	0.0051
120-12-7	Anthracene	0.020U	0.020	0.0049
56-55-3	Benzo(a)anthracene	**0.0062J**	0.020	0.0033
50-32-8	Benzo(a)pyrene	**0.0066J**	0.020	0.0028
*205-99-2	Benzo(b)fluoranthene	**0.0046J**	0.020	0.0023
*207-08-9	Benzo(k)fluoranthene	**0.0046J**	0.020	0.0024
191-24-2	Benzo(g,h,i)perylene	**0.0029J**	0.020	0.0023
218-01-9	Chrysene	**0.0066J**	0.020	0.0047
53-70-3	Dibenz(a,h)anthracene	0.020U	0.020	0.0023
206-44-0	Fluoranthene	**0.010J**	0.020	0.0054
86-73-7	Fluorene	0.020U	0.020	0.0049
193-39-5	Indeno(1,2,3-cd)pyrene	**0.0033J**	0.020	0.0032
91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0055
91-20-3	Naphthalene	0.020U	0.020	0.0068
85-01-8	Phenanthrene	**0.0091J**	0.020	0.0049
129-00-0	Pyrene	**0.012J**	0.020	0.0052

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*79*	*35-100*
2-Fluorobiphenyl	*82*	*45-105*
o-Terphenyl	*85*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB239-0305**	Sampled:	04/09/13 13:53
Lab Sample ID:	**1304171-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	82		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.5**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:39	DSC	1303272
Lead	**13**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/12/13 12:14	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB239-0305**	Sampled:	04/09/13 13:53
Lab Sample ID:	**1304171-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**82**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB240-0305**	Sampled:	04/09/13 13:58
Lab Sample ID:	**1304171-03**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	82		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.13J**	0.20	0.057
208-96-8	Acenaphthylene	**0.083J**	0.20	0.051
120-12-7	Anthracene	**0.53**	0.20	0.049
56-55-3	Benzo(a)anthracene	**1.6**	0.20	0.034
50-32-8	Benzo(a)pyrene	**1.4**	0.20	0.028
*205-99-2	Benzo(b)fluoranthene	**1.5**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**0.76**	0.20	0.024
191-24-2	Benzo(g,h,i)perylene	**0.65**	0.20	0.023
218-01-9	Chrysene	**1.6**	0.20	0.048
*53-70-3	Dibenz(a,h)anthracene	**0.15J**	0.20	0.023
206-44-0	Fluoranthene	**2.9**	0.20	0.055
86-73-7	Fluorene	**0.15J**	0.20	0.049
193-39-5	Indeno(1,2,3-cd)pyrene	**0.61**	0.20	0.033
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.056
*91-20-3	Naphthalene	0.20U	0.20	0.069
85-01-8	Phenanthrene	**1.6**	0.20	0.050
129-00-0	Pyrene	**2.9**	0.20	0.053

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*44*	*35-100*
2-Fluorobiphenyl	*66*	*45-105*
o-Terphenyl	*79*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB240-0305**	Sampled:	04/09/13 13:58
Lab Sample ID:	**1304171-03**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	82		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**7.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:42	DSC	1303272
Lead	**120**	2.5	0.16	mg/kg dry wt.	25	USEPA-6020A	04/12/13 12:17	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB240-0305**	Sampled:	04/09/13 13:58
Lab Sample ID:	**1304171-03**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**82**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB241-0305**	Sampled:	04/09/13 14:02
Lab Sample ID:	**1304171-04**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	81		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.23**	0.21	0.057
208-96-8	Acenaphthylene	0.21U	0.21	0.051
120-12-7	Anthracene	**0.57**	0.21	0.049
56-55-3	Benzo(a)anthracene	**1.3**	0.21	0.034
50-32-8	Benzo(a)pyrene	**1.1**	0.21	0.028
*205-99-2	Benzo(b)fluoranthene	**1.2**	0.21	0.023
*207-08-9	Benzo(k)fluoranthene	**0.64**	0.21	0.024
191-24-2	Benzo(g,h,i)perylene	**0.57**	0.21	0.023
218-01-9	Chrysene	**1.3**	0.21	0.048
53-70-3	Dibenz(a,h)anthracene	**0.11J**	0.21	0.023
206-44-0	Fluoranthene	**2.3**	0.21	0.055
86-73-7	Fluorene	**0.26**	0.21	0.050
193-39-5	Indeno(1,2,3-cd)pyrene	**0.55**	0.21	0.033
*91-57-6	2-Methylnaphthalene	0.21U	0.21	0.056
91-20-3	Naphthalene	0.21U	0.21	0.069
85-01-8	Phenanthrene	**2.1**	0.21	0.050
129-00-0	Pyrene	**3.0**	0.21	0.053

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*61*	*35-100*
2-Fluorobiphenyl	*65*	*45-105*
o-Terphenyl	*75*	*30-125*

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB241-0305**	Sampled:	04/09/13 14:02
Lab Sample ID:	**1304171-04**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**7.7**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:45	DSC	1303272
Lead	**320**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/12/13 12:19	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB241-0305**	Sampled:	04/09/13 14:02
Lab Sample ID:	**1304171-04**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB242-0305**	Sampled:	04/09/13 14:12
Lab Sample ID:	**1304171-05**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	85		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.018J**	0.020	0.0055
208-96-8	Acenaphthylene	0.020U	0.020	0.0049
120-12-7	Anthracene	**0.031**	0.020	0.0047
56-55-3	Benzo(a)anthracene	**0.033**	0.020	0.0032
*50-32-8	Benzo(a)pyrene	**0.013J**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.023**	0.020	0.0023
*207-08-9	Benzo(k)fluoranthene	**0.016J**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.011J**	0.020	0.0022
218-01-9	Chrysene	**0.033**	0.020	0.0046
53-70-3	Dibenz(a,h)anthracene	**0.0028J**	0.020	0.0023
206-44-0	Fluoranthene	**0.098**	0.020	0.0053
86-73-7	Fluorene	**0.027**	0.020	0.0048
*193-39-5	Indeno(1,2,3-cd)pyrene	**0.0073J**	0.020	0.0032
91-57-6	2-Methylnaphthalene	**0.51**	0.020	0.0054
91-20-3	Naphthalene	**0.75**	0.020	0.0066
85-01-8	Phenanthrene	**0.10**	0.020	0.0048
129-00-0	Pyrene	**0.10**	0.020	0.0051

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*93*	*35-100*
2-Fluorobiphenyl	*77*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB242-0305**	Sampled:	04/09/13 14:12
Lab Sample ID:	**1304171-05**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**7.0**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:53	DSC	1303272
Lead	**18**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/12/13 12:22	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB242-0305**	Sampled:	04/09/13 14:12
Lab Sample ID:	**1304171-05**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB243-0305**	Sampled:	04/09/13 14:08
Lab Sample ID:	**1304171-06**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	20	Analyzed:	04/11/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	81		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.85**	0.41	0.11
208-96-8	Acenaphthylene	0.41U	0.41	0.10
120-12-7	Anthracene	**2.4**	0.41	0.099
56-55-3	Benzo(a)anthracene	**4.5**	0.41	0.068
50-32-8	Benzo(a)pyrene	**4.2**	0.41	0.057
*205-99-2	Benzo(b)fluoranthene	**4.0**	0.41	0.047
*207-08-9	Benzo(k)fluoranthene	**2.2**	0.41	0.048
191-24-2	Benzo(g,h,i)perylene	**2.6**	0.41	0.047
218-01-9	Chrysene	**4.5**	0.41	0.096
*53-70-3	Dibenz(a,h)anthracene	**0.42**	0.41	0.047
206-44-0	Fluoranthene	**8.7**	0.41	0.11
86-73-7	Fluorene	**0.68**	0.41	0.10
193-39-5	Indeno(1,2,3-cd)pyrene	**2.0**	0.41	0.066
91-57-6	2-Methylnaphthalene	0.41U	0.41	0.11
91-20-3	Naphthalene	0.41U	0.41	0.14
85-01-8	Phenanthrene	**6.9**	0.41	0.10
129-00-0	Pyrene	**11**	0.41	0.11

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB243-0305**	Sampled:	04/09/13 14:08
Lab Sample ID:	**1304171-06**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:56	DSC	1303272
Lead	**38**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/12/13 12:25	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB243-0305**	Sampled:	04/09/13 14:08
Lab Sample ID:	**1304171-06**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-01**	Sampled:	04/09/13 00:00
Lab Sample ID:	**1304171-07**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	81		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.065**	0.021	0.0057
208-96-8	Acenaphthylene	**0.023**	0.021	0.0052
120-12-7	Anthracene	**0.16**	0.021	0.0050
56-55-3	Benzo(a)anthracene	**0.56**	0.021	0.0034
50-32-8	Benzo(a)pyrene	**0.34**	0.021	0.0028
*205-99-2	Benzo(b)fluoranthene	**0.47**	0.021	0.0024
*207-08-9	Benzo(k)fluoranthene	**0.23**	0.021	0.0024
191-24-2	Benzo(g,h,i)perylene	**0.20**	0.021	0.0023
218-01-9	Chrysene	**0.39**	0.021	0.0048
*53-70-3	Dibenz(a,h)anthracene	**0.044**	0.021	0.0024
206-44-0	Fluoranthene	**0.74**	0.021	0.0055
86-73-7	Fluorene	**0.086**	0.021	0.0050
193-39-5	Indeno(1,2,3-cd)pyrene	**0.17**	0.021	0.0033
91-57-6	2-Methylnaphthalene	**0.020J**	0.021	0.0056
91-20-3	Naphthalene	**0.017J**	0.021	0.0069
85-01-8	Phenanthrene	**0.68**	0.021	0.0050
129-00-0	Pyrene	**0.85**	0.021	0.0053

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*70*	*35-100*
2-Fluorobiphenyl	*69*	*45-105*
o-Terphenyl	*65*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-01**	Sampled:	04/09/13 00:00
Lab Sample ID:	**1304171-07**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**8.0**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 10:59	DSC	1303272
Lead	**270**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/12/13 12:28	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-01**	Sampled:	04/09/13 00:00
Lab Sample ID:	**1304171-07**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS213-0002**	Sampled:	04/10/13 10:50
Lab Sample ID:	**1304171-08**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	87		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.14J**	0.19	0.053
*208-96-8	Acenaphthylene	**0.069J**	0.19	0.048
120-12-7	Anthracene	**0.44**	0.19	0.046
56-55-3	Benzo(a)anthracene	**1.1**	0.19	0.032
50-32-8	Benzo(a)pyrene	**1.2**	0.19	0.027
*205-99-2	Benzo(b)fluoranthene	**1.3**	0.19	0.022
*207-08-9	Benzo(k)fluoranthene	**0.90**	0.19	0.023
191-24-2	Benzo(g,h,i)perylene	**0.69**	0.19	0.022
218-01-9	Chrysene	**1.2**	0.19	0.045
53-70-3	Dibenz(a,h)anthracene	**0.25**	0.19	0.022
206-44-0	Fluoranthene	**2.5**	0.19	0.052
*86-73-7	Fluorene	**0.12J**	0.19	0.047
193-39-5	Indeno(1,2,3-cd)pyrene	**0.61**	0.19	0.031
*91-57-6	2-Methylnaphthalene	0.19U	0.19	0.053
91-20-3	Naphthalene	**0.085J**	0.19	0.065
85-01-8	Phenanthrene	**1.9**	0.19	0.047
129-00-0	Pyrene	**2.4**	0.19	0.050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*61*	*35-100*
2-Fluorobiphenyl	*73*	*45-105*
o-Terphenyl	*113*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS213-0002**	Sampled:	04/10/13 10:50
Lab Sample ID:	**1304171-08**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	87		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**8.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:02	DSC	1303272
Lead	**720**	10	0.66	mg/kg dry wt.	100	USEPA-6020A	04/12/13 12:37	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS213-0002**	Sampled:	04/10/13 10:50
Lab Sample ID:	**1304171-08**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**87**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS214-0002**	Sampled:	04/10/13 10:55
Lab Sample ID:	**1304171-09**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	79		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.21U	0.21	0.059
208-96-8	Acenaphthylene	0.21U	0.21	0.053
*120-12-7	Anthracene	**0.091J**	0.21	0.051
56-55-3	Benzo(a)anthracene	**0.31**	0.21	0.035
50-32-8	Benzo(a)pyrene	**0.38**	0.21	0.029
*205-99-2	Benzo(b)fluoranthene	**0.58**	0.21	0.024
*207-08-9	Benzo(k)fluoranthene	**0.40**	0.21	0.025
191-24-2	Benzo(g,h,i)perylene	**0.32**	0.21	0.024
*218-01-9	Chrysene	**0.46**	0.21	0.049
53-70-3	Dibenz(a,h)anthracene	**0.10J**	0.21	0.024
206-44-0	Fluoranthene	**0.47**	0.21	0.057
86-73-7	Fluorene	0.21U	0.21	0.051
193-39-5	Indeno(1,2,3-cd)pyrene	**0.25**	0.21	0.034
*91-57-6	2-Methylnaphthalene	0.21U	0.21	0.058
91-20-3	Naphthalene	0.21U	0.21	0.071
85-01-8	Phenanthrene	**0.26**	0.21	0.052
129-00-0	Pyrene	**0.73**	0.21	0.055

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*90*	*35-100*
2-Fluorobiphenyl	*71*	*45-105*
o-Terphenyl	*74*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS214-0002**	Sampled:	04/10/13 10:55
Lab Sample ID:	**1304171-09**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	79		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**8.7**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:05	DSC	1303272
Lead	**290**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/12/13 12:40	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS214-0002**	Sampled:	04/10/13 10:55
Lab Sample ID:	**1304171-09**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**79**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS215-0002**	Sampled:	04/10/13 11:00
Lab Sample ID:	**1304171-10**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	90		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.19U	0.19	0.052
208-96-8	Acenaphthylene	0.19U	0.19	0.046
*120-12-7	Anthracene	**0.17J**	0.19	0.045
56-55-3	Benzo(a)anthracene	**0.24**	0.19	0.031
50-32-8	Benzo(a)pyrene	**0.25**	0.19	0.026
*205-99-2	Benzo(b)fluoranthene	**0.26**	0.19	0.021
*207-08-9	Benzo(k)fluoranthene	**0.21**	0.19	0.022
*191-24-2	Benzo(g,h,i)perylene	**0.10J**	0.19	0.021
*218-01-9	Chrysene	**0.30**	0.19	0.043
53-70-3	Dibenz(a,h)anthracene	0.19U	0.19	0.021
206-44-0	Fluoranthene	**0.36**	0.19	0.050
86-73-7	Fluorene	0.19U	0.19	0.045
193-39-5	Indeno(1,2,3-cd)pyrene	0.19U	0.19	0.030
91-57-6	2-Methylnaphthalene	0.19U	0.19	0.051
91-20-3	Naphthalene	0.19U	0.19	0.062
85-01-8	Phenanthrene	**0.24**	0.19	0.045
129-00-0	Pyrene	**0.53**	0.19	0.048

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*71*	*35-100*
2-Fluorobiphenyl	*66*	*45-105*
o-Terphenyl	*68*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS215-0002**	Sampled:	04/10/13 11:00
Lab Sample ID:	**1304171-10**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	90		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**7.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:08	DSC	1303272
Lead	**370**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/12/13 12:43	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS215-0002**	Sampled:	04/10/13 11:00
Lab Sample ID:	**1304171-10**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**90**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS216-0002**	Sampled:	04/10/13 11:05
Lab Sample ID:	**1304171-11**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/11/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	81		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.21U	0.21	0.057
208-96-8	Acenaphthylene	0.21U	0.21	0.052
120-12-7	Anthracene	0.21U	0.21	0.050
56-55-3	Benzo(a)anthracene	**0.18J**	0.21	0.034
50-32-8	Benzo(a)pyrene	**0.20J**	0.21	0.029
*205-99-2	Benzo(b)fluoranthene	**0.17J**	0.21	0.024
*207-08-9	Benzo(k)fluoranthene	**0.15J**	0.21	0.024
191-24-2	Benzo(g,h,i)perylene	**0.12J**	0.21	0.023
218-01-9	Chrysene	**0.20J**	0.21	0.048
*53-70-3	Dibenz(a,h)anthracene	0.21U	0.21	0.024
206-44-0	Fluoranthene	**0.27**	0.21	0.055
86-73-7	Fluorene	0.21U	0.21	0.050
*193-39-5	Indeno(1,2,3-cd)pyrene	**0.091J**	0.21	0.033
91-57-6	2-Methylnaphthalene	0.21U	0.21	0.057
91-20-3	Naphthalene	0.21U	0.21	0.069
85-01-8	Phenanthrene	**0.11J**	0.21	0.051
129-00-0	Pyrene	**0.35**	0.21	0.053

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*63*	*35-100*
2-Fluorobiphenyl	*73*	*45-105*
o-Terphenyl	*76*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS216-0002**	Sampled:	04/10/13 11:05
Lab Sample ID:	**1304171-11**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.8**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:10	DSC	1303272
Lead	**180**	2.5	0.16	mg/kg dry wt.	25	USEPA-6020A	04/12/13 12:45	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS216-0002**	Sampled:	04/10/13 11:05
Lab Sample ID:	**1304171-11**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS217-0002**	Sampled:	04/10/13 11:10
Lab Sample ID:	**1304171-12**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	50	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	87		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.96U	0.96	0.27
208-96-8	Acenaphthylene	0.96U	0.96	0.24
120-12-7	Anthracene	**0.48J**	0.96	0.23
56-55-3	Benzo(a)anthracene	**2.0**	0.96	0.16
50-32-8	Benzo(a)pyrene	**2.1**	0.96	0.13
*205-99-2	Benzo(b)fluoranthene	**2.2**	0.96	0.11
*207-08-9	Benzo(k)fluoranthene	**1.2**	0.96	0.11
191-24-2	Benzo(g,h,i)perylene	**1.4**	0.96	0.11
218-01-9	Chrysene	**2.1**	0.96	0.22
53-70-3	Dibenz(a,h)anthracene	**0.28J**	0.96	0.11
206-44-0	Fluoranthene	**3.7**	0.96	0.26
*86-73-7	Fluorene	0.96U	0.96	0.23
193-39-5	Indeno(1,2,3-cd)pyrene	**1.0**	0.96	0.15
91-57-6	2-Methylnaphthalene	0.96U	0.96	0.26
91-20-3	Naphthalene	0.96U	0.96	0.32
85-01-8	Phenanthrene	**1.8**	0.96	0.24
129-00-0	Pyrene	**4.9**	0.96	0.25

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS217-0002**	Sampled:	04/10/13 11:10
Lab Sample ID:	**1304171-12**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	87		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**9.0**	0.46	0.076	mg/kg dry wt.	5	USEPA-6020A	04/12/13 13:36	DSC	1303272
Lead	**530**	9.3	0.61	mg/kg dry wt.	100	USEPA-6020A	04/12/13 12:48	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS217-0002**	Sampled:	04/10/13 11:10
Lab Sample ID:	**1304171-12**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**87**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS218-0002**	Sampled:	04/10/13 11:15
Lab Sample ID:	**1304171-13**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	85		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.27**	0.20	0.055
208-96-8	Acenaphthylene	0.20U	0.20	0.049
120-12-7	Anthracene	**0.92**	0.20	0.047
56-55-3	Benzo(a)anthracene	**2.0**	0.20	0.033
50-32-8	Benzo(a)pyrene	**1.8**	0.20	0.027
*205-99-2	Benzo(b)fluoranthene	**2.1**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**1.1**	0.20	0.023
191-24-2	Benzo(g,h,i)perylene	**1.1**	0.20	0.022
218-01-9	Chrysene	**2.1**	0.20	0.046
*53-70-3	Dibenz(a,h)anthracene	**0.22**	0.20	0.023
206-44-0	Fluoranthene	**3.9**	0.20	0.053
86-73-7	Fluorene	**0.25**	0.20	0.048
193-39-5	Indeno(1,2,3-cd)pyrene	**0.90**	0.20	0.032
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.054
91-20-3	Naphthalene	0.20U	0.20	0.066
85-01-8	Phenanthrene	**3.0**	0.20	0.048
129-00-0	Pyrene	**5.0**	0.20	0.051

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*60*	*35-100*
2-Fluorobiphenyl	*71*	*45-105*
o-Terphenyl	*72*	*30-125*

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS218-0002**	Sampled:	04/10/13 11:15
Lab Sample ID:	**1304171-13**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**9.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:16	DSC	1303272
Lead	**660**	10	0.66	mg/kg dry wt.	100	USEPA-6020A	04/12/13 12:51	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS218-0002**	Sampled:	04/10/13 11:15
Lab Sample ID:	**1304171-13**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS219-0002**	Sampled:	04/10/13 11:20
Lab Sample ID:	**1304171-14**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	20	Analyzed:	04/12/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12034
Percent Solids:	79		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.92**	0.42	0.12
208-96-8	Acenaphthylene	0.42U	0.42	0.10
120-12-7	Anthracene	**3.5**	0.42	0.10
56-55-3	Benzo(a)anthracene	**7.0**	0.42	0.069
50-32-8	Benzo(a)pyrene	**5.6**	0.42	0.058
*205-99-2	Benzo(b)fluoranthene	**6.1**	0.42	0.048
*207-08-9	Benzo(k)fluoranthene	**4.7**	0.42	0.049
191-24-2	Benzo(g,h,i)perylene	**2.9**	0.42	0.048
218-01-9	Chrysene	**6.0**	0.42	0.098
*53-70-3	Dibenz(a,h)anthracene	**0.64**	0.42	0.048
206-44-0	Fluoranthene	**13**	0.42	0.11
86-73-7	Fluorene	**1.4**	0.42	0.10
193-39-5	Indeno(1,2,3-cd)pyrene	**2.7**	0.42	0.067
*91-57-6	2-Methylnaphthalene	0.42U	0.42	0.11
*91-20-3	Naphthalene	0.42U	0.42	0.14
85-01-8	Phenanthrene	**8.9**	0.42	0.10
129-00-0	Pyrene	**14**	0.42	0.11

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS219-0002**	Sampled:	04/10/13 11:20
Lab Sample ID:	**1304171-14**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	79		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.0**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:19	DSC	1303272
Lead	**270**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/12/13 12:54	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS219-0002**	Sampled:	04/10/13 11:20
Lab Sample ID:	**1304171-14**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**79**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS220-0002**	Sampled:	04/10/13 11:25
Lab Sample ID:	**1304171-15**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	88		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.061**	0.019	0.0053
208-96-8	Acenaphthylene	**0.0068J**	0.019	0.0048
120-12-7	Anthracene	**0.25**	0.019	0.0046
56-55-3	Benzo(a)anthracene	**0.38**	0.019	0.0031
50-32-8	Benzo(a)pyrene	**0.27**	0.019	0.0026
*205-99-2	Benzo(b)fluoranthene	**0.27**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.16**	0.019	0.0022
191-24-2	Benzo(g,h,i)perylene	**0.13**	0.019	0.0022
218-01-9	Chrysene	**0.29**	0.019	0.0044
*53-70-3	Dibenz(a,h)anthracene	**0.031**	0.019	0.0022
206-44-0	Fluoranthene	**0.61**	0.019	0.0051
86-73-7	Fluorene	**0.091**	0.019	0.0046
193-39-5	Indeno(1,2,3-cd)pyrene	**0.12**	0.019	0.0031
91-57-6	2-Methylnaphthalene	**0.0068J**	0.019	0.0052
91-20-3	Naphthalene	0.019U	0.019	0.0064
85-01-8	Phenanthrene	**0.65**	0.019	0.0047
129-00-0	Pyrene	**0.71**	0.019	0.0049

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*77*	*35-100*
2-Fluorobiphenyl	*80*	*45-105*
o-Terphenyl	*82*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS220-0002**	Sampled:	04/10/13 11:25
Lab Sample ID:	**1304171-15**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**18**	0.50	0.082	mg/kg dry wt.	5	USEPA-6020A	04/12/13 13:00	DSC	1303272
Lead	**5900**	100	6.6	mg/kg dry wt.	1000	USEPA-6020A	04/12/13 13:45	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS220-0002**	Sampled:	04/10/13 11:25
Lab Sample ID:	**1304171-15**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**88**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS220-0002**	Sampled:	04/10/13 11:25
Lab Sample ID:	**1304171-15RE1**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Lead	**13**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/16/13 10:38	MSM	1303384

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS221-0002**	Sampled:	04/10/13 11:30
Lab Sample ID:	**1304171-16**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	1	Analyzed:	04/11/13 By: ASC
QC Batch:	1303247	Analytical Batch:	3D12016
Percent Solids:	88		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.013J**	0.019	0.0053
208-96-8	Acenaphthylene	**0.0054J**	0.019	0.0048
120-12-7	Anthracene	**0.036**	0.019	0.0046
56-55-3	Benzo(a)anthracene	**0.11**	0.019	0.0031
50-32-8	Benzo(a)pyrene	**0.10**	0.019	0.0026
*205-99-2	Benzo(b)fluoranthene	**0.11**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.084**	0.019	0.0022
191-24-2	Benzo(g,h,i)perylene	**0.066**	0.019	0.0022
218-01-9	Chrysene	**0.11**	0.019	0.0044
53-70-3	Dibenz(a,h)anthracene	**0.017J**	0.019	0.0022
206-44-0	Fluoranthene	**0.19**	0.019	0.0051
*86-73-7	Fluorene	**0.013J**	0.019	0.0046
193-39-5	Indeno(1,2,3-cd)pyrene	**0.051**	0.019	0.0031
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0052
91-20-3	Naphthalene	0.019U	0.019	0.0064
85-01-8	Phenanthrene	**0.13**	0.019	0.0047
129-00-0	Pyrene	**0.22**	0.019	0.0049

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*78*	*35-100*
2-Fluorobiphenyl	*80*	*45-105*
o-Terphenyl	*80*	*30-125*

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS221-0002**	Sampled:	04/10/13 11:30
Lab Sample ID:	**1304171-16**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.1**	0.093	0.015	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:31	DSC	1303272
Lead	**35**	0.47	0.031	mg/kg dry wt.	5	USEPA-6020A	04/12/13 13:02	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS221-0002**	Sampled:	04/10/13 11:30
Lab Sample ID:	**1304171-16**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**88**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS222-0002**	Sampled:	04/10/13 11:35
Lab Sample ID:	**1304171-17**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	84		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.20U	0.20	0.055
208-96-8	Acenaphthylene	0.20U	0.20	0.050
120-12-7	Anthracene	**0.12J**	0.20	0.048
*56-55-3	Benzo(a)anthracene	**0.60**	0.20	0.033
*50-32-8	Benzo(a)pyrene	**0.72**	0.20	0.027
*205-99-2	Benzo(b)fluoranthene	**0.78**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**0.45**	0.20	0.023
191-24-2	Benzo(g,h,i)perylene	**0.44**	0.20	0.022
*218-01-9	Chrysene	**0.62**	0.20	0.046
*53-70-3	Dibenz(a,h)anthracene	**0.097J**	0.20	0.023
*206-44-0	Fluoranthene	**0.89**	0.20	0.053
*86-73-7	Fluorene	0.20U	0.20	0.048
193-39-5	Indeno(1,2,3-cd)pyrene	**0.37**	0.20	0.032
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.054
*91-20-3	Naphthalene	0.20U	0.20	0.067
85-01-8	Phenanthrene	**0.37**	0.20	0.049
*129-00-0	Pyrene	**1.1**	0.20	0.051

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*62*	*35-100*
2-Fluorobiphenyl	*74*	*45-105*
o-Terphenyl	*83*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS222-0002**	Sampled:	04/10/13 11:35
Lab Sample ID:	**1304171-17**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	84		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
***Arsenic**	**5.9**	0.094	0.015	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:34	DSC	1303272
***Lead**	**720**	19	1.2	mg/kg dry wt.	200	USEPA-6020A	04/12/13 13:48	DSC	1303272

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS222-0002**	Sampled:	04/10/13 11:35
Lab Sample ID:	**1304171-17**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**84**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS223-0002**	Sampled:	04/10/13 11:40
Lab Sample ID:	**1304171-18**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	85		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.20U	0.20	0.054
208-96-8	Acenaphthylene	0.20U	0.20	0.049
120-12-7	Anthracene	**0.22**	0.20	0.047
56-55-3	Benzo(a)anthracene	**1.4**	0.20	0.032
50-32-8	Benzo(a)pyrene	**1.3**	0.20	0.027
*205-99-2	Benzo(b)fluoranthene	**1.6**	0.20	0.022
*207-08-9	Benzo(k)fluoranthene	**0.79**	0.20	0.023
191-24-2	Benzo(g,h,i)perylene	**0.70**	0.20	0.022
218-01-9	Chrysene	**1.5**	0.20	0.046
*53-70-3	Dibenz(a,h)anthracene	**0.16J**	0.20	0.022
206-44-0	Fluoranthene	**2.4**	0.20	0.053
86-73-7	Fluorene	0.20U	0.20	0.047
193-39-5	Indeno(1,2,3-cd)pyrene	**0.63**	0.20	0.032
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.054
*91-20-3	Naphthalene	0.20U	0.20	0.066
85-01-8	Phenanthrene	**0.21**	0.20	0.048
129-00-0	Pyrene	**2.4**	0.20	0.051

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*57*	*35-100*
2-Fluorobiphenyl	*62*	*45-105*
o-Terphenyl	*75*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS223-0002**	Sampled:	04/10/13 11:40
Lab Sample ID:	**1304171-18**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:48	DSC	1303272
Lead	**16**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/12/13 13:31	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASS223-0002**	Sampled:	04/10/13 11:40
Lab Sample ID:	**1304171-18**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-02**	Sampled:	04/10/13 00:00
Lab Sample ID:	**1304171-19**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Unit:	mg/kg dry	Prepared:	04/11/13 By: ALK
Dilution Factor:	10	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303247	Analytical Batch:	3D12027
Percent Solids:	84		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.21**	0.20	0.055
208-96-8	Acenaphthylene	**0.058J**	0.20	0.050
120-12-7	Anthracene	**0.53**	0.20	0.048
56-55-3	Benzo(a)anthracene	**1.4**	0.20	0.033
50-32-8	Benzo(a)pyrene	**1.4**	0.20	0.027
*205-99-2	Benzo(b)fluoranthene	**1.6**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**0.92**	0.20	0.023
191-24-2	Benzo(g,h,i)perylene	**0.86**	0.20	0.022
218-01-9	Chrysene	**1.2**	0.20	0.046
*53-70-3	Dibenz(a,h)anthracene	**0.19J**	0.20	0.023
206-44-0	Fluoranthene	**2.3**	0.20	0.053
86-73-7	Fluorene	**0.19J**	0.20	0.048
193-39-5	Indeno(1,2,3-cd)pyrene	**0.76**	0.20	0.032
*91-57-6	2-Methylnaphthalene	0.20U	0.20	0.054
91-20-3	Naphthalene	0.20U	0.20	0.067
85-01-8	Phenanthrene	**1.7**	0.20	0.048
129-00-0	Pyrene	**2.6**	0.20	0.051

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*69*	*35-100*
2-Fluorobiphenyl	*76*	*45-105*
o-Terphenyl	*87*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-02**	Sampled:	04/10/13 00:00
Lab Sample ID:	**1304171-19**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15
Percent Solids:	84		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.8**	0.092	0.015	mg/kg dry wt.	1	USEPA-6020A	04/12/13 11:51	DSC	1303272
Lead	**470**	9.2	0.61	mg/kg dry wt.	100	USEPA-6020A	04/12/13 13:34	DSC	1303272

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304171**
Project:	USCG Atwater Facility	Description:	112G02435
Client Sample ID:	**DASB-FD-02**	Sampled:	04/10/13 00:00
Lab Sample ID:	**1304171-19**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/10/13 17:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**84**	0.1	0.1	%	1	USEPA-3550C	04/11/13 13:40	BAR	1303262

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304171-17	DASS222-0002	Benzo(a)pyrene
1304171-17	DASS222-0002	Benzo(b)fluoranthene
1304171-17	DASS222-0002	Chrysene
1304171-17	DASS222-0002	Pyrene

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304171-01	DASB238-0305	Benzo(b)fluoranthene
1304171-01	DASB238-0305	Phenanthrene
1304171-01	DASB238-0305	Pyrene
1304171-17	DASS222-0002	Benzo(a)anthracene
1304171-17	DASS222-0002	Fluoranthene

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1303247-MS1		Dibenz(a,h)anthracene
1303247-MS1		Indeno(1,2,3-cd)pyrene
1303247-MS2		Benzo(b)fluoranthene
1303247-MS2		Benzo(k)fluoranthene
1303247-MSD1		Benzo(b)fluoranthene
1303247-MSD1		Benzo(k)fluoranthene
1303247-MSD2		Benzo(b)fluoranthene
1303247-MSD2		Benzo(k)fluoranthene
1303247-MSD2		Dibenz(a,h)anthracene
1304171-01	DASB238-0305	Benzo(b)fluoranthene
1304171-01	DASB238-0305	Benzo(k)fluoranthene
1304171-02	DASB239-0305	Benzo(b)fluoranthene
1304171-02	DASB239-0305	Benzo(k)fluoranthene
1304171-03	DASB240-0305	Benzo(b)fluoranthene
1304171-03	DASB240-0305	Benzo(k)fluoranthene
1304171-03	DASB240-0305	Dibenz(a,h)anthracene
1304171-03	DASB240-0305	Naphthalene
1304171-04	DASB241-0305	2-Methylnaphthalene
1304171-04	DASB241-0305	Benzo(b)fluoranthene
1304171-04	DASB241-0305	Benzo(k)fluoranthene
1304171-05	DASB242-0305	Benzo(a)pyrene
1304171-05	DASB242-0305	Benzo(b)fluoranthene
1304171-05	DASB242-0305	Benzo(k)fluoranthene
1304171-05	DASB242-0305	Indeno(1,2,3-cd)pyrene
1304171-05	DASB242-0305	Nitrobenzene-d5
1304171-06	DASB243-0305	Benzo(b)fluoranthene
1304171-06	DASB243-0305	Benzo(k)fluoranthene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304171-06	DASB243-0305	Dibenz(a,h)anthracene
1304171-07	DASB-FD-01	Benzo(b)fluoranthene
1304171-07	DASB-FD-01	Benzo(k)fluoranthene
1304171-07	DASB-FD-01	Dibenz(a,h)anthracene
1304171-08	DASS213-0002	2-Methylnaphthalene
1304171-08	DASS213-0002	Acenaphthylene
1304171-08	DASS213-0002	Benzo(b)fluoranthene
1304171-08	DASS213-0002	Benzo(k)fluoranthene
1304171-08	DASS213-0002	Fluorene
1304171-09	DASS214-0002	2-Methylnaphthalene
1304171-09	DASS214-0002	Anthracene
1304171-09	DASS214-0002	Benzo(b)fluoranthene
1304171-09	DASS214-0002	Benzo(k)fluoranthene
1304171-09	DASS214-0002	Chrysene
1304171-09	DASS214-0002	Nitrobenzene-d5
1304171-10	DASS215-0002	Anthracene
1304171-10	DASS215-0002	Benzo(b)fluoranthene
1304171-10	DASS215-0002	Benzo(g,h,i)perylene
1304171-10	DASS215-0002	Benzo(k)fluoranthene
1304171-10	DASS215-0002	Chrysene
1304171-10	DASS215-0002	Nitrobenzene-d5
1304171-11	DASS216-0002	Benzo(b)fluoranthene
1304171-11	DASS216-0002	Benzo(k)fluoranthene
1304171-11	DASS216-0002	Dibenz(a,h)anthracene
1304171-11	DASS216-0002	Indeno(1,2,3-cd)pyrene
1304171-12	DASS217-0002	Benzo(b)fluoranthene
1304171-12	DASS217-0002	Benzo(k)fluoranthene
1304171-12	DASS217-0002	Fluorene
1304171-13	DASS218-0002	Benzo(b)fluoranthene
1304171-13	DASS218-0002	Benzo(k)fluoranthene
1304171-13	DASS218-0002	Dibenz(a,h)anthracene
1304171-14	DASS219-0002	2-Methylnaphthalene
1304171-14	DASS219-0002	Benzo(b)fluoranthene
1304171-14	DASS219-0002	Benzo(k)fluoranthene
1304171-14	DASS219-0002	Dibenz(a,h)anthracene
1304171-14	DASS219-0002	Naphthalene
1304171-15	DASS220-0002	Benzo(b)fluoranthene
1304171-15	DASS220-0002	Benzo(k)fluoranthene
1304171-15	DASS220-0002	Dibenz(a,h)anthracene
1304171-16	DASS221-0002	Benzo(b)fluoranthene
1304171-16	DASS221-0002	Benzo(k)fluoranthene
1304171-16	DASS221-0002	Fluorene
1304171-17	DASS222-0002	Benzo(b)fluoranthene
1304171-17	DASS222-0002	Benzo(k)fluoranthene
1304171-17	DASS222-0002	Dibenz(a,h)anthracene
1304171-17	DASS222-0002	Fluorene
1304171-17	DASS222-0002	Naphthalene
1304171-17	DASS222-0002	Nitrobenzene-d5

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304171-18	DASS223-0002	Benzo(b)fluoranthene
1304171-18	DASS223-0002	Benzo(k)fluoranthene
1304171-18	DASS223-0002	Dibenz(a,h)anthracene
1304171-18	DASS223-0002	Naphthalene
1304171-18	DASS223-0002	Nitrobenzene-d5
1304171-19	DASB-FD-02	2-Methylnaphthalene
1304171-19	DASB-FD-02	Benzo(b)fluoranthene
1304171-19	DASB-FD-02	Benzo(k)fluoranthene
1304171-19	DASB-FD-02	Dibenz(a,h)anthracene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample:	
1304171-09	DASS214-0002
1304171-10	DASS215-0002
1304171-11	DASS216-0002
1304171-12	DASS217-0002
1304171-17	DASS222-0002
1304171-18	DASS223-0002

Qualification: Surrogate results are unavailable due to positive results in the sample, resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample:	
1304171-06	DASB243-0305
1304171-14	DASS219-0002

Qualification: Surrogate results are unavailable due to sample matrix interference(s), resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample: 1304171-12 DASS217-0002

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STATEMENT OF DATA QUALIFICATIONS

Total Metals by EPA 6000/7000 Series Methods

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Arsenic

Qualification: The RPD between the MS and MSD results exceeded the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Arsenic

Qualification: Matrix QC results are not available due to sample dilution.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Lead

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; matrix QC results are not available.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-01 DASB238-0305 Lead

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CART 10 (2-21)

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 2283 PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412-921-7231	Tri Matrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412-443-0244	5560 Corp Exchange Ct. SE
		CARRIER/WAYBILL NUMBER		CITY, STATE
		— Lab Pick Up		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

E1304171

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ml Jar)	TYPE OF ANALYSIS: Pb, As, PAH	COMMENTS
1.	4/9	1350	DASB238-0305	238	3	5	SO	G	2	2	MS/MSD
2.	4/9	1353	DASB239-0305	239	3	5			1	1	
3.	4/9	1358	DASB240-0305	240	3	5			1	1	
4.	4/9	1402	DASB241-0305	241	3	5			1	1	
5.	4/9	1412	DASB242-0305	242	3	5			1	1	
6.	4/9	1408	DASB243-0305	243	3	5			1	1	
7.	4/9	0000	DASB-FD-01	QC	–	–	QC	G	1	1	
8.	4/10	1050	DASS213-0002	213	0	2	SO		1	1	
9.	4/10	1055	DASS214-0002	214					1	1	
10.	4/10	1100	DASS215-0002	215					1	1	
11.	4/10	1105	DASS216-0002	216					1	1	
12.	4/10	1110	DASS217-0002	217					1	1	
13.	4/10	1115	DASS218-0002	218					1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/10/13	1330	1. RECEIVED BY	4/10/13	1330
2. RELINQUISHED BY	4/10/13	1415	2. RECEIVED BY	4/10/13	1415
3. RELINQUISHED BY	4-10-13	1715	3. RECEIVED BY	4-10-13	1715

COMMENTS: * SB242 - Potentially high PAHs

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

TETRA TECH NUS, INC. CART 10 (2-21) CHAIN OF CUSTODY NUMBER № 2284 PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412921 7231	TriMatrix/Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 412 443 0244	ADDRESS: 5560 Corp Exchange Ct. SE
		CARRIER/WAYBILL NUMBER: Lab Pick Up		CITY, STATE: Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

TYPE OF ANALYSIS: Po, As, PAHs

	DATE YEAR 2013	TIME	SAMPLE ID (E 1304171)	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ml/Jar)	Po, As, PAHs								COMMENTS
14.	4/10	1120	DASS219-0002	219	0	2	SO	G	1	1								
15.	↓	1125	DASS220-0002	220	↓	↓	↓	↓	1	1								
16.	↓	1130	DASS221-0002	221	↓	↓	↓	↓	1	1								
17.	↓	1135	DASS222-0002	222	↓	↓	↓	↓	2	2								MS/MSD
18.	↓	1140	DASS223-0002	223	↓	↓	↓	↓	1	1								
19.	↓	0000	DASB-FD-02	QC	-	-	QC	↓	1	1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY: [signature]	4/10/13	1330	1. RECEIVED BY: [signature]	4/10/13	1330
2. RELINQUISHED BY: [signature]	4/10/13	1415	2. RECEIVED BY: [signature]	4/10/13	1450
3. RELINQUISHED BY: Ray Johnson	4/10/13	1415	3. RECEIVED BY: D. Nardin	4-10-13	1715

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Work Order #: 1304171
New / Add To
Receipt Record Page/Line #: 2-21
Project Chemist
Sample #s

Recorded by (initials/date): JN 4-10-13

☑ Cooler ☐ Box ☐ Other
Qty Received: 2

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
171596	1758	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
171222	1805	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
171596 Temp Blank	0		8.9
TB location: Representative / Not Representative			
1	7.9	0	7.9
2	7.5	0	7.5
3	7.3	0	7.3
Average °C			7.6
171222 Temp Blank	0		4.3
TB location: Representative / Not Representative			
1	5.2	0	5.2
2	7.6	0	7.6
3	5.8	0	5.8
Average °C			6.2
Cooler # / Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
Cooler # / Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2283 + #2284

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Average sample temperature ≤6° C?
☐	☑	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☑	☐	☐	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-10-13	4-10-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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April 15, 2013

TETRA TECH NUS - Pittsburgh
Attn: Mr. Joe Logan
661 Anderson Drive, Foster Plaza 7
Pittsburgh, PA 15220

Project: USCG Atwater Facility

Dear Mr. Joe Logan,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1304185	04/11/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS201-0002**	Sampled:	04/11/13 07:50
Lab Sample ID:	**1304185-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	81		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
*83-32-9	Acenaphthene	0.10U	0.10	0.029
208-96-8	Acenaphthylene	0.10U	0.10	0.026
120-12-7	Anthracene	**0.055J**	0.10	0.025
56-55-3	Benzo(a)anthracene	**0.27**	0.10	0.017
50-32-8	Benzo(a)pyrene	**0.23**	0.10	0.014
*205-99-2	Benzo(b)fluoranthene	**0.28**	0.10	0.012
*207-08-9	Benzo(k)fluoranthene	**0.18**	0.10	0.012
191-24-2	Benzo(g,h,i)perylene	**0.11**	0.10	0.012
218-01-9	Chrysene	**0.26**	0.10	0.024
*53-70-3	Dibenz(a,h)anthracene	**0.026J**	0.10	0.012
206-44-0	Fluoranthene	**0.42**	0.10	0.028
*86-73-7	Fluorene	**0.028J**	0.10	0.025
193-39-5	Indeno(1,2,3-cd)pyrene	**0.095J**	0.10	0.017
91-57-6	2-Methylnaphthalene	0.10U	0.10	0.028
91-20-3	Naphthalene	0.10U	0.10	0.035
85-01-8	Phenanthrene	**0.28**	0.10	0.025
129-00-0	Pyrene	**0.49**	0.10	0.027

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*66*	*35-100*
2-Fluorobiphenyl	*68*	*45-105*
o-Terphenyl	*76*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS201-0002**	Sampled:	04/11/13 07:50
Lab Sample ID:	**1304185-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.7**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 09:54	DSC	1303314
Lead	**66**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/15/13 10:49	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS201-0002**	Sampled:	04/11/13 07:50
Lab Sample ID:	**1304185-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS202-0002**	Sampled:	04/11/13 07:55
Lab Sample ID:	**1304185-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	79		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.26**	0.11	0.029
208-96-8	Acenaphthylene	0.11U	0.11	0.026
120-12-7	Anthracene	**0.68**	0.11	0.025
56-55-3	Benzo(a)anthracene	**0.82**	0.11	0.017
50-32-8	Benzo(a)pyrene	**0.64**	0.11	0.014
*205-99-2	Benzo(b)fluoranthene	**0.76**	0.11	0.012
*207-08-9	Benzo(k)fluoranthene	**0.46**	0.11	0.012
191-24-2	Benzo(g,h,i)perylene	**0.27**	0.11	0.012
218-01-9	Chrysene	**0.91**	0.11	0.025
53-70-3	Dibenz(a,h)anthracene	**0.11**	0.11	0.012
206-44-0	Fluoranthene	**1.6**	0.11	0.028
86-73-7	Fluorene	**0.37**	0.11	0.025
193-39-5	Indeno(1,2,3-cd)pyrene	**0.26**	0.11	0.017
*91-57-6	2-Methylnaphthalene	**0.037J**	0.11	0.029
*91-20-3	Naphthalene	**0.052J**	0.11	0.035
85-01-8	Phenanthrene	**1.9**	0.11	0.026
129-00-0	Pyrene	**1.6**	0.11	0.027

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*64*	*35-100*
2-Fluorobiphenyl	*70*	*45-105*
o-Terphenyl	*74*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS202-0002**	Sampled:	04/11/13 07:55
Lab Sample ID:	**1304185-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	79		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 09:57	DSC	1303314
Lead	**39**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 10:52	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS202-0002**	Sampled:	04/11/13 07:55
Lab Sample ID:	**1304185-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**79**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS203-0002**	Sampled:	04/11/13 08:00
Lab Sample ID:	**1304185-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	83		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.10U	0.10	0.028
*208-96-8	Acenaphthylene	0.10U	0.10	0.025
*120-12-7	Anthracene	**0.093J**	0.10	0.024
56-55-3	Benzo(a)anthracene	**0.22**	0.10	0.017
50-32-8	Benzo(a)pyrene	**0.20**	0.10	0.014
*205-99-2	Benzo(b)fluoranthene	**0.23**	0.10	0.011
*207-08-9	Benzo(k)fluoranthene	**0.14**	0.10	0.012
191-24-2	Benzo(g,h,i)perylene	**0.097J**	0.10	0.011
218-01-9	Chrysene	**0.24**	0.10	0.023
*53-70-3	Dibenz(a,h)anthracene	**0.022J**	0.10	0.011
206-44-0	Fluoranthene	**0.41**	0.10	0.027
86-73-7	Fluorene	0.10U	0.10	0.024
193-39-5	Indeno(1,2,3-cd)pyrene	**0.081J**	0.10	0.016
91-57-6	2-Methylnaphthalene	0.10U	0.10	0.027
91-20-3	Naphthalene	0.10U	0.10	0.034
85-01-8	Phenanthrene	**0.21**	0.10	0.025
129-00-0	Pyrene	**0.44**	0.10	0.026

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*54*	*35-100*
2-Fluorobiphenyl	*68*	*45-105*
o-Terphenyl	*70*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS203-0002**	Sampled:	04/11/13 08:00
Lab Sample ID:	**1304185-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	83		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:00	DSC	1303314
Lead	**29**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 11:01	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS203-0002**	Sampled:	04/11/13 08:00
Lab Sample ID:	**1304185-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**83**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS204-0002**	Sampled:	04/11/13 08:05
Lab Sample ID:	**1304185-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	79		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
*83-32-9	Acenaphthene	0.11U	0.11	0.029
208-96-8	Acenaphthylene	0.11U	0.11	0.026
*120-12-7	Anthracene	**0.078J**	0.11	0.025
56-55-3	Benzo(a)anthracene	**0.18**	0.11	0.017
50-32-8	Benzo(a)pyrene	**0.18**	0.11	0.015
*205-99-2	Benzo(b)fluoranthene	**0.23**	0.11	0.012
*207-08-9	Benzo(k)fluoranthene	**0.11**	0.11	0.012
191-24-2	Benzo(g,h,i)perylene	**0.11J**	0.11	0.012
218-01-9	Chrysene	**0.22**	0.11	0.025
*53-70-3	Dibenz(a,h)anthracene	**0.021J**	0.11	0.012
206-44-0	Fluoranthene	**0.31**	0.11	0.028
*86-73-7	Fluorene	0.11U	0.11	0.025
193-39-5	Indeno(1,2,3-cd)pyrene	**0.088J**	0.11	0.017
91-57-6	2-Methylnaphthalene	0.11U	0.11	0.029
91-20-3	Naphthalene	0.11U	0.11	0.035
85-01-8	Phenanthrene	**0.17**	0.11	0.026
129-00-0	Pyrene	**0.36**	0.11	0.027

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*68*	*35-100*
2-Fluorobiphenyl	*79*	*45-105*
o-Terphenyl	*78*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS204-0002**	Sampled:	04/11/13 08:05
Lab Sample ID:	**1304185-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	79		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:03	DSC	1303314
Lead	**40**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/15/13 11:04	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS204-0002**	Sampled:	04/11/13 08:05
Lab Sample ID:	**1304185-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**79**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS205-0002**	Sampled:	04/11/13 08:10
Lab Sample ID:	**1304185-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	82		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.23**	0.10	0.028
208-96-8	Acenaphthylene	0.10U	0.10	0.025
120-12-7	Anthracene	**0.51**	0.10	0.024
56-55-3	Benzo(a)anthracene	**0.89**	0.10	0.017
50-32-8	Benzo(a)pyrene	**0.74**	0.10	0.014
*205-99-2	Benzo(b)fluoranthene	**0.95**	0.10	0.012
*207-08-9	Benzo(k)fluoranthene	**0.50**	0.10	0.012
191-24-2	Benzo(g,h,i)perylene	**0.35**	0.10	0.012
218-01-9	Chrysene	**0.84**	0.10	0.024
*53-70-3	Dibenz(a,h)anthracene	**0.084J**	0.10	0.012
206-44-0	Fluoranthene	**1.5**	0.10	0.027
*86-73-7	Fluorene	**0.19**	0.10	0.025
193-39-5	Indeno(1,2,3-cd)pyrene	**0.32**	0.10	0.016
*91-57-6	2-Methylnaphthalene	**0.081J**	0.10	0.028
*91-20-3	Naphthalene	**0.42**	0.10	0.034
85-01-8	Phenanthrene	**1.5**	0.10	0.025
129-00-0	Pyrene	**1.8**	0.10	0.026

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*68*	*35-100*
2-Fluorobiphenyl	*78*	*45-105*
o-Terphenyl	*76*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS205-0002**	Sampled:	04/11/13 08:10
Lab Sample ID:	**1304185-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	82		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:06	DSC	1303314
Lead	**21**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 11:07	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS205-0002**	Sampled:	04/11/13 08:10
Lab Sample ID:	**1304185-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**82**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS206-0002**	Sampled:	04/11/13 08:20
Lab Sample ID:	**1304185-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	78		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
*83-32-9	Acenaphthene	**0.035J**	0.11	0.030
208-96-8	Acenaphthylene	0.11U	0.11	0.027
*120-12-7	Anthracene	**0.18**	0.11	0.026
56-55-3	Benzo(a)anthracene	**0.29**	0.11	0.018
50-32-8	Benzo(a)pyrene	**0.26**	0.11	0.015
*205-99-2	Benzo(b)fluoranthene	**0.35**	0.11	0.012
*207-08-9	Benzo(k)fluoranthene	**0.21**	0.11	0.013
191-24-2	Benzo(g,h,i)perylene	**0.13**	0.11	0.012
218-01-9	Chrysene	**0.35**	0.11	0.025
53-70-3	Dibenz(a,h)anthracene	**0.055J**	0.11	0.012
206-44-0	Fluoranthene	**0.49**	0.11	0.029
*86-73-7	Fluorene	**0.057J**	0.11	0.026
193-39-5	Indeno(1,2,3-cd)pyrene	**0.10J**	0.11	0.017
91-57-6	2-Methylnaphthalene	0.11U	0.11	0.029
*91-20-3	Naphthalene	0.11U	0.11	0.036
85-01-8	Phenanthrene	**0.41**	0.11	0.026
129-00-0	Pyrene	**0.57**	0.11	0.028

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*62*	*35-100*
2-Fluorobiphenyl	*68*	*45-105*
o-Terphenyl	*70*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS206-0002**	Sampled:	04/11/13 08:20
Lab Sample ID:	**1304185-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	78		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**8.9**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:09	DSC	1303314
Lead	**410**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/15/13 11:09	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS206-0002**	Sampled:	04/11/13 08:20
Lab Sample ID:	**1304185-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**78**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS207-0002**	Sampled:	04/11/13 08:25
Lab Sample ID:	**1304185-07**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	1	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	85		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.016J**	0.020	0.0054
208-96-8	Acenaphthylene	**0.014J**	0.020	0.0049
120-12-7	Anthracene	**0.057**	0.020	0.0047
56-55-3	Benzo(a)anthracene	**0.26**	0.020	0.0032
50-32-8	Benzo(a)pyrene	**0.20**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.23**	0.020	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.12**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.093**	0.020	0.0022
218-01-9	Chrysene	**0.22**	0.020	0.0046
*53-70-3	Dibenz(a,h)anthracene	**0.025**	0.020	0.0022
206-44-0	Fluoranthene	**0.31**	0.020	0.0052
86-73-7	Fluorene	**0.020**	0.020	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	**0.089**	0.020	0.0031
*91-57-6	2-Methylnaphthalene	**0.0067J**	0.020	0.0053
*91-20-3	Naphthalene	0.020U	0.020	0.0066
85-01-8	Phenanthrene	**0.20**	0.020	0.0048
129-00-0	Pyrene	**0.41**	0.020	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*79*	*35-100*
2-Fluorobiphenyl	*84*	*45-105*
o-Terphenyl	*77*	*30-125*

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS207-0002**	Sampled:	04/11/13 08:25
Lab Sample ID:	**1304185-07**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:24	DSC	1303314
Lead	**99**	2.5	0.16	mg/kg dry wt.	25	USEPA-6020A	04/15/13 11:12	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS207-0002**	Sampled:	04/11/13 08:25
Lab Sample ID:	**1304185-07**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB224-0507**	Sampled:	04/11/13 08:50
Lab Sample ID:	**1304185-08**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	1	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	85		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.015J**	0.020	0.0055
208-96-8	Acenaphthylene	0.020U	0.020	0.0049
120-12-7	Anthracene	**0.014J**	0.020	0.0047
56-55-3	Benzo(a)anthracene	**0.041**	0.020	0.0033
50-32-8	Benzo(a)pyrene	**0.033**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.039**	0.020	0.0023
*207-08-9	Benzo(k)fluoranthene	**0.019J**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.020**	0.020	0.0022
218-01-9	Chrysene	**0.039**	0.020	0.0046
*53-70-3	Dibenz(a,h)anthracene	**0.0037J**	0.020	0.0023
206-44-0	Fluoranthene	**0.067**	0.020	0.0053
86-73-7	Fluorene	**0.0069J**	0.020	0.0048
*193-39-5	Indeno(1,2,3-cd)pyrene	**0.013J**	0.020	0.0032
*91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0054
*91-20-3	Naphthalene	0.020U	0.020	0.0066
85-01-8	Phenanthrene	**0.058**	0.020	0.0048
129-00-0	Pyrene	**0.081**	0.020	0.0051

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*77*	*35-100*
2-Fluorobiphenyl	*78*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB224-0507**	Sampled:	04/11/13 08:50
Lab Sample ID:	**1304185-08**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:12	DSC	1303314
Lead	**63**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/15/13 11:15	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB224-0507**	Sampled:	04/11/13 08:50
Lab Sample ID:	**1304185-08**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB225-0507**	Sampled:	04/11/13 08:55
Lab Sample ID:	**1304185-09**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	1	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	79		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.19**	0.021	0.0059
208-96-8	Acenaphthylene	**0.0061J**	0.021	0.0053
120-12-7	Anthracene	**0.037**	0.021	0.0051
56-55-3	Benzo(a)anthracene	**0.067**	0.021	0.0035
50-32-8	Benzo(a)pyrene	**0.066**	0.021	0.0029
*205-99-2	Benzo(b)fluoranthene	**0.071**	0.021	0.0024
*207-08-9	Benzo(k)fluoranthene	**0.037**	0.021	0.0025
191-24-2	Benzo(g,h,i)perylene	**0.034**	0.021	0.0024
218-01-9	Chrysene	**0.063**	0.021	0.0049
53-70-3	Dibenz(a,h)anthracene	**0.0070J**	0.021	0.0024
206-44-0	Fluoranthene	**0.13**	0.021	0.0057
86-73-7	Fluorene	**0.068**	0.021	0.0051
193-39-5	Indeno(1,2,3-cd)pyrene	**0.032**	0.021	0.0034
*91-57-6	2-Methylnaphthalene	0.021U	0.021	0.0058
91-20-3	Naphthalene	**0.018J**	0.021	0.0071
85-01-8	Phenanthrene	**0.090**	0.021	0.0052
129-00-0	Pyrene	**0.15**	0.021	0.0055

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*75*	*35-100*
2-Fluorobiphenyl	*76*	*45-105*
o-Terphenyl	*74*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB225-0507**	Sampled:	04/11/13 08:55
Lab Sample ID:	**1304185-09**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	79		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**2.6**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:15	DSC	1303314
Lead	**31**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 11:18	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB225-0507**	Sampled:	04/11/13 08:55
Lab Sample ID:	**1304185-09**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**79**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB226-0507**	Sampled:	04/11/13 09:00
Lab Sample ID:	**1304185-10**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303302	Analytical Batch:	3D15022
Percent Solids:	76		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.15**	0.11	0.030
208-96-8	Acenaphthylene	0.11U	0.11	0.027
120-12-7	Anthracene	**0.32**	0.11	0.026
56-55-3	Benzo(a)anthracene	**0.41**	0.11	0.018
50-32-8	Benzo(a)pyrene	**0.30**	0.11	0.015
*205-99-2	Benzo(b)fluoranthene	**0.34**	0.11	0.013
*207-08-9	Benzo(k)fluoranthene	**0.17**	0.11	0.013
191-24-2	Benzo(g,h,i)perylene	**0.16**	0.11	0.012
218-01-9	Chrysene	**0.35**	0.11	0.026
*53-70-3	Dibenz(a,h)anthracene	**0.038J**	0.11	0.013
206-44-0	Fluoranthene	**0.98**	0.11	0.029
86-73-7	Fluorene	**0.11J**	0.11	0.026
193-39-5	Indeno(1,2,3-cd)pyrene	**0.14**	0.11	0.018
*91-57-6	2-Methylnaphthalene	0.11U	0.11	0.030
*91-20-3	Naphthalene	**0.040J**	0.11	0.037
85-01-8	Phenanthrene	**0.50**	0.11	0.027
129-00-0	Pyrene	**0.97**	0.11	0.028

Surrogates:	***% Recovery***	***Control Limits***
** Nitrobenzene-d5*	*66*	*35-100*
2-Fluorobiphenyl	*75*	*45-105*
o-Terphenyl	*75*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB226-0507**	Sampled:	04/11/13 09:00
Lab Sample ID:	**1304185-10**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	76		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.2**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:29	DSC	1303314
Lead	**35**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 11:21	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB226-0507**	Sampled:	04/11/13 09:00
Lab Sample ID:	**1304185-10**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**76**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB227-0507**	Sampled:	04/11/13 09:05
Lab Sample ID:	**1304185-11**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	1	Analyzed:	04/12/13 By: ASC
QC Batch:	1303302	Analytical Batch:	3D12034
Percent Solids:	84		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.034**	0.020	0.0055
208-96-8	Acenaphthylene	**0.012J**	0.020	0.0050
*120-12-7	Anthracene	**0.064**	0.020	0.0048
*56-55-3	Benzo(a)anthracene	**0.21**	0.020	0.0033
50-32-8	Benzo(a)pyrene	**0.18**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.22**	0.020	0.0023
*207-08-9	Benzo(k)fluoranthene	**0.12**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.084**	0.020	0.0022
*218-01-9	Chrysene	**0.19**	0.020	0.0046
*53-70-3	Dibenz(a,h)anthracene	**0.019J**	0.020	0.0023
*206-44-0	Fluoranthene	**0.33**	0.020	0.0053
86-73-7	Fluorene	**0.051**	0.020	0.0048
193-39-5	Indeno(1,2,3-cd)pyrene	**0.082**	0.020	0.0032
91-57-6	2-Methylnaphthalene	**0.013J**	0.020	0.0054
91-20-3	Naphthalene	**0.016J**	0.020	0.0067
*85-01-8	Phenanthrene	**0.23**	0.020	0.0049
*129-00-0	Pyrene	**0.40**	0.020	0.0051

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*78*	*35-100*
2-Fluorobiphenyl	*84*	*45-105*
o-Terphenyl	*82*	*30-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB227-0507**	Sampled:	04/11/13 09:05
Lab Sample ID:	**1304185-11**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	84		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.9**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:32	DSC	1303314
***Lead**	**72**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/15/13 11:24	DSC	1303314

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB227-0507**	Sampled:	04/11/13 09:05
Lab Sample ID:	**1304185-11**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**84**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-FD-03**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304185-12**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Unit:	mg/kg dry	Prepared:	04/12/13 By: JTS
Dilution Factor:	5	Analyzed:	04/12/13 By: DWJ
QC Batch:	1303302	Analytical Batch:	3D15022
Percent Solids:	83		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.064J**	0.10	0.028
208-96-8	Acenaphthylene	**0.046J**	0.10	0.025
120-12-7	Anthracene	**0.47**	0.10	0.024
56-55-3	Benzo(a)anthracene	**0.92**	0.10	0.017
50-32-8	Benzo(a)pyrene	**0.63**	0.10	0.014
*205-99-2	Benzo(b)fluoranthene	**0.81**	0.10	0.011
*207-08-9	Benzo(k)fluoranthene	**0.40**	0.10	0.012
191-24-2	Benzo(g,h,i)perylene	**0.30**	0.10	0.011
218-01-9	Chrysene	**0.79**	0.10	0.023
53-70-3	Dibenz(a,h)anthracene	**0.12**	0.10	0.011
206-44-0	Fluoranthene	**1.7**	0.10	0.027
86-73-7	Fluorene	**0.12**	0.10	0.024
193-39-5	Indeno(1,2,3-cd)pyrene	**0.29**	0.10	0.016
*91-57-6	2-Methylnaphthalene	0.10U	0.10	0.027
*91-20-3	Naphthalene	0.10U	0.10	0.034
85-01-8	Phenanthrene	**1.5**	0.10	0.025
129-00-0	Pyrene	**1.9**	0.10	0.026

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*68*	*35-100*
2-Fluorobiphenyl	*75*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-FD-03**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304185-12**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15
Percent Solids:	83		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/15/13 10:46	DSC	1303314
Lead	**29**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/15/13 11:50	DSC	1303314

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304185**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-FD-03**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304185-12**	Sampled By:	Client
Matrix:	Soil	Received:	04/11/13 19:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**83**	0.1	0.1	%	1	USEPA-3550C	04/12/13 13:30	BAR	1303324

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304185-11	DASB227-0507	Phenanthrene
1304185-11	DASB227-0507	Pyrene

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304185-11	DASB227-0507	Anthracene
1304185-11	DASB227-0507	Benzo(a)anthracene
1304185-11	DASB227-0507	Benzo(b)fluoranthene
1304185-11	DASB227-0507	Chrysene
1304185-11	DASB227-0507	Fluoranthene

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1303302-MS1		Benzo(b)fluoranthene
1303302-MS1		Benzo(k)fluoranthene
1303302-MS1		Dibenz(a,h)anthracene
1303302-MS1		Indeno(1,2,3-cd)pyrene
1303302-MSD1		Dibenz(a,h)anthracene
1304185-01	DASS201-0002	Acenaphthene
1304185-01	DASS201-0002	Benzo(b)fluoranthene
1304185-01	DASS201-0002	Benzo(k)fluoranthene
1304185-01	DASS201-0002	Dibenz(a,h)anthracene
1304185-01	DASS201-0002	Fluorene
1304185-01	DASS201-0002	Nitrobenzene-d5
1304185-02	DASS202-0002	2-Methylnaphthalene
1304185-02	DASS202-0002	Benzo(b)fluoranthene
1304185-02	DASS202-0002	Benzo(k)fluoranthene
1304185-02	DASS202-0002	Naphthalene
1304185-03	DASS203-0002	Acenaphthylene
1304185-03	DASS203-0002	Anthracene
1304185-03	DASS203-0002	Benzo(b)fluoranthene
1304185-03	DASS203-0002	Benzo(k)fluoranthene
1304185-03	DASS203-0002	Dibenz(a,h)anthracene
1304185-04	DASS204-0002	Acenaphthene
1304185-04	DASS204-0002	Anthracene
1304185-04	DASS204-0002	Benzo(b)fluoranthene
1304185-04	DASS204-0002	Benzo(k)fluoranthene
1304185-04	DASS204-0002	Dibenz(a,h)anthracene
1304185-04	DASS204-0002	Fluorene
1304185-05	DASS205-0002	2-Methylnaphthalene
1304185-05	DASS205-0002	Benzo(b)fluoranthene
1304185-05	DASS205-0002	Benzo(k)fluoranthene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304185-05	DASS205-0002	Dibenz(a,h)anthracene
1304185-05	DASS205-0002	Fluorene
1304185-05	DASS205-0002	Naphthalene
1304185-06	DASS206-0002	Acenaphthene
1304185-06	DASS206-0002	Anthracene
1304185-06	DASS206-0002	Benzo(b)fluoranthene
1304185-06	DASS206-0002	Benzo(k)fluoranthene
1304185-06	DASS206-0002	Fluorene
1304185-06	DASS206-0002	Naphthalene
1304185-06	DASS206-0002	Nitrobenzene-d5
1304185-07	DASS207-0002	2-Methylnaphthalene
1304185-07	DASS207-0002	Benzo(b)fluoranthene
1304185-07	DASS207-0002	Benzo(k)fluoranthene
1304185-07	DASS207-0002	Dibenz(a,h)anthracene
1304185-07	DASS207-0002	Naphthalene
1304185-08	DASB224-0507	2-Methylnaphthalene
1304185-08	DASB224-0507	Benzo(b)fluoranthene
1304185-08	DASB224-0507	Benzo(k)fluoranthene
1304185-08	DASB224-0507	Dibenz(a,h)anthracene
1304185-08	DASB224-0507	Indeno(1,2,3-cd)pyrene
1304185-08	DASB224-0507	Naphthalene
1304185-09	DASB225-0507	2-Methylnaphthalene
1304185-09	DASB225-0507	Benzo(b)fluoranthene
1304185-09	DASB225-0507	Benzo(k)fluoranthene
1304185-10	DASB226-0507	2-Methylnaphthalene
1304185-10	DASB226-0507	Benzo(b)fluoranthene
1304185-10	DASB226-0507	Benzo(k)fluoranthene
1304185-10	DASB226-0507	Dibenz(a,h)anthracene
1304185-10	DASB226-0507	Naphthalene
1304185-10	DASB226-0507	Nitrobenzene-d5
1304185-11	DASB227-0507	Benzo(b)fluoranthene
1304185-11	DASB227-0507	Benzo(k)fluoranthene
1304185-11	DASB227-0507	Dibenz(a,h)anthracene
1304185-12	DASB-FD-03	2-Methylnaphthalene
1304185-12	DASB-FD-03	Benzo(b)fluoranthene
1304185-12	DASB-FD-03	Benzo(k)fluoranthene
1304185-12	DASB-FD-03	Naphthalene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample:	
1304185-01	DASS201-0002
1304185-03	DASS203-0002
1304185-04	DASS204-0002
1304185-06	DASS206-0002
1304185-10	DASB226-0507

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

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STATEMENT OF DATA QUALIFICATIONS

Total Metals by EPA 6000/7000 Series Methods

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; matrix QC results are not available.

Analysis: USEPA-6020A

Sample/Analyte: 1304185-11 DASB227-0507 Lead

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(3-12)

TETRA TECH NUS, INC. CERT 9 CHAIN OF CUSTODY | NUMBER № 2285 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412 921 7231	Trimatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412 443 0244	5560 Corp. Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Trimatrix Pick up		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: Pb, As, PAHs	COMMENTS
4/11	0750	DASS201-0002	201	0	2	SO	G	1	1	1304185-01
	0755	DASS202-0002	202					1	1	-02
	0800	DASS203-0002	203					1	1	-03
	0805	DASS204-0002	204					1	1	-04
	0810	DASS205-0002	205					1	1	-05
	0820	DASS206-0002	206					1	1	-06
	0825	DASS207-0002	207					1	1	-07
	0850	DASB224-~~0305~~ 0507	224	5	7			1	1	-0507 -08
	0855	DASB225-~~0305~~ 0507	225					1	1	-0507 -09
	0900	DASB226-~~0305~~ 0507	226					1	1	-0507 -10
	0905	DASB227-~~0305~~ 0507	227					2	2	-0507 -11
	0000	DASB-FD-03	QC	–	–	QC	G	1	1	-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4-11-13	1320	1. RECEIVED BY	4/11/13	1320
2. RELINQUISHED BY	4/11/13	1415	2. RECEIVED BY	4-11-13	1415
3. RELINQUISHED BY	4-11-13	1915	3. RECEIVED BY	4-11-13	1915

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Receipt Record Page/Line #: 3-12
Work Order #: 1304185
New / Add To
Project Chemist: GLW
Sample #s

Recorded by (initials/date): JN 4-11-13

☑ Cooler ☐ Box ☐ Other ____ Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (# ____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM0702	1957	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank	0		5.5
TB location: Representative / Not Representative			
1	3.4	0	3.4
2	3.4	0	3.4
3	3.5	0	3.5
Average °C			5.0

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2285

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☑	☐	☐	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-11-13	4-11-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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April 16, 2013

TETRA TECH NUS - Pittsburgh
Attn: Mr. Joe Logan
661 Anderson Drive, Foster Plaza 7
Pittsburgh, PA 15220

Project: USCG Atwater Facility

Dear Mr. Joe Logan,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1304208	04/12/2013	Laboratory Services
1304212	04/13/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB228-0305**	Sampled:	04/11/13 15:10
Lab Sample ID:	**1304208-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	86		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0054
208-96-8	Acenaphthylene	0.019U	0.019	0.0048
120-12-7	Anthracene	0.019U	0.019	0.0046
56-55-3	Benzo(a)anthracene	**0.0036J**	0.019	0.0032
*50-32-8	Benzo(a)pyrene	0.019U	0.019	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.0032J**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	0.019U	0.019	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.0036J**	0.019	0.0022
*218-01-9	Chrysene	**0.0052J**	0.019	0.0045
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	**0.0068J**	0.019	0.0052
86-73-7	Fluorene	0.019U	0.019	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0031
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0053
*91-20-3	Naphthalene	0.019U	0.019	0.0065
85-01-8	Phenanthrene	**0.0052J**	0.019	0.0047
129-00-0	Pyrene	**0.0080J**	0.019	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*70*	*35-100*
2-Fluorobiphenyl	*72*	*45-105*
o-Terphenyl	*74*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB228-0305**	Sampled:	04/11/13 15:10
Lab Sample ID:	**1304208-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	86		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:15	MSM	1303384
Lead	**6.9**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:15	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB228-0305**	Sampled:	04/11/13 15:10
Lab Sample ID:	**1304208-01**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**86**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB229-0305**	Sampled:	04/11/13 15:15
Lab Sample ID:	**1304208-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	90		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.018U	0.018	0.0051
208-96-8	Acenaphthylene	0.018U	0.018	0.0046
120-12-7	Anthracene	0.018U	0.018	0.0044
56-55-3	Benzo(a)anthracene	**0.0038J**	0.018	0.0030
50-32-8	Benzo(a)pyrene	**0.0034J**	0.018	0.0025
*205-99-2	Benzo(b)fluoranthene	**0.0038J**	0.018	0.0021
*207-08-9	Benzo(k)fluoranthene	0.018U	0.018	0.0022
191-24-2	Benzo(g,h,i)perylene	**0.0042J**	0.018	0.0021
218-01-9	Chrysene	0.018U	0.018	0.0043
53-70-3	Dibenz(a,h)anthracene	0.018U	0.018	0.0021
206-44-0	Fluoranthene	**0.0061J**	0.018	0.0050
86-73-7	Fluorene	0.018U	0.018	0.0045
193-39-5	Indeno(1,2,3-cd)pyrene	0.018U	0.018	0.0030
91-57-6	2-Methylnaphthalene	0.018U	0.018	0.0051
91-20-3	Naphthalene	0.018U	0.018	0.0062
85-01-8	Phenanthrene	**0.0053J**	0.018	0.0045
129-00-0	Pyrene	**0.0080J**	0.018	0.0048

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*76*	*35-100*
2-Fluorobiphenyl	*80*	*45-105*
o-Terphenyl	*77*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB229-0305**	Sampled:	04/11/13 15:15
Lab Sample ID:	**1304208-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	90		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:16	MSM	1303384
Lead	**6.5**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:16	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB229-0305**	Sampled:	04/11/13 15:15
Lab Sample ID:	**1304208-02**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**90**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB230-0305**	Sampled:	04/11/13 15:20
Lab Sample ID:	**1304208-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	86		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.020U	0.020	0.0054
208-96-8	Acenaphthylene	0.020U	0.020	0.0049
120-12-7	Anthracene	0.020U	0.020	0.0047
*56-55-3	Benzo(a)anthracene	0.020U	0.020	0.0032
50-32-8	Benzo(a)pyrene	0.020U	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	0.020U	0.020	0.0022
*207-08-9	Benzo(k)fluoranthene	0.020U	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.0028J**	0.020	0.0022
*218-01-9	Chrysene	0.020U	0.020	0.0045
53-70-3	Dibenz(a,h)anthracene	0.020U	0.020	0.0022
206-44-0	Fluoranthene	0.020U	0.020	0.0052
86-73-7	Fluorene	0.020U	0.020	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	0.020U	0.020	0.0031
91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0053
91-20-3	Naphthalene	0.020U	0.020	0.0065
85-01-8	Phenanthrene	0.020U	0.020	0.0048
129-00-0	Pyrene	0.020U	0.020	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*72*	*35-100*
2-Fluorobiphenyl	*74*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB230-0305**	Sampled:	04/11/13 15:20
Lab Sample ID:	**1304208-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	86		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.3**	0.094	0.015	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:17	MSM	1303384
Lead	**6.9**	0.094	0.0062	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:17	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB230-0305**	Sampled:	04/11/13 15:20
Lab Sample ID:	**1304208-03**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**86**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB231-0305**	Sampled:	04/11/13 15:25
Lab Sample ID:	**1304208-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	86		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0054
208-96-8	Acenaphthylene	0.019U	0.019	0.0049
120-12-7	Anthracene	0.019U	0.019	0.0047
56-55-3	Benzo(a)anthracene	0.019U	0.019	0.0032
50-32-8	Benzo(a)pyrene	0.019U	0.019	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.0023J**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	0.019U	0.019	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.0034J**	0.019	0.0022
218-01-9	Chrysene	**0.0045J**	0.019	0.0045
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	0.019U	0.019	0.0052
86-73-7	Fluorene	0.019U	0.019	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0031
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0053
91-20-3	Naphthalene	0.019U	0.019	0.0065
85-01-8	Phenanthrene	0.019U	0.019	0.0048
129-00-0	Pyrene	**0.0057J**	0.019	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*73*	*35-100*
2-Fluorobiphenyl	*77*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB231-0305**	Sampled:	04/11/13 15:25
Lab Sample ID:	**1304208-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	86		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:18	MSM	1303384
Lead	**7.5**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:18	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB231-0305**	Sampled:	04/11/13 15:25
Lab Sample ID:	**1304208-04**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**86**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-04**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	88		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0053
208-96-8	Acenaphthylene	0.019U	0.019	0.0047
120-12-7	Anthracene	0.019U	0.019	0.0046
*56-55-3	Benzo(a)anthracene	0.019U	0.019	0.0031
50-32-8	Benzo(a)pyrene	0.019U	0.019	0.0026
*205-99-2	Benzo(b)fluoranthene	0.019U	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	0.019U	0.019	0.0022
191-24-2	Benzo(g,h,i)perylene	**0.0044J**	0.019	0.0021
*218-01-9	Chrysene	0.019U	0.019	0.0044
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	0.019U	0.019	0.0051
86-73-7	Fluorene	0.019U	0.019	0.0046
193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0030
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0052
91-20-3	Naphthalene	0.019U	0.019	0.0064
85-01-8	Phenanthrene	0.019U	0.019	0.0046
129-00-0	Pyrene	0.019U	0.019	0.0049

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*75*	*35-100*
2-Fluorobiphenyl	*76*	*45-105*
o-Terphenyl	*78*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-04**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.6**	0.094	0.015	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:19	MSM	1303384
Lead	**7.1**	0.094	0.0062	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:19	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-04**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-05**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**88**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-05**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	87		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0053
208-96-8	Acenaphthylene	0.019U	0.019	0.0048
120-12-7	Anthracene	0.019U	0.019	0.0046
56-55-3	Benzo(a)anthracene	**0.0040J**	0.019	0.0032
50-32-8	Benzo(a)pyrene	**0.0028J**	0.019	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.0024J**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.0028J**	0.019	0.0022
191-24-2	Benzo(g,h,i)perylene	**0.0044J**	0.019	0.0022
218-01-9	Chrysene	**0.0052J**	0.019	0.0045
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	**0.0060J**	0.019	0.0052
86-73-7	Fluorene	0.019U	0.019	0.0046
*193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0031
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0053
91-20-3	Naphthalene	0.019U	0.019	0.0065
85-01-8	Phenanthrene	0.019U	0.019	0.0047
129-00-0	Pyrene	**0.0084J**	0.019	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*71*	*35-100*
2-Fluorobiphenyl	*75*	*45-105*
o-Terphenyl	*73*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-05**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30
Percent Solids:	87		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.0**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:20	MSM	1303384
Lead	**9.2**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:20	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304208**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASBFD-05**	Sampled:	04/11/13 00:00
Lab Sample ID:	**1304208-06**	Sampled By:	Client
Matrix:	Soil	Received:	04/12/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**87**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS208-0002**	Sampled:	04/12/13 12:10
Lab Sample ID:	**1304212-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	5	Analyzed:	04/16/13 By: DWJ
QC Batch:	1303365	Analytical Batch:	3D16006
Percent Solids:	87		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
*83-32-9	Acenaphthene	**0.033J**	0.096	0.027
208-96-8	Acenaphthylene	0.096U	0.096	0.024
120-12-7	Anthracene	**0.089J**	0.096	0.023
56-55-3	Benzo(a)anthracene	**0.32**	0.096	0.016
50-32-8	Benzo(a)pyrene	**0.27**	0.096	0.013
*205-99-2	Benzo(b)fluoranthene	**0.32**	0.096	0.011
*207-08-9	Benzo(k)fluoranthene	**0.14**	0.096	0.011
191-24-2	Benzo(g,h,i)perylene	**0.16**	0.096	0.011
218-01-9	Chrysene	**0.29**	0.096	0.022
53-70-3	Dibenz(a,h)anthracene	**0.031J**	0.096	0.011
206-44-0	Fluoranthene	**0.43**	0.096	0.026
*86-73-7	Fluorene	**0.033J**	0.096	0.023
193-39-5	Indeno(1,2,3-cd)pyrene	**0.12**	0.096	0.015
91-57-6	2-Methylnaphthalene	0.096U	0.096	0.026
91-20-3	Naphthalene	0.096U	0.096	0.032
85-01-8	Phenanthrene	**0.32**	0.096	0.024
129-00-0	Pyrene	**0.61**	0.096	0.025

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*52*	*35-100*
2-Fluorobiphenyl	*66*	*45-105*
o-Terphenyl	*60*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS208-0002**	Sampled:	04/12/13 12:10
Lab Sample ID:	**1304212-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	87		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**7.7**	0.092	0.015	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:20	MSM	1303384
Lead	**340**	4.6	0.30	mg/kg dry wt.	50	USEPA-6020A	04/16/13 10:38	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS208-0002**	Sampled:	04/12/13 12:10
Lab Sample ID:	**1304212-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**87**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS209-0002**	Sampled:	04/12/13 12:15
Lab Sample ID:	**1304212-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	2	Analyzed:	04/16/13 By: DWJ
QC Batch:	1303365	Analytical Batch:	3D16006
Percent Solids:	81		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.079**	0.041	0.011
208-96-8	Acenaphthylene	**0.017J**	0.041	0.010
120-12-7	Anthracene	**0.18**	0.041	0.0099
56-55-3	Benzo(a)anthracene	**0.63**	0.041	0.0068
50-32-8	Benzo(a)pyrene	**0.57**	0.041	0.0057
*205-99-2	Benzo(b)fluoranthene	**0.65**	0.041	0.0047
*207-08-9	Benzo(k)fluoranthene	**0.38**	0.041	0.0048
191-24-2	Benzo(g,h,i)perylene	**0.34**	0.041	0.0047
218-01-9	Chrysene	**0.65**	0.041	0.0096
53-70-3	Dibenz(a,h)anthracene	**0.12**	0.041	0.0047
206-44-0	Fluoranthene	**0.99**	0.041	0.011
86-73-7	Fluorene	**0.068**	0.041	0.0099
193-39-5	Indeno(1,2,3-cd)pyrene	**0.31**	0.041	0.0066
*91-57-6	2-Methylnaphthalene	**0.034J**	0.041	0.011
91-20-3	Naphthalene	**0.030J**	0.041	0.014
85-01-8	Phenanthrene	**0.84**	0.041	0.010
129-00-0	Pyrene	**1.1**	0.041	0.011

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*67*	*35-100*
2-Fluorobiphenyl	*69*	*45-105*
o-Terphenyl	*38*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS209-0002**	Sampled:	04/12/13 12:15
Lab Sample ID:	**1304212-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**11**	0.50	0.082	mg/kg dry wt.	5	USEPA-6020A	04/16/13 10:40	MSM	1303384
Lead	**510**	10	0.66	mg/kg dry wt.	100	USEPA-6020A	04/16/13 10:39	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS209-0002**	Sampled:	04/12/13 12:15
Lab Sample ID:	**1304212-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS210-0002**	Sampled:	04/12/13 12:20
Lab Sample ID:	**1304212-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	88		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0052
208-96-8	Acenaphthylene	0.019U	0.019	0.0047
120-12-7	Anthracene	0.019U	0.019	0.0045
56-55-3	Benzo(a)anthracene	0.019U	0.019	0.0031
50-32-8	Benzo(a)pyrene	0.019U	0.019	0.0026
*205-99-2	Benzo(b)fluoranthene	0.019U	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	0.019U	0.019	0.0022
191-24-2	Benzo(g,h,i)perylene	0.019U	0.019	0.0021
218-01-9	Chrysene	0.019U	0.019	0.0044
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	0.019U	0.019	0.0051
86-73-7	Fluorene	0.019U	0.019	0.0046
193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0030
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0052
91-20-3	Naphthalene	0.019U	0.019	0.0063
85-01-8	Phenanthrene	0.019U	0.019	0.0046
129-00-0	Pyrene	0.019U	0.019	0.0049

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*70*	*35-100*
2-Fluorobiphenyl	*81*	*45-105*
o-Terphenyl	*77*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS210-0002**	Sampled:	04/12/13 12:20
Lab Sample ID:	**1304212-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**2.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:24	MSM	1303384
Lead	**2.7**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:24	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS210-0002**	Sampled:	04/12/13 12:20
Lab Sample ID:	**1304212-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**88**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS211-0002**	Sampled:	04/12/13 12:25
Lab Sample ID:	**1304212-04**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	5	Analyzed:	04/16/13 By: DWJ
QC Batch:	1303365	Analytical Batch:	3D16006
Percent Solids:	84		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.099U	0.099	0.028
208-96-8	Acenaphthylene	0.099U	0.099	0.025
120-12-7	Anthracene	0.099U	0.099	0.024
56-55-3	Benzo(a)anthracene	**0.052J**	0.099	0.016
50-32-8	Benzo(a)pyrene	**0.068J**	0.099	0.014
*205-99-2	Benzo(b)fluoranthene	**0.049J**	0.099	0.011
*207-08-9	Benzo(k)fluoranthene	**0.039J**	0.099	0.012
191-24-2	Benzo(g,h,i)perylene	**0.039J**	0.099	0.011
218-01-9	Chrysene	**0.052J**	0.099	0.023
53-70-3	Dibenz(a,h)anthracene	0.099U	0.099	0.011
206-44-0	Fluoranthene	**0.070J**	0.099	0.027
86-73-7	Fluorene	0.099U	0.099	0.024
193-39-5	Indeno(1,2,3-cd)pyrene	**0.039J**	0.099	0.016
91-57-6	2-Methylnaphthalene	0.099U	0.099	0.027
91-20-3	Naphthalene	0.099U	0.099	0.033
85-01-8	Phenanthrene	**0.049J**	0.099	0.024
129-00-0	Pyrene	**0.11**	0.099	0.026

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*56*	*35-100*
2-Fluorobiphenyl	*56*	*45-105*
o-Terphenyl	*56*	*30-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS211-0002**	Sampled:	04/12/13 12:25
Lab Sample ID:	**1304212-04**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	84		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.8**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:28	MSM	1303384
Lead	**43**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/16/13 10:41	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS211-0002**	Sampled:	04/12/13 12:25
Lab Sample ID:	**1304212-04**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**84**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS212-0002**	Sampled:	04/12/13 12:30
Lab Sample ID:	**1304212-05**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	80		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.21**	0.021	0.0058
208-96-8	Acenaphthylene	**0.013J**	0.021	0.0052
120-12-7	Anthracene	**0.10**	0.021	0.0050
56-55-3	Benzo(a)anthracene	**0.36**	0.021	0.0034
50-32-8	Benzo(a)pyrene	**0.26**	0.021	0.0029
*205-99-2	Benzo(b)fluoranthene	**0.33**	0.021	0.0024
*207-08-9	Benzo(k)fluoranthene	**0.17**	0.021	0.0024
191-24-2	Benzo(g,h,i)perylene	**0.091**	0.021	0.0024
218-01-9	Chrysene	**0.35**	0.021	0.0049
*53-70-3	Dibenz(a,h)anthracene	**0.027**	0.021	0.0024
206-44-0	Fluoranthene	**0.51**	0.021	0.0056
86-73-7	Fluorene	**0.14**	0.021	0.0050
193-39-5	Indeno(1,2,3-cd)pyrene	**0.11**	0.021	0.0034
91-57-6	2-Methylnaphthalene	**0.013J**	0.021	0.0057
91-20-3	Naphthalene	**0.024**	0.021	0.0070
85-01-8	Phenanthrene	**0.45**	0.021	0.0051
129-00-0	Pyrene	**0.70**	0.021	0.0054

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*76*	*35-100*
2-Fluorobiphenyl	*72*	*45-105*
o-Terphenyl	*68*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS212-0002**	Sampled:	04/12/13 12:30
Lab Sample ID:	**1304212-05**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	80		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.4**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:29	MSM	1303384
Lead	**220**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/16/13 10:42	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS212-0002**	Sampled:	04/12/13 12:30
Lab Sample ID:	**1304212-05**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**80**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB232-0305**	Sampled:	04/12/13 12:40
Lab Sample ID:	**1304212-06**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	86		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.019U	0.019	0.0054
208-96-8	Acenaphthylene	0.019U	0.019	0.0049
*120-12-7	Anthracene	0.019U	0.019	0.0047
*56-55-3	Benzo(a)anthracene	0.019U	0.019	0.0032
50-32-8	Benzo(a)pyrene	0.019U	0.019	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.0024J**	0.019	0.0022
*207-08-9	Benzo(k)fluoranthene	0.019U	0.019	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.0051J**	0.019	0.0022
*218-01-9	Chrysene	0.019U	0.019	0.0045
53-70-3	Dibenz(a,h)anthracene	0.019U	0.019	0.0022
206-44-0	Fluoranthene	0.019U	0.019	0.0052
86-73-7	Fluorene	0.019U	0.019	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	0.019U	0.019	0.0031
91-57-6	2-Methylnaphthalene	0.019U	0.019	0.0053
91-20-3	Naphthalene	0.019U	0.019	0.0065
85-01-8	Phenanthrene	0.019U	0.019	0.0047
129-00-0	Pyrene	0.019U	0.019	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*71*	*35-100*
2-Fluorobiphenyl	*73*	*45-105*
o-Terphenyl	*71*	*30-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB232-0305**	Sampled:	04/12/13 12:40
Lab Sample ID:	**1304212-06**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	86		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.1**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:30	MSM	1303384
Lead	**7.0**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:30	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB232-0305**	Sampled:	04/12/13 12:40
Lab Sample ID:	**1304212-06**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**86**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB233-0305**	Sampled:	04/12/13 12:45
Lab Sample ID:	**1304212-07**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	85		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.020U	0.020	0.0054
208-96-8	Acenaphthylene	0.020U	0.020	0.0049
120-12-7	Anthracene	0.020U	0.020	0.0047
56-55-3	Benzo(a)anthracene	**0.011J**	0.020	0.0032
50-32-8	Benzo(a)pyrene	**0.011J**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.0097J**	0.020	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.0077J**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.0081J**	0.020	0.0022
218-01-9	Chrysene	**0.014J**	0.020	0.0046
*53-70-3	Dibenz(a,h)anthracene	0.020U	0.020	0.0022
206-44-0	Fluoranthene	**0.015J**	0.020	0.0053
86-73-7	Fluorene	0.020U	0.020	0.0047
*193-39-5	Indeno(1,2,3-cd)pyrene	**0.0041J**	0.020	0.0031
91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0054
91-20-3	Naphthalene	0.020U	0.020	0.0066
85-01-8	Phenanthrene	**0.011J**	0.020	0.0048
129-00-0	Pyrene	**0.018J**	0.020	0.0051

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*69*	*35-100*
2-Fluorobiphenyl	*69*	*45-105*
o-Terphenyl	*67*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB233-0305**	Sampled:	04/12/13 12:45
Lab Sample ID:	**1304212-07**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	85		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.8**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:31	MSM	1303384
Lead	**16**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/16/13 10:45	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB233-0305**	Sampled:	04/12/13 12:45
Lab Sample ID:	**1304212-07**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**85**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB234-0305**	Sampled:	04/12/13 12:55
Lab Sample ID:	**1304212-08**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	10	Analyzed:	04/16/13 By: DWJ
QC Batch:	1303365	Analytical Batch:	3D16006
Percent Solids:	52		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.26J**	0.32	0.089
208-96-8	Acenaphthylene	**0.16J**	0.32	0.080
120-12-7	Anthracene	**0.81**	0.32	0.077
56-55-3	Benzo(a)anthracene	**5.9**	0.32	0.053
50-32-8	Benzo(a)pyrene	**5.7**	0.32	0.044
*205-99-2	Benzo(b)fluoranthene	**6.6**	0.32	0.037
*207-08-9	Benzo(k)fluoranthene	**3.6**	0.32	0.038
191-24-2	Benzo(g,h,i)perylene	**2.8**	0.32	0.036
218-01-9	Chrysene	**5.8**	0.32	0.075
*53-70-3	Dibenz(a,h)anthracene	**0.66**	0.32	0.037
206-44-0	Fluoranthene	**5.0**	0.32	0.086
86-73-7	Fluorene	**0.35**	0.32	0.078
193-39-5	Indeno(1,2,3-cd)pyrene	**2.7**	0.32	0.052
*91-57-6	2-Methylnaphthalene	**0.12J**	0.32	0.088
91-20-3	Naphthalene	**0.24J**	0.32	0.11
85-01-8	Phenanthrene	**2.4**	0.32	0.079
129-00-0	Pyrene	**9.2**	0.32	0.083

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*63*	*35-100*
2-Fluorobiphenyl	*66*	*45-105*
o-Terphenyl	*61*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB234-0305**	Sampled:	04/12/13 12:55
Lab Sample ID:	**1304212-08**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	52		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**6.6**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:34	MSM	1303384
Lead	**220**	5.0	0.33	mg/kg dry wt.	50	USEPA-6020A	04/16/13 10:46	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB234-0305**	Sampled:	04/12/13 12:55
Lab Sample ID:	**1304212-08**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**52**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB235-0305**	Sampled:	04/12/13 13:00
Lab Sample ID:	**1304212-09**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	10	Analyzed:	04/16/13 By: DWJ
QC Batch:	1303365	Analytical Batch:	3D16006
Percent Solids:	72		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.11J**	0.23	0.064
208-96-8	Acenaphthylene	**0.092J**	0.23	0.058
120-12-7	Anthracene	**0.46**	0.23	0.056
56-55-3	Benzo(a)anthracene	**1.5**	0.23	0.038
50-32-8	Benzo(a)pyrene	**1.3**	0.23	0.032
*205-99-2	Benzo(b)fluoranthene	**1.8**	0.23	0.027
*207-08-9	Benzo(k)fluoranthene	**1.0**	0.23	0.027
191-24-2	Benzo(g,h,i)perylene	**0.87**	0.23	0.026
218-01-9	Chrysene	**1.4**	0.23	0.054
*53-70-3	Dibenz(a,h)anthracene	**0.42**	0.23	0.027
206-44-0	Fluoranthene	**2.7**	0.23	0.062
*86-73-7	Fluorene	**0.12J**	0.23	0.056
193-39-5	Indeno(1,2,3-cd)pyrene	**0.82**	0.23	0.037
*91-57-6	2-Methylnaphthalene	0.23U	0.23	0.064
91-20-3	Naphthalene	0.23U	0.23	0.078
85-01-8	Phenanthrene	**1.7**	0.23	0.057
129-00-0	Pyrene	**2.5**	0.23	0.060

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*74*	*35-100*
2-Fluorobiphenyl	*68*	*45-105*
o-Terphenyl	*93*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB235-0305**	Sampled:	04/12/13 13:00
Lab Sample ID:	**1304212-09**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	72		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**38**	1.0	0.16	mg/kg dry wt.	10	USEPA-6020A	04/16/13 10:48	MSM	1303384
Lead	**1800**	20	1.3	mg/kg dry wt.	200	USEPA-6020A	04/16/13 10:47	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB235-0305**	Sampled:	04/12/13 13:00
Lab Sample ID:	**1304212-09**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**72**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB236-0305**	Sampled:	04/12/13 13:10
Lab Sample ID:	**1304212-10**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	86		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.015J**	0.020	0.0054
*208-96-8	Acenaphthylene	0.020U	0.020	0.0049
120-12-7	Anthracene	**0.037**	0.020	0.0047
56-55-3	Benzo(a)anthracene	**0.11**	0.020	0.0032
50-32-8	Benzo(a)pyrene	**0.10**	0.020	0.0027
*205-99-2	Benzo(b)fluoranthene	**0.11**	0.020	0.0022
*207-08-9	Benzo(k)fluoranthene	**0.081**	0.020	0.0023
191-24-2	Benzo(g,h,i)perylene	**0.057**	0.020	0.0022
218-01-9	Chrysene	**0.11**	0.020	0.0045
53-70-3	Dibenz(a,h)anthracene	**0.019J**	0.020	0.0022
206-44-0	Fluoranthene	**0.21**	0.020	0.0052
86-73-7	Fluorene	**0.011J**	0.020	0.0047
193-39-5	Indeno(1,2,3-cd)pyrene	**0.049**	0.020	0.0031
91-57-6	2-Methylnaphthalene	0.020U	0.020	0.0053
*91-20-3	Naphthalene	0.020U	0.020	0.0065
85-01-8	Phenanthrene	**0.12**	0.020	0.0048
129-00-0	Pyrene	**0.22**	0.020	0.0050

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*76*	*35-100*
2-Fluorobiphenyl	*81*	*45-105*
o-Terphenyl	*80*	*30-125*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB236-0305**	Sampled:	04/12/13 13:10
Lab Sample ID:	**1304212-10**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	86		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**4.9**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:36	MSM	1303384
Lead	**26**	0.50	0.033	mg/kg dry wt.	5	USEPA-6020A	04/16/13 10:49	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB236-0305**	Sampled:	04/12/13 13:10
Lab Sample ID:	**1304212-10**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**86**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB237-0305**	Sampled:	04/12/13 13:05
Lab Sample ID:	**1304212-11**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Unit:	mg/kg dry	Prepared:	04/15/13 By: ALK
Dilution Factor:	1	Analyzed:	04/15/13 By: ASC
QC Batch:	1303365	Analytical Batch:	3D15025
Percent Solids:	81		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.021U	0.021	0.0057
208-96-8	Acenaphthylene	0.021U	0.021	0.0052
*120-12-7	Anthracene	0.021U	0.021	0.0050
56-55-3	Benzo(a)anthracene	**0.0058J**	0.021	0.0034
*50-32-8	Benzo(a)pyrene	**0.0037J**	0.021	0.0029
*205-99-2	Benzo(b)fluoranthene	**0.0058J**	0.021	0.0024
*207-08-9	Benzo(k)fluoranthene	**0.0025J**	0.021	0.0024
191-24-2	Benzo(g,h,i)perylene	**0.0025J**	0.021	0.0023
218-01-9	Chrysene	**0.0049J**	0.021	0.0048
53-70-3	Dibenz(a,h)anthracene	0.021U	0.021	0.0024
206-44-0	Fluoranthene	**0.0099J**	0.021	0.0055
86-73-7	Fluorene	0.021U	0.021	0.0050
193-39-5	Indeno(1,2,3-cd)pyrene	0.021U	0.021	0.0033
91-57-6	2-Methylnaphthalene	0.021U	0.021	0.0057
91-20-3	Naphthalene	0.021U	0.021	0.0070
85-01-8	Phenanthrene	**0.0074J**	0.021	0.0051
129-00-0	Pyrene	**0.010J**	0.021	0.0053

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*68*	*35-100*
2-Fluorobiphenyl	*75*	*45-105*
o-Terphenyl	*78*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB237-0305**	Sampled:	04/12/13 13:05
Lab Sample ID:	**1304212-11**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45
Percent Solids:	81		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**2.5**	0.091	0.015	mg/kg dry wt.	1	USEPA-6020A	04/16/13 10:37	MSM	1303384
Lead	**31**	0.46	0.030	mg/kg dry wt.	5	USEPA-6020A	04/16/13 10:49	MSM	1303384

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304212**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB237-0305**	Sampled:	04/12/13 13:05
Lab Sample ID:	**1304212-11**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/13/13 08:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**81**	0.1	0.1	%	1	USEPA-3550C	04/15/13 20:00	BAR	1303418

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304208-01	DASB228-0305	Benzo(a)pyrene
1304208-01	DASB228-0305	Benzo(b)fluoranthene
1304208-01	DASB228-0305	Benzo(k)fluoranthene
1304208-01	DASB228-0305	Chrysene
1304208-01	DASB228-0305	Naphthalene
1304208-02	DASB229-0305	Benzo(b)fluoranthene
1304208-02	DASB229-0305	Benzo(k)fluoranthene
1304208-03	DASB230-0305	Benzo(a)anthracene
1304208-03	DASB230-0305	Benzo(b)fluoranthene
1304208-03	DASB230-0305	Benzo(k)fluoranthene
1304208-03	DASB230-0305	Chrysene
1304208-04	DASB231-0305	Benzo(b)fluoranthene
1304208-04	DASB231-0305	Benzo(k)fluoranthene
1304208-05	DASBFD-04	Benzo(a)anthracene
1304208-05	DASBFD-04	Benzo(b)fluoranthene
1304208-05	DASBFD-04	Benzo(k)fluoranthene
1304208-05	DASBFD-04	Chrysene
1304208-06	DASBFD-05	Benzo(b)fluoranthene
1304208-06	DASBFD-05	Benzo(k)fluoranthene
1304208-06	DASBFD-05	Indeno(1,2,3-cd)pyrene
1304212-01	DASS208-0002	Acenaphthene
1304212-01	DASS208-0002	Benzo(b)fluoranthene
1304212-01	DASS208-0002	Benzo(k)fluoranthene
1304212-01	DASS208-0002	Fluorene
1304212-02	DASS209-0002	2-Methylnaphthalene
1304212-02	DASS209-0002	Benzo(b)fluoranthene
1304212-02	DASS209-0002	Benzo(k)fluoranthene
1304212-03	DASS210-0002	Benzo(b)fluoranthene
1304212-03	DASS210-0002	Benzo(k)fluoranthene
1304212-04	DASS211-0002	Benzo(b)fluoranthene
1304212-04	DASS211-0002	Benzo(k)fluoranthene
1304212-05	DASS212-0002	Benzo(b)fluoranthene
1304212-05	DASS212-0002	Benzo(k)fluoranthene
1304212-05	DASS212-0002	Dibenz(a,h)anthracene
1304212-06	DASB232-0305	Anthracene
1304212-06	DASB232-0305	Benzo(a)anthracene
1304212-06	DASB232-0305	Benzo(b)fluoranthene
1304212-06	DASB232-0305	Benzo(k)fluoranthene
1304212-06	DASB232-0305	Chrysene
1304212-07	DASB233-0305	Benzo(b)fluoranthene
1304212-07	DASB233-0305	Benzo(k)fluoranthene
1304212-07	DASB233-0305	Dibenz(a,h)anthracene
1304212-07	DASB233-0305	Indeno(1,2,3-cd)pyrene
1304212-08	DASB234-0305	2-Methylnaphthalene
1304212-08	DASB234-0305	Benzo(b)fluoranthene
1304212-08	DASB234-0305	Benzo(k)fluoranthene
1304212-08	DASB234-0305	Dibenz(a,h)anthracene
1304212-09	DASB235-0305	2-Methylnaphthalene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304212-09	DASB235-0305	Benzo(b)fluoranthene
1304212-09	DASB235-0305	Benzo(k)fluoranthene
1304212-09	DASB235-0305	Dibenz(a,h)anthracene
1304212-09	DASB235-0305	Fluorene
1304212-10	DASB236-0305	Acenaphthylene
1304212-10	DASB236-0305	Benzo(b)fluoranthene
1304212-10	DASB236-0305	Benzo(k)fluoranthene
1304212-10	DASB236-0305	Naphthalene
1304212-11	DASB237-0305	Anthracene
1304212-11	DASB237-0305	Benzo(a)pyrene
1304212-11	DASB237-0305	Benzo(b)fluoranthene
1304212-11	DASB237-0305	Benzo(k)fluoranthene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample:	
1304212-01	DASS208-0002
1304212-04	DASS211-0002

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TETRA TECH NUS, INC. CHAIN OF CUSTODY

CERT 2 (5-17)

NUMBER № 2286 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412921 7231	TriMatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412443 0244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		TriMatrix Pickup		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: 4°C

TYPE OF ANALYSIS: PCB, As, RAS

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS		COMMENTS
4/11	1510	DASB 228-0305	228	3	5	SO	G	1	1	01 E1304208
	1515	DASB 229-0305	229					1	1	02
	1520	DASB 230-0305	230					1	1	03
	1525	DASB 231-0305	231					1	1	04
4/11	0000	DASB FD-04	QC	–	–	QC	–	1	1	05
4/11	0000	DASB FD-05	QC	–	–	QC	–	1	1	06

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/12/13	9:01	1. RECEIVED BY	4/12/13	0901
2. RELINQUISHED BY	4/13/13	1330	2. RECEIVED BY	4/12/13	1330
3. RELINQUISHED BY	4/12/13	1730	3. RECEIVED BY D. Mardin	4-12-13	1730

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Receipt Record Page/Line #: 5-17
Work Order #: New / Add To
Project Chemist: BZW
Sample #s: 1304208

Recorded by (initials/date): JN 4-12-13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)

☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM2553	1750	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank	0		3.8
TB location: Representative / Not Representative			
1	3.7	0	3.7
2	3.8	0	3.8
3	4.3	0	4.3
Average °C			3.9
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐		Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2286

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☑	☐	☐	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

RUSH

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-12-13	4-12-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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TRIMATRIX LABORATORIES

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER № 2287 PAGE 1 OF 1 7-1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412 921 7231	TriMatrix/Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		Jim Goerdt	4124430244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8020 3157 7719		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

TYPE OF ANALYSIS: Pb, As, PAHs

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	Pb, As, PAHs								COMMENTS
01	4/12	1210	DASS208-0002	208	0	2	SO	G	1	1								1304212
02	↓	1215	DASS209-0002	209	↓	↓	↓	↓	1	1								
03	↓	1220	DASS210-0002	210	↓	↓	↓	↓	1	1								
04	↓	1225	DASS211-0002	211	↓	↓	↓	↓	1	1								
05	↓	1230	DASS212-0002	212	↓	↓	↓	↓	1	1								
06	↓	1240	DASB232-0305	232	3	5	↓	↓	1	1								
07	↓	1245	DASB233-0305	233	↓	↓	↓	↓	1	1								
08	↓	1255	DASB234-0305	234	↓	↓	↓	↓	1	1								
09	↓	1300	DASB235-0305	235	↓	↓	↓	↓	1	1								
10	↓	1310	DASB236-0305	236	↓	↓	↓	↓	1	1								
11	↓	1305	DASB237-0305	237	↓	↓	↓	↓	1	1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4/12/13	1525	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY [signature]	4/13/13	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Tetra Tech Nus, Inc
Receipt Record Page/Line #
Work Order #: 1304213
New / Add To
Project Chemist:
Sample #s

Recorded by (Initials/date): Ln 4/13/13

☒ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)

☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
3125	0908	☐ None ☒ Present / Intact ☐ Present / Not Intact	(Dispersed) / Top / Middle / Bottom	☒ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☒ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
3125	Temp Blank:	–	3.9
	TB location: (Representative) / Not Representative		
	1 5.0	–	5.0
	2 5.1	–	5.1
	3 4.1	–	4.1
	Average °C		4.7
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By _____
☒		Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other _____

COC Information

☐ TriMatrix COC ☒ Other 2287

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐		If "No", Project Chemist Approval Initials: _____
☒	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☒	☐		Completed Sample Preservation Verification Form?
☒	☐		Samples chemically preserved correctly?
☒	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils?
			☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☒ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☒	☐	☐	VOC vials / TOX containers have headspace?
☒	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
4/13/13 0845	4/13/13 0914	(Yes) / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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April 23, 2013

TETRA TECH NUS - Pittsburgh
Attn: Mr. Joe Logan
661 Anderson Drive, Foster Plaza 7
Pittsburgh, PA 15220

Project: USCG Atwater Facility

Dear Mr. Joe Logan,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1304314	04/18/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS244-0002**	Sampled:	04/17/13 17:30
Lab Sample ID:	**1304314-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Unit:	mg/kg dry	Prepared:	04/19/13 By: JTS
Dilution Factor:	20	Analyzed:	04/22/13 By: JLB
QC Batch:	1303525	Analytical Batch:	3D22051
Percent Solids:	88		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.38U	0.38	0.11
208-96-8	Acenaphthylene	0.38U	0.38	0.095
120-12-7	Anthracene	0.38U	0.38	0.091
56-55-3	Benzo(a)anthracene	**0.15J**	0.38	0.062
*50-32-8	Benzo(a)pyrene	**0.14J**	0.38	0.052
*205-99-2	Benzo(b)fluoranthene	**0.17J**	0.38	0.043
*207-08-9	Benzo(k)fluoranthene	**0.11J**	0.38	0.044
*191-24-2	Benzo(g,h,i)perylene	**0.083J**	0.38	0.043
218-01-9	Chrysene	**0.15J**	0.38	0.088
53-70-3	Dibenz(a,h)anthracene	0.38U	0.38	0.043
*206-44-0	Fluoranthene	**0.26J**	0.38	0.10
86-73-7	Fluorene	0.38U	0.38	0.091
193-39-5	Indeno(1,2,3-cd)pyrene	0.38U	0.38	0.061
91-57-6	2-Methylnaphthalene	0.38U	0.38	0.10
91-20-3	Naphthalene	0.38U	0.38	0.13
85-01-8	Phenanthrene	**0.11J**	0.38	0.093
129-00-0	Pyrene	**0.22J**	0.38	0.098

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS244-0002**	Sampled:	04/17/13 17:30
Lab Sample ID:	**1304314-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Percent Solids:	88		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
***Arsenic**	**6.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/22/13 11:52	KLV	1303582
***Lead**	**430**	10	0.66	mg/kg dry wt.	100	USEPA-6020A	04/22/13 09:41	KLV	1303582

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS244-0002**	Sampled:	04/17/13 17:30
Lab Sample ID:	**1304314-01**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**88**	0.1	0.1	%	1	USEPA-3550C	04/19/13 19:15	BAR	1303589

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS245-0002**	Sampled:	04/17/13 15:00
Lab Sample ID:	**1304314-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Unit:	mg/kg dry	Prepared:	04/19/13 By: JTS
Dilution Factor:	10	Analyzed:	04/19/13 By: DWJ
QC Batch:	1303525	Analytical Batch:	3D22010
Percent Solids:	83		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	**0.084J**	0.20	0.056
208-96-8	Acenaphthylene	0.20U	0.20	0.050
*120-12-7	Anthracene	**0.20J**	0.20	0.048
*56-55-3	Benzo(a)anthracene	**0.51**	0.20	0.033
*50-32-8	Benzo(a)pyrene	**0.47**	0.20	0.028
*205-99-2	Benzo(b)fluoranthene	**0.59**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**0.29**	0.20	0.023
*191-24-2	Benzo(g,h,i)perylene	**0.14J**	0.20	0.023
218-01-9	Chrysene	**0.39**	0.20	0.047
53-70-3	Dibenz(a,h)anthracene	0.20U	0.20	0.023
*206-44-0	Fluoranthene	**1.0**	0.20	0.054
86-73-7	Fluorene	**0.10J**	0.20	0.048
*193-39-5	Indeno(1,2,3-cd)pyrene	**0.22**	0.20	0.032
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.055
*91-20-3	Naphthalene	0.20U	0.20	0.067
*85-01-8	Phenanthrene	**0.83**	0.20	0.049
*129-00-0	Pyrene	**0.78**	0.20	0.052

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*57*	*35-100*
2-Fluorobiphenyl	*64*	*45-105*
o-Terphenyl	*85*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS245-0002**	Sampled:	04/17/13 15:00
Lab Sample ID:	**1304314-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Percent Solids:	83		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**9.4**	0.20	0.033	mg/kg dry wt.	2	USEPA-6020A	04/22/13 12:49	KLV	1303582
***Lead**	**620**	10	0.66	mg/kg dry wt.	100	USEPA-6020A	04/22/13 09:50	KLV	1303582

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS245-0002**	Sampled:	04/17/13 15:00
Lab Sample ID:	**1304314-02**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**83**	0.1	0.1	%	1	USEPA-3550C	04/19/13 19:15	BAR	1303589

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS246-0002**	Sampled:	04/17/13 15:10
Lab Sample ID:	**1304314-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Unit:	mg/kg dry	Prepared:	04/19/13 By: JTS
Dilution Factor:	10	Analyzed:	04/19/13 By: DWJ
QC Batch:	1303525	Analytical Batch:	3D22010
Percent Solids:	83		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.20U	0.20	0.056
208-96-8	Acenaphthylene	0.20U	0.20	0.050
120-12-7	Anthracene	0.20U	0.20	0.048
56-55-3	Benzo(a)anthracene	**0.13J**	0.20	0.033
*50-32-8	Benzo(a)pyrene	**0.095J**	0.20	0.028
*205-99-2	Benzo(b)fluoranthene	**0.14J**	0.20	0.023
*207-08-9	Benzo(k)fluoranthene	**0.079J**	0.20	0.024
191-24-2	Benzo(g,h,i)perylene	**0.046J**	0.20	0.023
218-01-9	Chrysene	**0.099J**	0.20	0.047
53-70-3	Dibenz(a,h)anthracene	0.20U	0.20	0.023
206-44-0	Fluoranthene	**0.18J**	0.20	0.054
86-73-7	Fluorene	0.20U	0.20	0.049
193-39-5	Indeno(1,2,3-cd)pyrene	**0.13J**	0.20	0.032
91-57-6	2-Methylnaphthalene	0.20U	0.20	0.055
91-20-3	Naphthalene	0.20U	0.20	0.068
85-01-8	Phenanthrene	**0.12J**	0.20	0.049
129-00-0	Pyrene	**0.15J**	0.20	0.052

Surrogates:	***% Recovery***	***Control Limits***
Nitrobenzene-d5	*65*	*35-100*
2-Fluorobiphenyl	*85*	*45-105*
o-Terphenyl	*105*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS246-0002**	Sampled:	04/17/13 15:10
Lab Sample ID:	**1304314-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Percent Solids:	83		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**5.6**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/22/13 12:23	KLV	1303582
***Lead**	**52**	1.0	0.066	mg/kg dry wt.	10	USEPA-6020A	04/22/13 09:58	KLV	1303582

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASS246-0002**	Sampled:	04/17/13 15:10
Lab Sample ID:	**1304314-03**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**83**	0.1	0.1	%	1	USEPA-3550C	04/19/13 19:15	BAR	1303589

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-01**	Sampled:	04/17/13 07:40
Lab Sample ID:	**1304314-04**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Percent Solids:	n/a		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**3.3**	0.092	0.015	mg/kg dry wt.	1	USEPA-6020A	04/22/13 12:36	KLV	1303582
Lead	**3.4**	0.092	0.0061	mg/kg dry wt.	1	USEPA-6020A	04/22/13 09:28	KLV	1303582

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304314**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-02**	Sampled:	04/17/13 15:20
Lab Sample ID:	**1304314-05**	Sampled By:	J.G.
Matrix:	Soil	Received:	04/18/13 17:30
Percent Solids:	n/a		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**3.6**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/22/13 12:38	KLV	1303582
Lead	**3.6**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/22/13 09:31	KLV	1303582

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304314-01	DASS244-0002	Fluoranthene
1304314-02	DASS245-0002	Benzo(a)anthracene
1304314-02	DASS245-0002	Benzo(b)fluoranthene
1304314-02	DASS245-0002	Fluoranthene
1304314-02	DASS245-0002	Indeno(1,2,3-cd)pyrene
1304314-02	DASS245-0002	Phenanthrene
1304314-02	DASS245-0002	Pyrene

Qualification: The RPD between the MS and MSD results exceeded the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304314-02	DASS245-0002	Benzo(a)anthracene
1304314-02	DASS245-0002	Benzo(b)fluoranthene
1304314-02	DASS245-0002	Benzo(g,h,i)perylene
1304314-02	DASS245-0002	Fluoranthene
1304314-02	DASS245-0002	Indeno(1,2,3-cd)pyrene
1304314-02	DASS245-0002	Phenanthrene
1304314-02	DASS245-0002	Pyrene

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1304314-02	DASS245-0002	Anthracene
1304314-02	DASS245-0002	Benzo(a)pyrene
1304314-03	DASS246-0002	Benzo(a)pyrene
1304314-03	DASS246-0002	Benzo(b)fluoranthene

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1303525-BS1		Naphthalene
1303525-MS1		Benzo(b)fluoranthene
1303525-MS1		Indeno(1,2,3-cd)pyrene
1303525-MS2		Naphthalene
1303525-MS2		Nitrobenzene-d5
1303525-MSD1		Benzo(b)fluoranthene
1303525-MSD2		Benzo(b)fluoranthene
1303525-MSD2		Dibenz(a,h)anthracene
1303525-MSD2		Indeno(1,2,3-cd)pyrene
1303525-MSD2		Nitrobenzene-d5
1304314-01	DASS244-0002	Benzo(a)pyrene
1304314-01	DASS244-0002	Benzo(b)fluoranthene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1304314-01	DASS244-0002	Benzo(g,h,i)perylene
1304314-01	DASS244-0002	Benzo(k)fluoranthene
1304314-02	DASS245-0002	Benzo(b)fluoranthene
1304314-02	DASS245-0002	Benzo(k)fluoranthene
1304314-02	DASS245-0002	Indeno(1,2,3-cd)pyrene
1304314-02	DASS245-0002	Naphthalene
1304314-03	DASS246-0002	Benzo(b)fluoranthene
1304314-03	DASS246-0002	Benzo(k)fluoranthene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample:	
1303525-MS1	
1303525-MS2	
1303525-MS3	
1303525-MSD1	
1303525-MSD2	
1303525-MSD3	
1304314-01	DASS244-0002
1304314-02	DASS245-0002
1304314-03	DASS246-0002

Qualification: Surrogate results are unavailable due to sample matrix interference(s), resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample:	
1303525-MS1	
1304314-01	DASS244-0002

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STATEMENT OF DATA QUALIFICATIONS

Total Metals by EPA 6000/7000 Series Methods

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte:		
1304314-01	DASS244-0002	Arsenic

Qualification: Matrix QC results are not available due to sample dilution.

Analysis: USEPA-6020A

Sample/Analyte:		
1304314-01	DASS244-0002	Lead
1304314-02	DASS245-0002	Lead
1304314-03	DASS246-0002	Lead

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1304314 (15-14) CART 9

TETRA TECH NUS, INC.

CHAIN OF CUSTODY | NUMBER № 2288 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412-921-7231	TriMatrix/Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412-443-0244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		TriMatrix Pickup		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: 4°C 4°C

TYPE OF ANALYSIS: P'D, AS, PAHS; P'D, AS

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS									COMMENTS
1201 4/17	1445	DASS244-0002	244	0	2	SO	G	2	2	-					-		MS/MSD
02	1500	DASS245-0002	245	0	2			2	2	-							MS/MSD
03	1510	DASS246-0002	246	0	2			2	2	-							MS/MSD
1304	740	DASB-CF-01	-	-	-			1	-	1							
05	1520	DASB-CF-02	-	-	-			1	-	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/18/13	1326	1. RECEIVED BY	4/18/13	1326
2. RELINQUISHED BY	4/18/13	1415	2. RECEIVED BY	4-18-13	1415
3. RELINQUISHED BY	4-18-13	1730	3. RECEIVED BY J. Nardin	4-18-13	1730

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Receipt Record Page/Line #: 15-14
Work Order #: 1304314
New / Add To
Project Chemist
Sample #s

Recorded by (initials/date): JN 4-18-13

☑ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)
☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM1090	1930	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0		4.9
TB location: Representative / Not Representative			
1	5.3	0	5.3
2	4.7	0	4.7
3	5.9	0	5.9
Average °C			5.3
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2288

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☑	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-18-13	4-18-13	Yes / No

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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April 25, 2013

TETRA TECH NUS - Pittsburgh
Attn: Mr. Joe Logan
661 Anderson Drive, Foster Plaza 7
Pittsburgh, PA 15220

Project: USCG Atwater Facility

Dear Mr. Joe Logan,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1304363	04/23/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304363**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-03**	Sampled:	04/19/13 09:45
Lab Sample ID:	**1304363-01**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/23/13 18:45
Percent Solids:	n/a		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**3.3**	0.10	0.016	mg/kg dry wt.	1	USEPA-6020A	04/25/13 13:21	DSC	1303713
Lead	**3.3**	0.10	0.0066	mg/kg dry wt.	1	USEPA-6020A	04/25/13 13:21	DSC	1303713

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304363**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-04**	Sampled:	04/23/13 11:10
Lab Sample ID:	**1304363-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/23/13 18:45
Unit:	mg/kg dry	Prepared:	04/24/13 By: JTS
Dilution Factor:	4	Analyzed:	04/24/13 By: ASC
QC Batch:	1303708	Analytical Batch:	3D25003
Percent Solids:	84		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	RL	MDL
83-32-9	Acenaphthene	0.080U	0.080	0.022
208-96-8	Acenaphthylene	0.080U	0.080	0.020
120-12-7	Anthracene	0.080U	0.080	0.019
56-55-3	Benzo(a)anthracene	**0.067J**	0.080	0.013
50-32-8	Benzo(a)pyrene	**0.070J**	0.080	0.011
*205-99-2	Benzo(b)fluoranthene	**0.099**	0.080	0.0091
*207-08-9	Benzo(k)fluoranthene	**0.052J**	0.080	0.0093
191-24-2	Benzo(g,h,i)perylene	**0.028J**	0.080	0.0090
218-01-9	Chrysene	**0.070J**	0.080	0.019
53-70-3	Dibenz(a,h)anthracene	0.080U	0.080	0.0091
206-44-0	Fluoranthene	**0.13**	0.080	0.021
86-73-7	Fluorene	0.080U	0.080	0.019
193-39-5	Indeno(1,2,3-cd)pyrene	**0.020J**	0.080	0.013
91-57-6	2-Methylnaphthalene	0.080U	0.080	0.022
91-20-3	Naphthalene	0.080U	0.080	0.027
85-01-8	Phenanthrene	**0.060J**	0.080	0.020
129-00-0	Pyrene	**0.13**	0.080	0.021

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*83*	*35-105*
Phenol-d6	*85*	*40-100*
Nitrobenzene-d5	*85*	*35-100*
2-Fluorobiphenyl	*84*	*45-105*
2,4,6-Tribromophenol	*72*	*35-125*
o-Terphenyl	*82*	*30-125*

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304363**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-04**	Sampled:	04/23/13 11:10
Lab Sample ID:	**1304363-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/23/13 18:45
Percent Solids:	84		

Total Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Arsenic	**3.2**	0.094	0.015	mg/kg dry wt.	1	USEPA-6020A	04/25/13 13:36	DSC	1303713
Lead	**12**	0.47	0.031	mg/kg dry wt.	5	USEPA-6020A	04/25/13 13:53	DSC	1303713

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ANALYTICAL REPORT

Client:	**TETRA TECH NUS - Pittsburgh**	Work Order:	**1304363**
Project:	USCG Atwater Facility	Description:	Laboratory Services
Client Sample ID:	**DASB-CF-04**	Sampled:	04/23/13 11:10
Lab Sample ID:	**1304363-02**	Sampled By:	Tetra Tech NUS
Matrix:	Soil	Received:	04/23/13 18:45

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	RL	MDL	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Percent Solids	**84**	0.1	0.1	%	1	USEPA-3550C	04/25/13 09:12	LMA	1303738

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
1303708-BS1		Naphthalene
1304363-02	DASB-CF-04	Benzo(b)fluoranthene
1304363-02	DASB-CF-04	Benzo(k)fluoranthene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample: 1304363-02 DASB-CF-04

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R-1304363 Chart 4

TETRA TECH NUS, INC. (24-21) CHAIN OF CUSTODY | NUMBER № 2289 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412921 7231	TriMatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goebel	412 443 0244	5560 Corp Exchange Ct.
		CARRIER/WAYBILL NUMBER		CITY, STATE
		TriMatrix Courier		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (#17)	TYPE OF ANALYSIS: Pb, As (CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: 4°C)	TYPE OF ANALYSIS: Pb, As, PAHs (CONTAINER TYPE PLASTIC (P) or GLASS (G): G; PRESERVATIVE USED: 4°C)							COMMENTS
4/19	945	DASB-CF-03	-	-	-	SO	G	1	1							-01	sand
4/23	1110	DASB-CF-04	-	-	-	SO	G	1		1						-02	top soil

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4-23-13	1210	1. RECEIVED BY	4/23/13	1210
2. RELINQUISHED BY	4/23/13	1425	2. RECEIVED BY	4-23-13	1425
3. RELINQUISHED BY	4-23-13	1845	3. RECEIVED BY D.D. Hardin	4-23-13	1845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R

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Individual sample results relate only to the sample tested.

5560 Corporate Exchange Court SE ◆ Grand Rapids, MI 49512 ◆ 616.975.4500 ◆ Fax 616.942.7463 ◆ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Receipt Record Page/Line #: 24-21
Work Order #: 1304363
New / Add To
Project Chemist: GLW
Sample #s

Recorded by (initials/date): DN 4-23-13

☐ Cooler ☐ Box ☐ Other
Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____)

☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM2002	2133	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0		4.6
TB location: Representative / Not Representative			
1	4.6	0	4.6
2	4.7	0	4.7
3			
Average °C			4.7

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 5289

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☑	☐	☐	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
DN 4-23-13	4-23-13	Yes / No

Log In Forms - Receiving.Log-In_Checklist

revision: 3.4

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Individual sample results relate only to the sample tested.

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BACKFILL AND SOIL CERTIFICATIONS

TRI-CITY AGGREGATES, INC.
A SUBSIDIARY OF GENOAK MATERIALS, INC.
P.O. Box 182
Holly, MI 48442
Phone (248) 634-8276 (Holly) or (810) 694-2840 (Flint)
Fax (248) 634-3301

April 09, 2013

TKMS
1780 E HIGHWOOD
PONTIAC MI 48340
RE: Class IIA Sand

To Whom It May Concern,

The Class IIA Sand that TKMS will be hauling from Tri-City Aggregates Inc.

will be loaded from:

Tri-City Aggregates Inc.
Pit# 2
14300 Shields Rd
Holly MI 48442
MDOT Pit# 63-094

All materials shipped from this location are from virgin ground and show no

evidence of contamination.

Thank You,

Scott A. McKay
General Manager

TRP Sand and Gravel

6267 St. Clair Highway, China Township Michigan 48054
Ph. 810.329.4027 Fax. 810.329.6359.

April 22, 2013

To Who To May Concern:

The **topsoil** that HM Environmental, 42826 North Walnut Street, Mt. Clemens, Michigan 48043 is delivering to you came from a borrow area that is clean from any contaminates.

Sincerely,

Dawn Pleprzak

Dawn Pleprzak
TRP Sand and Gravel

Appendix E

Laboratory Validation Reports

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **J. LOGAN** **DATE:** **MAY 17, 2013**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- PAH**
USCG ATWATER FACILITY
FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) - 1304171

SAMPLES: 31/Soil/PAH

DASB-FD-01	DASB-FD-02	DASB-FD-03	DASB224-0507
DASB225-0507	DASB226-0507	DASB227-0507	DASB238-0305
DASB239-0305	DASB240-0305	DASB241-0305	DASB242-0305
DASB243-0305	DASS201-0002	DASS202-0002	DASS203-0002
DASS204-0002	DASS205-0002	DASS206-0002	DASS207-0002
DASS213-0002	DASS214-0002	DASS215-0002	DASS216-0002
DASS217-0002	DASS218-0002	DASS219-0002	DASS220-0002
DASS221-0002	DASS222-0002	DASS223-0002	

OVERVIEW

The sample set for USCG ATWATER FACILITY, SDG 1304171 consists of thirty-one (31) soil environmental samples. All samples were analyzed for polycyclic aromatic hydrocarbons (PAH). There are three field duplicates contained within this SDG: DASB241-03-5/DASB-FD-01, DASS222-0002/DASBFD-02 andDASS203-0002/DASB-FD-03.

The samples were collected on April 9, 10 and 11, 2013 and analyzed by TriMatrix Laboratories. All analyses were conducted in accordance with USEPA SW 846 Method 8270C for PAHs analytical and reporting protocol.

These data were evaluated based on the following parameters:

* • Data Completeness
• Holding Times and Preservation
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Surrogate Recoveries
* • Laboratory Control Sample Results
• Matrix Spike / Matrix Spike Duplicate Results
* • Internal Standard Results
• Field Duplicate Precision
* • Detection Limits
* • Analyte Quantitation

* - All quality control criteria were met for this parameter.

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in

Appendix B.

PAH

Nineteen samples in coolers numbers 1111596 and 1111222 arrived at the laboratory at 7.6°C and 6.2 °C, respectively. Positive and nondetected results were qualified as estimated (J) and (UJ), respectively.

The matrix spike (MS) percent recovery (%R) of benzo(b)fluoranthene, phenanthrene and pyrene were greater than the upper quality control limit in sample DASB238-0305. The matrix spike duplicate (MSD) and relative percent difference (RPDs) were within quality control limits. The positive benzo(b)fluoranthene, phenanthrene and pyrene results in sample DASB238-0305 were qualified as estimated (J).

The MS/MSD %Rs of benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and pyrene were greater than the upper quality control limit in sample DASS222-0002. In addition, the MS %Rs of benzo(a)anthracene and fluoranthene were greater than the upper quality control limit. The positive benzo(a)pyrene, benzo(b)fluoranthene, chrysene, pyrene, benzo(a)anthracene and fluoranthene were qualified as estimated (J) in sample DASS222-0002.

The MS/MSD %Rs of phenanthrene and pyrene were greater than the upper quality control limit in sample DASB227-0507. In addition, the MS %Rs of anthracene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene and fluoranthene were greater than the upper quality control limit. The positive anthracene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, fluoranthene, phenanthrene and pyrene results were qualified as estimated (J).

Field duplicate imprecision was noted in the field duplicate pair DASB241-0305 and DASB-FD-01 for several PAHs. The RPDs were greater than the 50% quality control limit for acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno (1,2,3-cde)pyrene, phenanthrene and pyrene. The positive results of the aforementioned analytes were qualified as estimated (J) in the field duplicate pair DASB241-0305 and DASB-FD-01.

Field duplicate imprecision was noted in the field duplicate pair DASS222-0002 and DASB-FD-02 for several PAHs. The RPDs were greater than the 50% quality control limit for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. In addition, the variance was greater than 2X the reporting limit for anthracene. The positive results of the aforementioned analytes were qualified as estimated (J) in the field duplicate pair DASS222-0002 and DASB-FD-02.

Field duplicate imprecision was noted in the field duplicate pair DASS203-0002 and DASB-FD-03 for several PAHs. The RPDs were greater than the 50% quality control limit for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene and pyrene. In addition, the variance was greater than 2X the reporting limit for anthracene, benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene. The positive results of the aforementioned analytes were qualified as estimated (J) in the field duplicate pair DASS203-0002 and DASB-FD-03.

TO: J. Logan
FROM: A. Cognetti
DATE: May 17, 2013
SDG: 1304171
PAGE: 3

Additional Comments:

Several samples were diluted for analysis resulting in elevated reporting limits.

Sample	Dilution Factor
DASB-FD-03	5X
DASB226-0507	5X
DASS201-0002	5X
DASS202-0002	5X
DASS203-0002	5X
DASS204-0002	5X
DASS205-0002	5X
DASS206-0002	5X
DASB-FD-02	10X
DASB240-0305	10X
DASB241-0305	10X
DASS213-0002	10X
DASS214-0002	10X
DASS215-0002	10X
DASS216-0002	10X
DASS218-0002	10X
DASS222-0002	10X
DASS223-0002	10X
DASB243-0305	20X
DASS219-0002	20X
DASS217-0002	50X

Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

Nondetected results were reported to the reporting limit.

EXECUTIVE SUMMARY

Laboratory Performance: None.

Other factors affecting data quality: Sample temperature noncompliance was noted affecting nineteen samples. Matrix spike/matrix spike duplicate percent recoveries did not meet quality control limits for samples DASB238-0305, DASS222-0002 and DASB227-0507 resulting in the qualification of data. Field duplicate imprecision was noted in all the field duplicate pairs.

TO: J. Logan
FROM: A. Cognetti
DATE: May 17, 2013
SDG: 1304171
PAGE: 4

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02435	NSAMPLE	DASB224-0507			DASB225-0507			DASB226-0507			DASB227-0507		
SDG: 1304171	LAB_ID	1304185-08			1304185-09			1304185-10			1304185-11		
FRACTION: PAH	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.0			79.0			76.0			84.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.02	U		0.021	U		0.11	U		0.013	J	P
ACENAPHTHENE		0.015	J	P	0.19			0.15			0.034		
ACENAPHTHYLENE		0.02	U		0.0061	J	P	0.11	U		0.012	J	P
ANTHRACENE		0.014	J	P	0.037			0.32			0.064	J	D
BENZO(A)ANTHRACENE		0.041			0.067			0.41			0.21	J	D
BENZO(A)PYRENE		0.033			0.066			0.3			0.18		
BENZO(B)FLUORANTHENE		0.039			0.071			0.34			0.22	J	D
BENZO(G,H,I)PERYLENE		0.02			0.034			0.16			0.084		
BENZO(K)FLUORANTHENE		0.019	J	P	0.037			0.17			0.12		
CHRYSENE		0.039			0.063			0.35			0.19	J	D
DIBENZO(A,H)ANTHRACENE		0.0037	J	P	0.007	J	P	0.038	J	P	0.019	J	P
FLUORANTHENE		0.067			0.13			0.98			0.33	J	D
FLUORENE		0.0069	J	P	0.068			0.11	J	P	0.051		
INDENO(1,2,3-CD)PYRENE		0.013	J	P	0.032			0.14			0.082		
NAPHTHALENE		0.02	U		0.018	J	P	0.04	J	P	0.016	J	P
PHENANTHRENE		0.058			0.09			0.5			0.23	J	D
PYRENE		0.081			0.15			0.97			0.4	J	D

PROJ_NO: 02435	NSAMPLE	DASB238-0305			DASB239-0305			DASB240-0305			DASB241-0305		
SDG: 1304171	LAB_ID	1304171-01			1304171-02			1304171-03			1304171-04		
FRACTION: PAH	SAMP_DATE	4/9/2013			4/9/2013			4/9/2013			4/9/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.0			82.0			82.0			81.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.02	UR	M	0.02	UR	M	0.2	UR	M	0.21	UR	M
ACENAPHTHENE		0.011	J	MP	0.07	J	M	0.13	J	MP	0.23	J	GM
ACENAPHTHYLENE		0.007	J	MP	0.02	UR	M	0.083	J	MP	0.21	UR	M
ANTHRACENE		0.015	J	MP	0.02	UR	M	0.53	J	M	0.57	J	GM
BENZO(A)ANTHRACENE		0.11	J	M	0.0062	J	MP	1.6	J	M	1.3	J	GM
BENZO(A)PYRENE		0.13	J	M	0.0066	J	MP	1.4	J	M	1.1	J	GM
BENZO(B)FLUORANTHENE		0.12	J	DM	0.0046	J	MP	1.5	J	M	1.2	J	GM
BENZO(G,H,I)PERYLENE		0.088	J	M	0.0029	J	MP	0.65	J	M	0.57	J	GM
BENZO(K)FLUORANTHENE		0.083	J	M	0.0046	J	MP	0.76	J	M	0.64	J	GM
CHRYSENE		0.1	J	M	0.0066	J	MP	1.6	J	M	1.3	J	GM
DIBENZO(A,H)ANTHRACENE		0.02	J	M	0.02	UR	M	0.15	J	MP	0.11	J	GMP
FLUORANTHENE		0.13	J	M	0.01	J	MP	2.9	J	M	2.3	J	GM
FLUORENE		0.0065	J	MP	0.02	UR	M	0.15	J	MP	0.26	J	GM
INDENO(1,2,3-CD)PYRENE		0.076	J	M	0.0033	J	MP	0.61	J	M	0.55	J	GM
NAPHTHALENE		0.02	UR	M	0.02	UR	M	0.2	UR	M	0.21	UR	M
PHENANTHRENE		0.066	J	DM	0.0091	J	MP	1.6	J	M	2.1	J	GM
PYRENE		0.19	J	DM	0.012	J	MP	2.9	J	M	3	J	GM

PROJ_NO: 02435	NSAMPLE	DASB242-0305			DASB243-0305			DASB-FD-01			DASB-FD-02		
SDG: 1304171	LAB_ID	1304171-05			1304171-06			1304171-07			1304171-19		
FRACTION: PAH	SAMP_DATE	4/9/2013			4/9/2013			4/9/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.0			81.0			81.0			84.0		
	DUP_OF							DASB241-0305			DASS222-0002		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.51	J	M	0.41	UR	M	0.02	J	MP	0.2	UR	M
ACENAPHTHENE		0.018	J	MP	0.85	J	M	0.065	J	GM	0.21	J	M
ACENAPHTHYLENE		0.02	UR	M	0.41	UR	M	0.023	J	M	0.058	J	MP
ANTHRACENE		0.031	J	M	2.4	J	M	0.16	J	GM	0.53	J	GM
BENZO(A)ANTHRACENE		0.033	J	M	4.5	J	M	0.56	J	GM	1.4	J	GM
BENZO(A)PYRENE		0.013	J	MP	4.2	J	M	0.34	J	GM	1.4	J	GM
BENZO(B)FLUORANTHENE		0.023	J	M	4	J	M	0.47	J	GM	1.6	J	GM
BENZO(G,H,I)PERYLENE		0.011	J	MP	2.6	J	M	0.2	J	GM	0.86	J	GM
BENZO(K)FLUORANTHENE		0.016	J	MP	2.2	J	M	0.23	J	GM	0.92	J	GM
CHRYSENE		0.033	J	M	4.5	J	M	0.39	J	GM	1.2	J	GM
DIBENZO(A,H)ANTHRACENE		0.0028	J	MP	0.42	J	M	0.044	J	GM	0.19	J	MP
FLUORANTHENE		0.098	J	M	8.7	J	M	0.74	J	GM	2.3	J	GM
FLUORENE		0.027	J	M	0.68	J	M	0.086	J	GM	0.19	J	MP
INDENO(1,2,3-CD)PYRENE		0.0073	J	MP	2	J	M	0.17	J	GM	0.76	J	GM
NAPHTHALENE		0.75	J	M	0.41	UR	M	0.017	J	MP	0.2	UR	M
PHENANTHRENE		0.1	J	M	6.9	J	M	0.68	J	GM	1.7	J	GM
PYRENE		0.1	J	M	11	J	M	0.85	J	GM	2.6	J	GM

PROJ_NO: 02435	NSAMPLE	DASB-FD-03			DASS201-0002			DASS202-0002			DASS203-0002		
SDG: 1304171	LAB_ID	1304185-12			1304185-01			1304185-02			1304185-03		
FRACTION: PAH	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.0			81.0			79.0			83.0		
	DUP_OF	DASS203-0002											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.1	U		0.1	U		0.037	J	P	0.1	U	
ACENAPHTHENE		0.064	J	P	0.1	U		0.26			0.1	U	
ACENAPHTHYLENE		0.046	J	P	0.1	U		0.11	U		0.1	U	
ANTHRACENE		0.47	J	G	0.055	J	P	0.68			0.093	J	GP
BENZO(A)ANTHRACENE		0.92	J	G	0.27			0.82			0.22	J	G
BENZO(A)PYRENE		0.63	J	G	0.23			0.64			0.2	J	G
BENZO(B)FLUORANTHENE		0.81	J	G	0.28			0.76			0.23	J	G
BENZO(G,H,I)PERYLENE		0.3	J	G	0.11			0.27			0.097	J	GP
BENZO(K)FLUORANTHENE		0.4	J	G	0.18			0.46			0.14	J	G
CHRYSENE		0.79	J	G	0.26			0.91			0.24	J	G
DIBENZO(A,H)ANTHRACENE		0.12			0.026	J	P	0.11			0.022	J	P
FLUORANTHENE		1.7	J	G	0.42			1.6			0.41	J	G
FLUORENE		0.12			0.028	J	P	0.37			0.1	U	
INDENO(1,2,3-CD)PYRENE		0.29	J	G	0.095	J	P	0.26			0.081	J	GP
NAPHTHALENE		0.1	U		0.1	U		0.052	J	P	0.1	U	
PHENANTHRENE		1.5	J	G	0.28			1.9			0.21	J	G
PYRENE		1.9	J	G	0.49			1.6			0.44	J	G

PROJ_NO: 02435	NSAMPLE	DASS204-0002			DASS205-0002			DASS206-0002			DASS207-0002		
SDG: 1304171	LAB_ID	1304185-04			1304185-05			1304185-06			1304185-07		
FRACTION: PAH	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	79.0			82.0			78.0			85.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.11	U		0.081	J	P	0.11	U		0.0067	J	P
ACENAPHTHENE		0.11	U		0.23			0.035	J	P	0.016	J	P
ACENAPHTHYLENE		0.11	U		0.1	U		0.11	U		0.014	J	P
ANTHRACENE		0.078	J	P	0.51			0.18			0.057		
BENZO(A)ANTHRACENE		0.18			0.89			0.29			0.26		
BENZO(A)PYRENE		0.18			0.74			0.26			0.2		
BENZO(B)FLUORANTHENE		0.23			0.95			0.35			0.23		
BENZO(G,H,I)PERYLENE		0.11	J	P	0.35			0.13			0.093		
BENZO(K)FLUORANTHENE		0.11			0.5			0.21			0.12		
CHRYSENE		0.22			0.84			0.35			0.22		
DIBENZO(A,H)ANTHRACENE		0.021	J	P	0.084	J	P	0.055	J	P	0.025		
FLUORANTHENE		0.31			1.5			0.49			0.31		
FLUORENE		0.11	U		0.19			0.057	J	P	0.02		
INDENO(1,2,3-CD)PYRENE		0.088	J	P	0.32			0.1	J	P	0.089		
NAPHTHALENE		0.11	U		0.42			0.11	U		0.02	U	
PHENANTHRENE		0.17			1.5			0.41			0.2		
PYRENE		0.36			1.8			0.57			0.41		

PROJ_NO: 02435	NSAMPLE	DASS213-0002			DASS214-0002			DASS215-0002			DASS216-0002		
SDG: 1304171	LAB_ID	1304171-08			1304171-09			1304171-10			1304171-11		
FRACTION: PAH	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			79.0			90.0			81.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.19	UR	M	0.21	UR	M	0.19	UR	M	0.21	UR	M
ACENAPHTHENE		0.14	J	MP	0.21	UR	M	0.19	UR	M	0.21	UR	M
ACENAPHTHYLENE		0.069	J	MP	0.21	UR	M	0.19	UR	M	0.21	UR	M
ANTHRACENE		0.44	J	M	0.091	J	MP	0.17	J	MP	0.21	UR	M
BENZO(A)ANTHRACENE		1.1	J	M	0.31	J	M	0.24	J	M	0.18	J	MP
BENZO(A)PYRENE		1.2	J	M	0.38	J	M	0.25	J	M	0.2	J	MP
BENZO(B)FLUORANTHENE		1.3	J	M	0.58	J	M	0.26	J	M	0.17	J	MP
BENZO(G,H,I)PERYLENE		0.69	J	M	0.32	J	M	0.1	J	MP	0.12	J	MP
BENZO(K)FLUORANTHENE		0.9	J	M	0.4	J	M	0.21	J	M	0.15	J	MP
CHRYSENE		1.2	J	M	0.46	J	M	0.3	J	M	0.2	J	MP
DIBENZO(A,H)ANTHRACENE		0.25	J	M	0.1	J	MP	0.19	UR	M	0.21	UR	M
FLUORANTHENE		2.5	J	M	0.47	J	M	0.36	J	M	0.27	J	M
FLUORENE		0.12	J	MP	0.21	UR	M	0.19	UR	M	0.21	UR	M
INDENO(1,2,3-CD)PYRENE		0.61	J	M	0.25	J	M	0.19	UR	M	0.091	J	MP
NAPHTHALENE		0.085	J	MP	0.21	UR	M	0.19	UR	M	0.21	UR	M
PHENANTHRENE		1.9	J	M	0.26	J	M	0.24	J	M	0.11	J	MP
PYRENE		2.4	J	M	0.73	J	M	0.53	J	M	0.35	J	M

PROJ_NO: 02435	NSAMPLE	DASS217-0002			DASS218-0002			DASS219-0002			DASS220-0002		
SDG: 1304171	LAB_ID	1304171-12			1304171-13			1304171-14			1304171-15		
FRACTION: PAH	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			85.0			79.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.96	UR	M	0.2	UR	M	0.42	UR	M	0.0068	J	MP
ACENAPHTHENE		0.96	UR	M	0.27	J	M	0.92	J	M	0.061	J	M
ACENAPHTHYLENE		0.96	UR	M	0.2	UR	M	0.42	UR	M	0.0068	J	MP
ANTHRACENE		0.48	J	MP	0.92	J	M	3.5	J	M	0.25	J	M
BENZO(A)ANTHRACENE		2	J	M	2	J	M	7	J	M	0.38	J	M
BENZO(A)PYRENE		2.1	J	M	1.8	J	M	5.6	J	M	0.27	J	M
BENZO(B)FLUORANTHENE		2.2	J	M	2.1	J	M	6.1	J	M	0.27	J	M
BENZO(G,H,I)PERYLENE		1.4	J	M	1.1	J	M	2.9	J	M	0.13	J	M
BENZO(K)FLUORANTHENE		1.2	J	M	1.1	J	M	4.7	J	M	0.16	J	M
CHRYSENE		2.1	J	M	2.1	J	M	6	J	M	0.29	J	M
DIBENZO(A,H)ANTHRACENE		0.28	J	MP	0.22	J	M	0.64	J	M	0.031	J	M
FLUORANTHENE		3.7	J	M	3.9	J	M	13	J	M	0.61	J	M
FLUORENE		0.96	UR	M	0.25	J	M	1.4	J	M	0.091	J	M
INDENO(1,2,3-CD)PYRENE		1	J	M	0.9	J	M	2.7	J	M	0.12	J	M
NAPHTHALENE		0.96	UR	M	0.2	UR	M	0.42	UR	M	0.019	UR	M
PHENANTHRENE		1.8	J	M	3	J	M	8.9	J	M	0.65	J	M
PYRENE		4.9	J	M	5	J	M	14	J	M	0.71	J	M

PROJ_NO: 02435	NSAMPLE	DASS221-0002			DASS222-0002			DASS223-0002		
SDG: 1304171	LAB_ID	1304171-16			1304171-17			1304171-18		
FRACTION: PAH	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	88.0			84.0			85.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.019	UR	M	0.2	UR	M	0.2	UR	M
ACENAPHTHENE		0.013	J	MP	0.2	UR	M	0.2	UR	M
ACENAPHTHYLENE		0.0054	J	MP	0.2	UR	M	0.2	UR	M
ANTHRACENE		0.036	J	M	0.12	J	GMP	0.22	J	M
BENZO(A)ANTHRACENE		0.11	J	M	0.6	J	DGM	1.4	J	M
BENZO(A)PYRENE		0.1	J	M	0.72	J	DGM	1.3	J	M
BENZO(B)FLUORANTHENE		0.11	J	M	0.78	J	DGM	1.6	J	M
BENZO(G,H,I)PERYLENE		0.066	J	M	0.44	J	GM	0.7	J	M
BENZO(K)FLUORANTHENE		0.084	J	M	0.45	J	GM	0.79	J	M
CHRYSENE		0.11	J	M	0.62	J	DGM	1.5	J	M
DIBENZO(A,H)ANTHRACENE		0.017	J	MP	0.097	J	MP	0.16	J	MP
FLUORANTHENE		0.19	J	M	0.89	J	DGM	2.4	J	M
FLUORENE		0.013	J	MP	0.2	UR	M	0.2	UR	M
INDENO(1,2,3-CD)PYRENE		0.051	J	M	0.37	J	GM	0.63	J	M
NAPHTHALENE		0.019	UR	M	0.2	UR	M	0.2	UR	M
PHENANTHRENE		0.13	J	M	0.37	J	GM	0.21	J	M
PYRENE		0.22	J	M	1.1	J	DGM	2.4	J	M

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB-FD-01

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-07 File ID: 1304171-07.D

Sampled: 04/09/13 00:00 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 02:36

Solids: 80.92 Preparation: 3550C Sonication Extract Initial/Final: 29.6 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.065	0.0057	0.021	0.021	
208-96-8	Acenaphthylene	1	0.023	0.0052	0.021	0.021	
120-12-7	Anthracene	1	0.16	0.0050	0.021	0.021	
56-55-3	Benzo(a)anthracene	1	0.56	0.0034	0.010	0.021	
50-32-8	Benzo(a)pyrene	1	0.34	0.0028	0.010	0.021	
205-99-2	Benzo(b)fluoranthene	1	0.47	0.0024	0.010	0.021	
207-08-9	Benzo(k)fluoranthene	1	0.23	0.0024	0.010	0.021	
191-24-2	Benzo(g,h,i)perylene	1	0.20	0.0023	0.010	0.021	
218-01-9	Chrysene	1	0.39	0.0048	0.021	0.021	
53-70-3	Dibenz(a,h)anthracene	1	0.044	0.0024	0.010	0.021	
206-44-0	Fluoranthene	1	0.74	0.0055	0.021	0.021	
86-73-7	Fluorene	1	0.086	0.0050	0.021	0.021	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.17	0.0033	0.0041	0.021	
91-57-6	2-Methylnaphthalene	1	0.020	0.0056	0.021	0.021	J
91-20-3	Naphthalene	1	0.017	0.0069	0.021	0.021	J
85-01-8	Phenanthrene	1	0.68	0.0050	0.021	0.021	
129-00-0	Pyrene	1	0.85	0.0053	0.021	0.021	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.417	0.291	70	35 - 100	
2-Fluorobiphenyl	0.417	0.288	69	45 - 105	
o-Terphenyl	0.422	0.276	65	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	127349	7.832	97874	7.546	
Naphthalene-d8	539557	10.543	407297	10.262	
Acenaphthene-d10	232066	14.652	189519	14.365	
Phenanthrene-d10	330374	18.062	317445	17.798	
Chrysene-d12	253487	21.664	314770	21.453	
Perylene-d12	209779	23.418	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB-FD-02

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-19 File ID: 1304171-19 x10.D

Sampled: 04/10/13 00:00 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 02:00

Solids: 84.14 Preparation: 3550C Sonication Extract Initial/Final: 30.6 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.21	0.055	0.20	0.20	
208-96-8	Acenaphthylene	10	0.058	0.050	0.20	0.20	J
120-12-7	Anthracene	10	0.53	0.048	0.20	0.20	
56-55-3	Benzo(a)anthracene	10	1.4	0.033	0.099	0.20	
50-32-8	Benzo(a)pyrene	10	1.4	0.027	0.099	0.20	
205-99-2	Benzo(b)fluoranthene	10	1.6	0.023	0.099	0.20	
207-08-9	Benzo(k)fluoranthene	10	0.92	0.023	0.099	0.20	
191-24-2	Benzo(g,h,i)perylene	10	0.86	0.022	0.099	0.20	
218-01-9	Chrysene	10	1.2	0.046	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.19	0.023	0.099	0.20	J
206-44-0	Fluoranthene	10	2.3	0.053	0.20	0.20	
86-73-7	Fluorene	10	0.19	0.048	0.20	0.20	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.76	0.032	0.040	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.054	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.067	0.20	0.20	U
85-01-8	Phenanthrene	10	1.7	0.048	0.20	0.20	
129-00-0	Pyrene	10	2.6	0.051	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.388	0.268	69	35 - 100	D
2-Fluorobiphenyl	0.388	0.295	76	45 - 105	D
o-Terphenyl	0.392	0.342	87	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	103857	7.827	97874	7.546	
Naphthalene-d8	488809	10.554	407297	10.262	
Acenaphthene-d10	194856	14.652	189519	14.365	
Phenanthrene-d10	359518	18.05	317445	17.798	
Chrysene-d12	286804	21.64	314770	21.453	
Perylene-d12	209760	23.389	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB-FD-03

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-12 File ID: 1304185-12 x5.D

Sampled: 04/11/13 00:00 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 23:27

Solids: 83.12 Preparation: 3550C Sonication Extract Initial/Final: 29.9 g / 1 mL

QC Batch: 1303302 Sequence: 3D15022 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.064	0.028	0.10	0.10	J
208-96-8	Acenaphthylene	5	0.046	0.025	0.10	0.10	J
120-12-7	Anthracene	5	0.47	0.024	0.10	0.10	
56-55-3	Benzo(a)anthracene	5	0.92	0.017	0.050	0.10	
50-32-8	Benzo(a)pyrene	5	0.63	0.014	0.050	0.10	
205-99-2	Benzo(b)fluoranthene	5	0.81	0.011	0.050	0.10	
207-08-9	Benzo(k)fluoranthene	5	0.40	0.012	0.050	0.10	
191-24-2	Benzo(g,h,i)perylene	5	0.30	0.011	0.050	0.10	
218-01-9	Chrysene	5	0.79	0.023	0.10	0.10	
53-70-3	Dibenz(a,h)anthracene	5	0.12	0.011	0.050	0.10	
206-44-0	Fluoranthene	5	1.7	0.027	0.10	0.10	
86-73-7	Fluorene	5	0.12	0.024	0.10	0.10	
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.29	0.016	0.020	0.10	
91-57-6	2-Methylnaphthalene	5	0.10	0.027	0.10	0.10	U
91-20-3	Naphthalene	5	0.10	0.034	0.10	0.10	U
85-01-8	Phenanthrene	5	1.5	0.025	0.10	0.10	
129-00-0	Pyrene	5	1.9	0.026	0.10	0.10	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.402	0.276	68	35 - 100	D
2-Fluorobiphenyl	0.402	0.302	75	45 - 105	D
o-Terphenyl	0.406	0.298	73	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	117833	7.78	97874	7.546	
Naphthalene-d8	521385	10.502	407297	10.262	
Acenaphthene-d10	217101	14.594	189519	14.365	
Phenanthrene-d10	378290	18.003	317445	17.798	
Chrysene-d12	276675	21.605	314770	21.453	
Perylene-d12	190098	23.336	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB224-0507

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Laboratory ID: 1304185-08
File ID: 1304185-08.D
Sampled: 04/11/13 08:50
Prepared: 04/12/13 08:49
Analyzed: 04/12/13 14:08
Solids: 84.57
Preparation: 3550C Sonication Extract
Initial/Final: 29.1 g / 1 mL
QC Batch: 1303302
Sequence: 3D12034
Calibration: 3D12002
Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.015	0.0055	0.020	0.020	J
208-96-8	Acenaphthylene	1	0.020	0.0049	0.020	0.020	U
120-12-7	Anthracene	1	0.014	0.0047	0.020	0.020	J
56-55-3	Benzo(a)anthracene	1	0.041	0.0033	0.0099	0.020	
50-32-8	Benzo(a)pyrene	1	0.033	0.0027	0.0099	0.020	
205-99-2	Benzo(b)fluoranthene	1	0.039	0.0023	0.0099	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.019	0.0023	0.0099	0.020	J
191-24-2	Benzo(g,h,i)perylene	1	0.020	0.0022	0.0099	0.020	
218-01-9	Chrysene	1	0.039	0.0046	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.0037	0.0023	0.0099	0.020	J
206-44-0	Fluoranthene	1	0.067	0.0053	0.020	0.020	
86-73-7	Fluorene	1	0.0069	0.0048	0.020	0.020	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.013	0.0032	0.0039	0.020	J
91-57-6	2-Methylnaphthalene	1	0.020	0.0054	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0066	0.020	0.020	U
85-01-8	Phenanthrene	1	0.058	0.0048	0.020	0.020	
129-00-0	Pyrene	1	0.081	0.0051	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.406	0.311	77	35 - 100	
2-Fluorobiphenyl	0.406	0.319	78	45 - 105	
o-Terphenyl	0.410	0.300	73	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	127883	7.826	97874	7.546	
Naphthalene-d8	531432	10.531	407297	10.262	
Acenaphthene-d10	228504	14.634	189519	14.365	
Phenanthrene-d10	397763	18.044	317445	17.798	
Chrysene-d12	308945	21.634	314770	21.453	
Perylene-d12	226740	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB225-0507

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-09 File ID: 1304185-09.D

Sampled: 04/11/13 08:55 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 14:43

Solids: 78.96 Preparation: 3550C Sonication Extract Initial/Final: 28.9 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.19	0.0059	0.021	0.021	
208-96-8	Acenaphthylene	1	0.0061	0.0053	0.021	0.021	J
120-12-7	Anthracene	1	0.037	0.0051	0.021	0.021	
56-55-3	Benzo(a)anthracene	1	0.067	0.0035	0.011	0.021	
50-32-8	Benzo(a)pyrene	1	0.066	0.0029	0.011	0.021	
205-99-2	Benzo(b)fluoranthene	1	0.071	0.0024	0.011	0.021	
207-08-9	Benzo(k)fluoranthene	1	0.037	0.0025	0.011	0.021	
191-24-2	Benzo(g,h,i)perylene	1	0.034	0.0024	0.011	0.021	
218-01-9	Chrysene	1	0.063	0.0049	0.021	0.021	
53-70-3	Dibenz(a,h)anthracene	1	0.0070	0.0024	0.011	0.021	J
206-44-0	Fluoranthene	1	0.13	0.0057	0.021	0.021	
86-73-7	Fluorene	1	0.068	0.0051	0.021	0.021	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.032	0.0034	0.0042	0.021	
91-57-6	2-Methylnaphthalene	1	0.021	0.0058	0.021	0.021	U
91-20-3	Naphthalene	1	0.018	0.0071	0.021	0.021	J
85-01-8	Phenanthrene	1	0.090	0.0052	0.021	0.021	
129-00-0	Pyrene	1	0.15	0.0055	0.021	0.021	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.438	0.327	75	35 - 100	
2-Fluorobiphenyl	0.438	0.333	76	45 - 105	
o-Terphenyl	0.443	0.328	74	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	131715	7.821	97874	7.546	
Naphthalene-d8	548043	10.531	407297	10.262	
Acenaphthene-d10	232906	14.634	189519	14.365	
Phenanthrene-d10	396370	18.044	317445	17.798	
Chrysene-d12	290240	21.635	314770	21.453	
Perylene-d12	206956	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB226-0507

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-10 File ID: 1304185-10 x5.D

Sampled: 04/11/13 09:00 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 22:51

Solids: 76.20 Preparation: 3550C Sonication Extract Initial/Final: 29.7 g / 1 mL

QC Batch: 1303302 Sequence: 3D15022 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.15	0.030	0.11	0.11	
208-96-8	Acenaphthylene	5	0.11	0.027	0.11	0.11	U
120-12-7	Anthracene	5	0.32	0.026	0.11	0.11	
56-55-3	Benzo(a)anthracene	5	0.41	0.018	0.055	0.11	
50-32-8	Benzo(a)pyrene	5	0.30	0.015	0.055	0.11	
205-99-2	Benzo(b)fluoranthene	5	0.34	0.013	0.055	0.11	
207-08-9	Benzo(k)fluoranthene	5	0.17	0.013	0.055	0.11	
191-24-2	Benzo(g,h,i)perylene	5	0.16	0.012	0.055	0.11	
218-01-9	Chrysene	5	0.35	0.026	0.11	0.11	
53-70-3	Dibenz(a,h)anthracene	5	0.038	0.013	0.055	0.11	J
206-44-0	Fluoranthene	5	0.98	0.029	0.11	0.11	
86-73-7	Fluorene	5	0.11	0.026	0.11	0.11	J
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.14	0.018	0.022	0.11	
91-57-6	2-Methylnaphthalene	5	0.11	0.030	0.11	0.11	U
91-20-3	Naphthalene	5	0.040	0.037	0.11	0.11	J
85-01-8	Phenanthrene	5	0.50	0.027	0.11	0.11	
129-00-0	Pyrene	5	0.97	0.028	0.11	0.11	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.442	0.289	66	35 - 100	D
2-Fluorobiphenyl	0.442	0.329	75	45 - 105	D
o-Terphenyl	0.446	0.334	75	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	124491	7.786	97874	7.546	
Naphthalene-d8	539955	10.502	407297	10.262	
Acenaphthene-d10	222363	14.594	189519	14.365	
Phenanthrene-d10	391219	18.003	317445	17.798	
Chrysene-d12	348747	21.605	314770	21.453	
Perylene-d12	251439	23.336	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-11 File ID: 1304185-11.D

Sampled: 04/11/13 09:05 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 15:18

Solids: 84.01 Preparation: 3550C Sonication Extract Initial/Final: 28.5 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.034	0.0055	0.020	0.020	
208-96-8	Acenaphthylene	1	0.012	0.0050	0.020	0.020	J
120-12-7	Anthracene	1	0.064	0.0048	0.020	0.020	
56-55-3	Benzo(a)anthracene	1	0.21	0.0033	0.0099	0.020	
50-32-8	Benzo(a)pyrene	1	0.18	0.0027	0.0099	0.020	
205-99-2	Benzo(b)fluoranthene	1	0.22	0.0023	0.0099	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.12	0.0023	0.0099	0.020	
191-24-2	Benzo(g,h,i)perylene	1	0.084	0.0022	0.0099	0.020	
218-01-9	Chrysene	1	0.19	0.0046	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.019	0.0023	0.0099	0.020	J
206-44-0	Fluoranthene	1	0.33	0.0053	0.020	0.020	
86-73-7	Fluorene	1	0.051	0.0048	0.020	0.020	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.082	0.0032	0.0040	0.020	
91-57-6	2-Methylnaphthalene	1	0.013	0.0054	0.020	0.020	J
91-20-3	Naphthalene	1	0.016	0.0067	0.020	0.020	J
85-01-8	Phenanthrene	1	0.23	0.0049	0.020	0.020	
129-00-0	Pyrene	1	0.40	0.0051	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.418	0.325	78	35 - 100	
2-Fluorobiphenyl	0.418	0.351	84	45 - 105	
o-Terphenyl	0.422	0.344	82	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	120783	7.826	97874	7.546	
Naphthalene-d8	496006	10.531	407297	10.262	
Acenaphthene-d10	212972	14.64	189519	14.365	
Phenanthrene-d10	361474	18.044	317445	17.798	
Chrysene-d12	267060	21.634	314770	21.453	
Perylene-d12	191396	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-01 File ID: 1304171-01.D

Sampled: 04/09/13 13:50 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 14:24

Solids: 83.45 Preparation: 3550C Sonication Extract Initial/Final: 29.3 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.011	0.0055	0.020	0.020	J
208-96-8	Acenaphthylene	1	0.0070	0.0050	0.020	0.020	J
120-12-7	Anthracene	1	0.015	0.0048	0.020	0.020	J
56-55-3	Benzo(a)anthracene	1	0.11	0.0033	0.010	0.020	
50-32-8	Benzo(a)pyrene	1	0.13	0.0028	0.010	0.020	
205-99-2	Benzo(b)fluoranthene	1	0.12	0.0023	0.010	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.083	0.0023	0.010	0.020	
191-24-2	Benzo(g,h,i)perylene	1	0.088	0.0023	0.010	0.020	
218-01-9	Chrysene	1	0.10	0.0047	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.020	0.0023	0.010	0.020	
206-44-0	Fluoranthene	1	0.13	0.0054	0.020	0.020	
86-73-7	Fluorene	1	0.0065	0.0048	0.020	0.020	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.076	0.0032	0.0040	0.020	
91-57-6	2-Methylnaphthalene	1	0.020	0.0055	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0067	0.020	0.020	U
85-01-8	Phenanthrene	1	0.066	0.0049	0.020	0.020	
129-00-0	Pyrene	1	0.19	0.0052	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.409	0.324	79	35 - 100	
2-Fluorobiphenyl	0.409	0.329	80	45 - 105	
o-Terphenyl	0.413	0.328	79	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	134404	7.867	97874	7.546	
Naphthalene-d8	540921	10.578	407297	10.262	
Acenaphthene-d10	224216	14.681	189519	14.365	
Phenanthrene-d10	368535	18.073	317445	17.798	
Chrysene-d12	250749	21.658	314770	21.453	
Perylene-d12	193108	23.406	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB239-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-02 File ID: 1304171-02.D

Sampled: 04/09/13 13:53 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 13:13

Solids: 82.47 Preparation: 3550C Sonication Extract Initial/Final: 29.2 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.070	0.0056	0.020	0.020	
208-96-8	Acenaphthylene	1	0.020	0.0051	0.020	0.020	U
120-12-7	Anthracene	1	0.020	0.0049	0.020	0.020	U
56-55-3	Benzo(a)anthracene	1	0.0062	0.0033	0.010	0.020	J
50-32-8	Benzo(a)pyrene	1	0.0066	0.0028	0.010	0.020	J
205-99-2	Benzo(b)fluoranthene	1	0.0046	0.0023	0.010	0.020	J
207-08-9	Benzo(k)fluoranthene	1	0.0046	0.0024	0.010	0.020	J
191-24-2	Benzo(g,h,i)perylene	1	0.0029	0.0023	0.010	0.020	J
218-01-9	Chrysene	1	0.0066	0.0047	0.020	0.020	J
53-70-3	Dibenz(a,h)anthracene	1	0.010	0.0023	0.010	0.020	U
206-44-0	Fluoranthene	1	0.010	0.0054	0.020	0.020	J
86-73-7	Fluorene	1	0.020	0.0049	0.020	0.020	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0033	0.0032	0.0040	0.020	J
91-57-6	2-Methylnaphthalene	1	0.020	0.0055	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0068	0.020	0.020	U
85-01-8	Phenanthrene	1	0.0091	0.0049	0.020	0.020	J
129-00-0	Pyrene	1	0.012	0.0052	0.020	0.020	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.415	0.329	79	35 - 100	
2-Fluorobiphenyl	0.415	0.338	82	45 - 105	
o-Terphenyl	0.419	0.357	85	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	135346	7.873	97874	7.546	
Naphthalene-d8	533501	10.578	407297	10.262	
Acenaphthene-d10	221778	14.675	189519	14.365	
Phenanthrene-d10	396849	18.073	317445	17.798	
Chrysene-d12	373688	21.658	314770	21.453	
Perylene-d12	264394	23.401	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB240-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-03 File ID: 1304171-03 x10.D

Sampled: 04/09/13 13:58 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 03:11

Solids: 81.71 Preparation: 3550C Sonication Extract Initial/Final: 29.6 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.13	0.057	0.20	0.20	J
208-96-8	Acenaphthylene	10	0.083	0.051	0.20	0.20	J
120-12-7	Anthracene	10	0.53	0.049	0.20	0.20	
56-55-3	Benzo(a)anthracene	10	1.6	0.034	0.10	0.20	
50-32-8	Benzo(a)pyrene	10	1.4	0.028	0.10	0.20	
205-99-2	Benzo(b)fluoranthene	10	1.5	0.023	0.10	0.20	
207-08-9	Benzo(k)fluoranthene	10	0.76	0.024	0.10	0.20	
191-24-2	Benzo(g,h,i)perylene	10	0.65	0.023	0.10	0.20	
218-01-9	Chrysene	10	1.6	0.048	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.15	0.023	0.10	0.20	J
206-44-0	Fluoranthene	10	2.9	0.055	0.20	0.20	
86-73-7	Fluorene	10	0.15	0.049	0.20	0.20	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.61	0.033	0.041	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.056	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.069	0.20	0.20	U
85-01-8	Phenanthrene	10	1.6	0.050	0.20	0.20	
129-00-0	Pyrene	10	2.9	0.053	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.413	0.182	44	35 - 100	D
2-Fluorobiphenyl	0.413	0.273	66	45 - 105	D
o-Terphenyl	0.418	0.331	79	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	124992	7.832	97874	7.546	
Naphthalene-d8	544683	10.554	407297	10.262	
Acenaphthene-d10	214934	14.652	189519	14.365	
Phenanthrene-d10	409891	18.056	317445	17.798	
Chrysene-d12	369720	21.646	314770	21.453	
Perylene-d12	271790	23.395	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB241-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-04 File ID: 1304171-04 x10.D

Sampled: 04/09/13 14:02 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 03:47

Solids: 81.37 Preparation: 3550C Sonication Extract Initial/Final: 28.4 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.23	0.057	0.21	0.21	
208-96-8	Acenaphthylene	10	0.21	0.051	0.21	0.21	U
120-12-7	Anthracene	10	0.57	0.049	0.21	0.21	
56-55-3	Benzo(a)anthracene	10	1.3	0.034	0.10	0.21	
50-32-8	Benzo(a)pyrene	10	1.1	0.028	0.10	0.21	
205-99-2	Benzo(b)fluoranthene	10	1.2	0.023	0.10	0.21	
207-08-9	Benzo(k)fluoranthene	10	0.64	0.024	0.10	0.21	
191-24-2	Benzo(g,h,i)perylene	10	0.57	0.023	0.10	0.21	
218-01-9	Chrysene	10	1.3	0.048	0.21	0.21	
53-70-3	Dibenz(a,h)anthracene	10	0.11	0.023	0.10	0.21	J
206-44-0	Fluoranthene	10	2.3	0.055	0.21	0.21	
86-73-7	Fluorene	10	0.26	0.050	0.21	0.21	
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.55	0.033	0.041	0.21	
91-57-6	2-Methylnaphthalene	10	0.21	0.056	0.21	0.21	U
91-20-3	Naphthalene	10	0.21	0.069	0.21	0.21	U
85-01-8	Phenanthrene	10	2.1	0.050	0.21	0.21	
129-00-0	Pyrene	10	3.0	0.053	0.21	0.21	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.433	0.264	61	35 - 100	D
2-Fluorobiphenyl	0.433	0.281	65	45 - 105	D
o-Terphenyl	0.437	0.329	75	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	112069	7.832	97874	7.546	
Naphthalene-d8	497609	10.554	407297	10.262	
Acenaphthene-d10	204516	14.652	189519	14.365	
Phenanthrene-d10	370111	18.056	317445	17.798	
Chrysene-d12	254103	21.646	314770	21.453	
Perylene-d12	185272	23.395	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB242-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-05 File ID: 1304171-05.D

Sampled: 04/09/13 14:12 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 13:49

Solids: 84.79 Preparation: 3550C Sonication Extract Initial/Final: 29 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.018	0.0055	0.020	0.020	J
208-96-8	Acenaphthylene	1	0.020	0.0049	0.020	0.020	U
120-12-7	Anthracene	1	0.031	0.0047	0.020	0.020	
56-55-3	Benzo(a)anthracene	1	0.033	0.0032	0.0098	0.020	
50-32-8	Benzo(a)pyrene	1	0.013	0.0027	0.0098	0.020	J
205-99-2	Benzo(b)fluoranthene	1	0.023	0.0023	0.0098	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.016	0.0023	0.0098	0.020	J
191-24-2	Benzo(g,h,i)perylene	1	0.011	0.0022	0.0098	0.020	J
218-01-9	Chrysene	1	0.033	0.0046	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.0028	0.0023	0.0098	0.020	J
206-44-0	Fluoranthene	1	0.098	0.0053	0.020	0.020	
86-73-7	Fluorene	1	0.027	0.0048	0.020	0.020	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0073	0.0032	0.0039	0.020	J
91-57-6	2-Methylnaphthalene	1	0.51	0.0054	0.020	0.020	
91-20-3	Naphthalene	1	0.75	0.0066	0.020	0.020	
85-01-8	Phenanthrene	1	0.10	0.0048	0.020	0.020	
129-00-0	Pyrene	1	0.10	0.0051	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.407	0.377	93	35 - 100	
2-Fluorobiphenyl	0.407	0.313	77	45 - 105	
o-Terphenyl	0.411	0.298	73	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	144574	7.879	97874	7.546	
Naphthalene-d8	534340	10.589	407297	10.262	
Acenaphthene-d10	233668	14.681	189519	14.365	
Phenanthrene-d10	415599	18.073	317445	17.798	
Chrysene-d12	367067	21.658	314770	21.453	
Perylene-d12	273745	23.406	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB243-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-06 File ID: 1304171-06 x20.D

Sampled: 04/09/13 14:08 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 23:02

Solids: 80.70 Preparation: 3550C Sonication Extract Initial/Final: 30.4 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	20	0.85	0.11	0.41	0.41	
208-96-8	Acenaphthylene	20	0.41	0.10	0.41	0.41	U
120-12-7	Anthracene	20	2.4	0.099	0.41	0.41	
56-55-3	Benzo(a)anthracene	20	4.5	0.068	0.21	0.41	
50-32-8	Benzo(a)pyrene	20	4.2	0.057	0.21	0.41	
205-99-2	Benzo(b)fluoranthene	20	4.0	0.047	0.21	0.41	
207-08-9	Benzo(k)fluoranthene	20	2.2	0.048	0.21	0.41	
191-24-2	Benzo(g,h,i)perylene	20	2.6	0.047	0.21	0.41	
218-01-9	Chrysene	20	4.5	0.096	0.41	0.41	
53-70-3	Dibenz(a,h)anthracene	20	0.42	0.047	0.21	0.41	
206-44-0	Fluoranthene	20	8.7	0.11	0.41	0.41	
86-73-7	Fluorene	20	0.68	0.10	0.41	0.41	
193-39-5	Indeno(1,2,3-cd)pyrene	20	2.0	0.066	0.083	0.41	
91-57-6	2-Methylnaphthalene	20	0.41	0.11	0.41	0.41	U
91-20-3	Naphthalene	20	0.41	0.14	0.41	0.41	U
85-01-8	Phenanthrene	20	6.9	0.10	0.41	0.41	
129-00-0	Pyrene	20	11	0.11	0.41	0.41	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	116573	7.826	97874	7.546	
Naphthalene-d8	535212	10.548	407297	10.262	
Acenaphthene-d10	218978	14.646	189519	14.365	
Phenanthrene-d10	406503	18.044	317445	17.798	
Chrysene-d12	359711	21.64	314770	21.453	
Perylene-d12	259807	23.377	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS201-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-01 File ID: 1304185-01 5X.D

Sampled: 04/11/13 07:50 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 17:05

Solids: 81.03 Preparation: 3550C Sonication Extract Initial/Final: 30.4 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.10	0.029	0.10	0.10	U
208-96-8	Acenaphthylene	5	0.10	0.026	0.10	0.10	U
120-12-7	Anthracene	5	0.055	0.025	0.10	0.10	J
56-55-3	Benzo(a)anthracene	5	0.27	0.017	0.051	0.10	
50-32-8	Benzo(a)pyrene	5	0.23	0.014	0.051	0.10	
205-99-2	Benzo(b)fluoranthene	5	0.28	0.012	0.051	0.10	
207-08-9	Benzo(k)fluoranthene	5	0.18	0.012	0.051	0.10	
191-24-2	Benzo(g,h,i)perylene	5	0.11	0.012	0.051	0.10	
218-01-9	Chrysene	5	0.26	0.024	0.10	0.10	
53-70-3	Dibenz(a,h)anthracene	5	0.026	0.012	0.051	0.10	J
206-44-0	Fluoranthene	5	0.42	0.028	0.10	0.10	
86-73-7	Fluorene	5	0.028	0.025	0.10	0.10	J
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.095	0.017	0.021	0.10	J
91-57-6	2-Methylnaphthalene	5	0.10	0.028	0.10	0.10	U
91-20-3	Naphthalene	5	0.10	0.035	0.10	0.10	U
85-01-8	Phenanthrene	5	0.28	0.025	0.10	0.10	
129-00-0	Pyrene	5	0.49	0.027	0.10	0.10	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.406	0.268	66	35 - 100	D
2-Fluorobiphenyl	0.406	0.278	68	45 - 105	D
o-Terphenyl	0.410	0.313	76	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	111608	7.832	97874	7.546	
Naphthalene-d8	503315	10.56	407297	10.262	
Acenaphthene-d10	195445	14.646	189519	14.365	
Phenanthrene-d10	357805	18.056	317445	17.798	
Chrysene-d12	291519	21.64	314770	21.453	
Perylene-d12	208950	23.389	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS202-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-02 File ID: 1304185-02 5X.D

Sampled: 04/11/13 07:55 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 17:41

Solids: 79.33 Preparation: 3550C Sonication Extract Initial/Final: 30.3 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.26	0.029	0.11	0.11	
208-96-8	Acenaphthylene	5	0.11	0.026	0.11	0.11	U
120-12-7	Anthracene	5	0.68	0.025	0.11	0.11	
56-55-3	Benzo(a)anthracene	5	0.82	0.017	0.053	0.11	
50-32-8	Benzo(a)pyrene	5	0.64	0.014	0.053	0.11	
205-99-2	Benzo(b)fluoranthene	5	0.76	0.012	0.053	0.11	
207-08-9	Benzo(k)fluoranthene	5	0.46	0.012	0.053	0.11	
191-24-2	Benzo(g,h,i)perylene	5	0.27	0.012	0.053	0.11	
218-01-9	Chrysene	5	0.91	0.025	0.11	0.11	
53-70-3	Dibenz(a,h)anthracene	5	0.11	0.012	0.053	0.11	
206-44-0	Fluoranthene	5	1.6	0.028	0.11	0.11	
86-73-7	Fluorene	5	0.37	0.025	0.11	0.11	
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.26	0.017	0.021	0.11	
91-57-6	2-Methylnaphthalene	5	0.037	0.029	0.11	0.11	J
91-20-3	Naphthalene	5	0.052	0.035	0.11	0.11	J
85-01-8	Phenanthrene	5	1.9	0.026	0.11	0.11	
129-00-0	Pyrene	5	1.6	0.027	0.11	0.11	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.416	0.268	64	35 - 100	D
2-Fluorobiphenyl	0.416	0.291	70	45 - 105	D
o-Terphenyl	0.420	0.310	74	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	118497	7.832	97874	7.546	
Naphthalene-d8	529309	10.56	407297	10.262	
Acenaphthene-d10	217497	14.646	189519	14.365	
Phenanthrene-d10	401830	18.05	317445	17.798	
Chrysene-d12	324321	21.64	314770	21.453	
Perylene-d12	220992	23.389	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS203-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-03 File ID: 1304185-03 5X.D

Sampled: 04/11/13 08:00 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 18:16

Solids: 83.15 Preparation: 3550C Sonication Extract Initial/Final: 29.8 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.10	0.028	0.10	0.10	U
208-96-8	Acenaphthylene	5	0.10	0.025	0.10	0.10	U
120-12-7	Anthracene	5	0.093	0.024	0.10	0.10	J
56-55-3	Benzo(a)anthracene	5	0.22	0.017	0.050	0.10	
50-32-8	Benzo(a)pyrene	5	0.20	0.014	0.050	0.10	
205-99-2	Benzo(b)fluoranthene	5	0.23	0.011	0.050	0.10	
207-08-9	Benzo(k)fluoranthene	5	0.14	0.012	0.050	0.10	
191-24-2	Benzo(g,h,i)perylene	5	0.097	0.011	0.050	0.10	J
218-01-9	Chrysene	5	0.24	0.023	0.10	0.10	
53-70-3	Dibenz(a,h)anthracene	5	0.022	0.011	0.050	0.10	J
206-44-0	Fluoranthene	5	0.41	0.027	0.10	0.10	
86-73-7	Fluorene	5	0.10	0.024	0.10	0.10	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.081	0.016	0.020	0.10	J
91-57-6	2-Methylnaphthalene	5	0.10	0.027	0.10	0.10	U
91-20-3	Naphthalene	5	0.10	0.034	0.10	0.10	U
85-01-8	Phenanthrene	5	0.21	0.025	0.10	0.10	
129-00-0	Pyrene	5	0.44	0.026	0.10	0.10	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.404	0.216	54	35 - 100	D
2-Fluorobiphenyl	0.404	0.274	68	45 - 105	D
o-Terphenyl	0.408	0.287	70	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	120205	7.838	97874	7.546	
Naphthalene-d8	518246	10.56	407297	10.262	
Acenaphthene-d10	198506	14.652	189519	14.365	
Phenanthrene-d10	380830	18.062	317445	17.798	
Chrysene-d12	323053	21.64	314770	21.453	
Perylene-d12	232041	23.395	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS204-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-04 File ID: 1304185-04 5X.D

Sampled: 04/11/13 08:05 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 18:52

Solids: 79.18 Preparation: 3550C Sonication Extract Initial/Final: 30 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.11	0.029	0.11	0.11	U
208-96-8	Acenaphthylene	5	0.11	0.026	0.11	0.11	U
120-12-7	Anthracene	5	0.078	0.025	0.11	0.11	J
56-55-3	Benzo(a)anthracene	5	0.18	0.017	0.053	0.11	
50-32-8	Benzo(a)pyrene	5	0.18	0.015	0.053	0.11	
205-99-2	Benzo(b)fluoranthene	5	0.23	0.012	0.053	0.11	
207-08-9	Benzo(k)fluoranthene	5	0.11	0.012	0.053	0.11	
191-24-2	Benzo(g,h,i)perylene	5	0.11	0.012	0.053	0.11	J
218-01-9	Chrysene	5	0.22	0.025	0.11	0.11	
53-70-3	Dibenz(a,h)anthracene	5	0.021	0.012	0.053	0.11	J
206-44-0	Fluoranthene	5	0.31	0.028	0.11	0.11	
86-73-7	Fluorene	5	0.11	0.025	0.11	0.11	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.088	0.017	0.021	0.11	J
91-57-6	2-Methylnaphthalene	5	0.11	0.029	0.11	0.11	U
91-20-3	Naphthalene	5	0.11	0.035	0.11	0.11	U
85-01-8	Phenanthrene	5	0.17	0.026	0.11	0.11	
129-00-0	Pyrene	5	0.36	0.027	0.11	0.11	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.421	0.284	68	35 - 100	D
2-Fluorobiphenyl	0.421	0.333	79	45 - 105	D
o-Terphenyl	0.425	0.333	78	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	113906	7.832	97874	7.546	
Naphthalene-d8	501518	10.578	407297	10.262	
Acenaphthene-d10	187636	14.646	189519	14.365	
Phenanthrene-d10	366947	18.061	317445	17.798	
Chrysene-d12	281033	21.64	314770	21.453	
Perylene-d12	194682	23.389	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS205-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-05 File ID: 1304185-05 5X.D

Sampled: 04/11/13 08:10 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 19:27

Solids: 81.86 Preparation: 3550C Sonication Extract Initial/Final: 28.5 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.23	0.028	0.10	0.10	
208-96-8	Acenaphthylene	5	0.10	0.025	0.10	0.10	U
120-12-7	Anthracene	5	0.51	0.024	0.10	0.10	
56-55-3	Benzo(a)anthracene	5	0.89	0.017	0.051	0.10	
50-32-8	Benzo(a)pyrene	5	0.74	0.014	0.051	0.10	
205-99-2	Benzo(b)fluoranthene	5	0.95	0.012	0.051	0.10	
207-08-9	Benzo(k)fluoranthene	5	0.50	0.012	0.051	0.10	
191-24-2	Benzo(g,h,i)perylene	5	0.35	0.012	0.051	0.10	
218-01-9	Chrysene	5	0.84	0.024	0.10	0.10	
53-70-3	Dibenz(a,h)anthracene	5	0.084	0.012	0.051	0.10	J
206-44-0	Fluoranthene	5	1.5	0.027	0.10	0.10	
86-73-7	Fluorene	5	0.19	0.025	0.10	0.10	
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.32	0.016	0.020	0.10	
91-57-6	2-Methylnaphthalene	5	0.081	0.028	0.10	0.10	J
91-20-3	Naphthalene	5	0.42	0.034	0.10	0.10	
85-01-8	Phenanthrene	5	1.5	0.025	0.10	0.10	
129-00-0	Pyrene	5	1.8	0.026	0.10	0.10	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.429	0.289	68	35 - 100	D
2-Fluorobiphenyl	0.429	0.332	78	45 - 105	D
o-Terphenyl	0.433	0.328	76	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	103195	7.832	97874	7.546	
Naphthalene-d8	473429	10.554	407297	10.262	
Acenaphthene-d10	186843	14.646	189519	14.365	
Phenanthrene-d10	348292	18.05	317445	17.798	
Chrysene-d12	244396	21.64	314770	21.453	
Perylene-d12	159769	23.389	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS206-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-06 File ID: 1304185-06 5X.D

Sampled: 04/11/13 08:20 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 20:02

Solids: 77.79 Preparation: 3550C Sonication Extract Initial/Final: 29.2 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.035	0.030	0.11	0.11	J
208-96-8	Acenaphthylene	5	0.11	0.027	0.11	0.11	U
120-12-7	Anthracene	5	0.18	0.026	0.11	0.11	
56-55-3	Benzo(a)anthracene	5	0.29	0.018	0.054	0.11	
50-32-8	Benzo(a)pyrene	5	0.26	0.015	0.054	0.11	
205-99-2	Benzo(b)fluoranthene	5	0.35	0.012	0.054	0.11	
207-08-9	Benzo(k)fluoranthene	5	0.21	0.013	0.054	0.11	
191-24-2	Benzo(g,h,i)perylene	5	0.13	0.012	0.054	0.11	
218-01-9	Chrysene	5	0.35	0.025	0.11	0.11	
53-70-3	Dibenz(a,h)anthracene	5	0.055	0.012	0.054	0.11	J
206-44-0	Fluoranthene	5	0.49	0.029	0.11	0.11	
86-73-7	Fluorene	5	0.057	0.026	0.11	0.11	J
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.10	0.017	0.021	0.11	J
91-57-6	2-Methylnaphthalene	5	0.11	0.029	0.11	0.11	U
91-20-3	Naphthalene	5	0.11	0.036	0.11	0.11	U
85-01-8	Phenanthrene	5	0.41	0.026	0.11	0.11	
129-00-0	Pyrene	5	0.57	0.028	0.11	0.11	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.440	0.271	62	35 - 100	D
2-Fluorobiphenyl	0.440	0.299	68	45 - 105	D
o-Terphenyl	0.445	0.310	70	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	115835	7.827	97874	7.546	
Naphthalene-d8	499074	10.572	407297	10.262	
Acenaphthene-d10	194685	14.652	189519	14.365	
Phenanthrene-d10	385124	18.056	317445	17.798	
Chrysene-d12	306856	21.64	314770	21.453	
Perylene-d12	205442	23.395	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS207-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304185-07 File ID: 1304185-07.D

Sampled: 04/11/13 08:25 Prepared: 04/12/13 08:49 Analyzed: 04/12/13 13:32

Solids: 85.40 Preparation: 3550C Sonication Extract Initial/Final: 29.6 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.016	0.0054	0.020	0.020	J
208-96-8	Acenaphthylene	1	0.014	0.0049	0.020	0.020	J
120-12-7	Anthracene	1	0.057	0.0047	0.020	0.020	
56-55-3	Benzo(a)anthracene	1	0.26	0.0032	0.0098	0.020	
50-32-8	Benzo(a)pyrene	1	0.20	0.0027	0.0098	0.020	
205-99-2	Benzo(b)fluoranthene	1	0.23	0.0022	0.0098	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.12	0.0023	0.0098	0.020	
191-24-2	Benzo(g,h,i)perylene	1	0.093	0.0022	0.0098	0.020	
218-01-9	Chrysene	1	0.22	0.0046	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.025	0.0022	0.0098	0.020	
206-44-0	Fluoranthene	1	0.31	0.0052	0.020	0.020	
86-73-7	Fluorene	1	0.020	0.0047	0.020	0.020	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.089	0.0031	0.0039	0.020	
91-57-6	2-Methylnaphthalene	1	0.0067	0.0053	0.020	0.020	J
91-20-3	Naphthalene	1	0.020	0.0066	0.020	0.020	U
85-01-8	Phenanthrene	1	0.20	0.0048	0.020	0.020	
129-00-0	Pyrene	1	0.41	0.0050	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.396	0.314	79	35 - 100	
2-Fluorobiphenyl	0.396	0.332	84	45 - 105	
o-Terphenyl	0.400	0.308	77	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	123975	7.827	97874	7.546	
Naphthalene-d8	515637	10.531	407297	10.262	
Acenaphthene-d10	219299	14.634	189519	14.365	
Phenanthrene-d10	389320	18.038	317445	17.798	
Chrysene-d12	274178	21.635	314770	21.453	
Perylene-d12	210904	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS213-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-08 File ID: 1304171-08 10X.D

Sampled: 04/10/13 10:50 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 19:08

Solids: 86.57 Preparation: 3550C Sonication Extract Initial/Final: 30 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.14	0.053	0.19	0.19	J
208-96-8	Acenaphthylene	10	0.069	0.048	0.19	0.19	J
120-12-7	Anthracene	10	0.44	0.046	0.19	0.19	
56-55-3	Benzo(a)anthracene	10	1.1	0.032	0.096	0.19	
50-32-8	Benzo(a)pyrene	10	1.2	0.027	0.096	0.19	
205-99-2	Benzo(b)fluoranthene	10	1.3	0.022	0.096	0.19	
207-08-9	Benzo(k)fluoranthene	10	0.90	0.023	0.096	0.19	
191-24-2	Benzo(g,h,i)perylene	10	0.69	0.022	0.096	0.19	
218-01-9	Chrysene	10	1.2	0.045	0.19	0.19	
53-70-3	Dibenz(a,h)anthracene	10	0.25	0.022	0.096	0.19	
206-44-0	Fluoranthene	10	2.5	0.052	0.19	0.19	
86-73-7	Fluorene	10	0.12	0.047	0.19	0.19	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.61	0.031	0.038	0.19	
91-57-6	2-Methylnaphthalene	10	0.19	0.053	0.19	0.19	U
91-20-3	Naphthalene	10	0.085	0.065	0.19	0.19	J
85-01-8	Phenanthrene	10	1.9	0.047	0.19	0.19	
129-00-0	Pyrene	10	2.4	0.050	0.19	0.19	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.385	0.235	61	35 - 100	D
2-Fluorobiphenyl	0.385	0.281	73	45 - 105	D
o-Terphenyl	0.389	0.439	113	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	121247	7.879	97874	7.546	
Naphthalene-d8	467995	10.589	407297	10.262	
Acenaphthene-d10	187849	14.687	189519	14.365	
Phenanthrene-d10	317071	18.079	317445	17.798	
Chrysene-d12	329221	21.664	314770	21.453	
Perylene-d12	229826	23.418	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS214-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-09 File ID: 1304171-09 10X.D

Sampled: 04/10/13 10:55 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 19:44

Solids: 78.68 Preparation: 3550C Sonication Extract Initial/Final: 29.3 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.21	0.059	0.21	0.21	U
208-96-8	Acenaphthylene	10	0.21	0.053	0.21	0.21	U
120-12-7	Anthracene	10	0.091	0.051	0.21	0.21	J
56-55-3	Benzo(a)anthracene	10	0.31	0.035	0.11	0.21	
50-32-8	Benzo(a)pyrene	10	0.38	0.029	0.11	0.21	
205-99-2	Benzo(b)fluoranthene	10	0.58	0.024	0.11	0.21	
207-08-9	Benzo(k)fluoranthene	10	0.40	0.025	0.11	0.21	
191-24-2	Benzo(g,h,i)perylene	10	0.32	0.024	0.11	0.21	
218-01-9	Chrysene	10	0.46	0.049	0.21	0.21	
53-70-3	Dibenz(a,h)anthracene	10	0.10	0.024	0.11	0.21	J
206-44-0	Fluoranthene	10	0.47	0.057	0.21	0.21	
86-73-7	Fluorene	10	0.21	0.051	0.21	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.25	0.034	0.042	0.21	
91-57-6	2-Methylnaphthalene	10	0.21	0.058	0.21	0.21	U
91-20-3	Naphthalene	10	0.21	0.071	0.21	0.21	U
85-01-8	Phenanthrene	10	0.26	0.052	0.21	0.21	
129-00-0	Pyrene	10	0.73	0.055	0.21	0.21	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.434	0.390	90	35 - 100	D
2-Fluorobiphenyl	0.434	0.308	71	45 - 105	D
o-Terphenyl	0.438	0.325	74	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	98975	7.867	97874	7.546	
Naphthalene-d8	441162	10.595	407297	10.262	
Acenaphthene-d10	174908	14.693	189519	14.365	
Phenanthrene-d10	272961	18.085	317445	17.798	
Chrysene-d12	172927	21.669	314770	21.453	
Perylene-d12	118016	23.424	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS215-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-10 File ID: 1304171-10 10X.D

Sampled: 04/10/13 11:00 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 20:19

Solids: 89.75 Preparation: 3550C Sonication Extract Initial/Final: 29.7 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.19	0.052	0.19	0.19	U
208-96-8	Acenaphthylene	10	0.19	0.046	0.19	0.19	U
120-12-7	Anthracene	10	0.17	0.045	0.19	0.19	J
56-55-3	Benzo(a)anthracene	10	0.24	0.031	0.093	0.19	
50-32-8	Benzo(a)pyrene	10	0.25	0.026	0.093	0.19	
205-99-2	Benzo(b)fluoranthene	10	0.26	0.021	0.093	0.19	
207-08-9	Benzo(k)fluoranthene	10	0.21	0.022	0.093	0.19	
191-24-2	Benzo(g,h,i)perylene	10	0.10	0.021	0.093	0.19	J
218-01-9	Chrysene	10	0.30	0.043	0.19	0.19	
53-70-3	Dibenz(a,h)anthracene	10	0.093	0.021	0.093	0.19	U
206-44-0	Fluoranthene	10	0.36	0.050	0.19	0.19	
86-73-7	Fluorene	10	0.19	0.045	0.19	0.19	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.037	0.030	0.037	0.19	U
91-57-6	2-Methylnaphthalene	10	0.19	0.051	0.19	0.19	U
91-20-3	Naphthalene	10	0.19	0.062	0.19	0.19	U
85-01-8	Phenanthrene	10	0.24	0.045	0.19	0.19	
129-00-0	Pyrene	10	0.53	0.048	0.19	0.19	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.375	0.266	71	35 - 100	D
2-Fluorobiphenyl	0.375	0.248	66	45 - 105	D
o-Terphenyl	0.379	0.259	68	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	103568	7.873	97874	7.546	
Naphthalene-d8	445787	10.601	407297	10.262	
Acenaphthene-d10	172057	14.693	189519	14.365	
Phenanthrene-d10	339637	18.091	317445	17.798	
Chrysene-d12	234381	21.669	314770	21.453	
Perylene-d12	166439	23.424	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS216-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-11 File ID: 1304171-11 x10.D

Sampled: 04/10/13 11:05 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 23:38

Solids: 80.68 Preparation: 3550C Sonication Extract Initial/Final: 28.5 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.21	0.057	0.21	0.21	U
208-96-8	Acenaphthylene	10	0.21	0.052	0.21	0.21	U
120-12-7	Anthracene	10	0.21	0.050	0.21	0.21	U
56-55-3	Benzo(a)anthracene	10	0.18	0.034	0.10	0.21	J
50-32-8	Benzo(a)pyrene	10	0.20	0.029	0.10	0.21	J
205-99-2	Benzo(b)fluoranthene	10	0.17	0.024	0.10	0.21	J
207-08-9	Benzo(k)fluoranthene	10	0.15	0.024	0.10	0.21	J
191-24-2	Benzo(g,h,i)perylene	10	0.12	0.023	0.10	0.21	J
218-01-9	Chrysene	10	0.20	0.048	0.21	0.21	J
53-70-3	Dibenz(a,h)anthracene	10	0.10	0.024	0.10	0.21	U
206-44-0	Fluoranthene	10	0.27	0.055	0.21	0.21	
86-73-7	Fluorene	10	0.21	0.050	0.21	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.091	0.033	0.041	0.21	J
91-57-6	2-Methylnaphthalene	10	0.21	0.057	0.21	0.21	U
91-20-3	Naphthalene	10	0.21	0.069	0.21	0.21	U
85-01-8	Phenanthrene	10	0.11	0.051	0.21	0.21	J
129-00-0	Pyrene	10	0.35	0.053	0.21	0.21	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.435	0.274	63	35 - 100	D
2-Fluorobiphenyl	0.435	0.317	73	45 - 105	D
o-Terphenyl	0.439	0.335	76	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	101669	7.826	97874	7.546	
Naphthalene-d8	463643	10.548	407297	10.262	
Acenaphthene-d10	171762	14.646	189519	14.365	
Phenanthrene-d10	332595	18.05	317445	17.798	
Chrysene-d12	265380	21.635	314770	21.453	
Perylene-d12	183722	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS217-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-12 File ID: 1304171-12 x50.D

Sampled: 04/10/13 11:10 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 00:13

Solids: 86.74 Preparation: 3550C Sonication Extract Initial/Final: 28.7 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	50	0.96	0.27	0.96	0.96	U
208-96-8	Acenaphthylene	50	0.96	0.24	0.96	0.96	U
120-12-7	Anthracene	50	0.48	0.23	0.96	0.96	J
56-55-3	Benzo(a)anthracene	50	2.0	0.16	0.48	0.96	
50-32-8	Benzo(a)pyrene	50	2.1	0.13	0.48	0.96	
205-99-2	Benzo(b)fluoranthene	50	2.2	0.11	0.48	0.96	
207-08-9	Benzo(k)fluoranthene	50	1.2	0.11	0.48	0.96	
191-24-2	Benzo(g,h,i)perylene	50	1.4	0.11	0.48	0.96	
218-01-9	Chrysene	50	2.1	0.22	0.96	0.96	
53-70-3	Dibenz(a,h)anthracene	50	0.28	0.11	0.48	0.96	J
206-44-0	Fluoranthene	50	3.7	0.26	0.96	0.96	
86-73-7	Fluorene	50	0.96	0.23	0.96	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	50	1.0	0.15	0.19	0.96	
91-57-6	2-Methylnaphthalene	50	0.96	0.26	0.96	0.96	U
91-20-3	Naphthalene	50	0.96	0.32	0.96	0.96	U
85-01-8	Phenanthrene	50	1.8	0.24	0.96	0.96	
129-00-0	Pyrene	50	4.9	0.25	0.96	0.96	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	100414	7.832	97874	7.546	
Naphthalene-d8	495538	10.548	407297	10.262	
Acenaphthene-d10	188491	14.646	189519	14.365	
Phenanthrene-d10	360618	18.05	317445	17.798	
Chrysene-d12	272021	21.64	314770	21.453	
Perylene-d12	185815	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS218-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-13 File ID: 1304171-13 x10.D

Sampled: 04/10/13 11:15 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 00:49

Solids: 84.52 Preparation: 3550C Sonication Extract Initial/Final: 28.8 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.27	0.055	0.20	0.20	
208-96-8	Acenaphthylene	10	0.20	0.049	0.20	0.20	U
120-12-7	Anthracene	10	0.92	0.047	0.20	0.20	
56-55-3	Benzo(a)anthracene	10	2.0	0.033	0.099	0.20	
50-32-8	Benzo(a)pyrene	10	1.8	0.027	0.099	0.20	
205-99-2	Benzo(b)fluoranthene	10	2.1	0.023	0.099	0.20	
207-08-9	Benzo(k)fluoranthene	10	1.1	0.023	0.099	0.20	
191-24-2	Benzo(g,h,i)perylene	10	1.1	0.022	0.099	0.20	
218-01-9	Chrysene	10	2.1	0.046	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.22	0.023	0.099	0.20	
206-44-0	Fluoranthene	10	3.9	0.053	0.20	0.20	
86-73-7	Fluorene	10	0.25	0.048	0.20	0.20	
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.90	0.032	0.039	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.054	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.066	0.20	0.20	U
85-01-8	Phenanthrene	10	3.0	0.048	0.20	0.20	
129-00-0	Pyrene	10	5.0	0.051	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.411	0.247	60	35 - 100	D
2-Fluorobiphenyl	0.411	0.292	71	45 - 105	D
o-Terphenyl	0.415	0.300	72	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	107486	7.832	97874	7.546	
Naphthalene-d8	495601	10.548	407297	10.262	
Acenaphthene-d10	197390	14.646	189519	14.365	
Phenanthrene-d10	369202	18.05	317445	17.798	
Chrysene-d12	273151	21.64	314770	21.453	
Perylene-d12	196473	23.383	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS219-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-14 File ID: 1304171-14 20X.D

Sampled: 04/10/13 11:20 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 09:53

Solids: 79.48 Preparation: 3550C Sonication Extract Initial/Final: 29.1 g / 1 mL

QC Batch: 1303247 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	20	0.92	0.12	0.42	0.42	
208-96-8	Acenaphthylene	20	0.42	0.10	0.42	0.42	U
120-12-7	Anthracene	20	3.5	0.10	0.42	0.42	
56-55-3	Benzo(a)anthracene	20	7.0	0.069	0.21	0.42	
50-32-8	Benzo(a)pyrene	20	5.6	0.058	0.21	0.42	
205-99-2	Benzo(b)fluoranthene	20	6.1	0.048	0.21	0.42	
207-08-9	Benzo(k)fluoranthene	20	4.7	0.049	0.21	0.42	
191-24-2	Benzo(g,h,i)perylene	20	2.9	0.048	0.21	0.42	
218-01-9	Chrysene	20	6.0	0.098	0.42	0.42	
53-70-3	Dibenz(a,h)anthracene	20	0.64	0.048	0.21	0.42	
206-44-0	Fluoranthene	20	13	0.11	0.42	0.42	
86-73-7	Fluorene	20	1.4	0.10	0.42	0.42	
193-39-5	Indeno(1,2,3-cd)pyrene	20	2.7	0.067	0.084	0.42	
91-57-6	2-Methylnaphthalene	20	0.42	0.11	0.42	0.42	U
91-20-3	Naphthalene	20	0.42	0.14	0.42	0.42	U
85-01-8	Phenanthrene	20	8.9	0.10	0.42	0.42	
129-00-0	Pyrene	20	14	0.11	0.42	0.42	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	100850	7.815	97874	7.546	
Naphthalene-d8	499287	10.531	407297	10.262	
Acenaphthene-d10	203345	14.629	189519	14.365	
Phenanthrene-d10	373223	18.032	317445	17.798	
Chrysene-d12	284592	21.629	314770	21.453	
Perylene-d12	213658	23.371	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS220-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-15 File ID: 1304171-15.D

Sampled: 04/10/13 11:25 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 17:22

Solids: 87.72 Preparation: 3550C Sonication Extract Initial/Final: 30.3 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.061	0.0053	0.019	0.019	
208-96-8	Acenaphthylene	1	0.0068	0.0048	0.019	0.019	J
120-12-7	Anthracene	1	0.25	0.0046	0.019	0.019	
56-55-3	Benzo(a)anthracene	1	0.38	0.0031	0.0095	0.019	
50-32-8	Benzo(a)pyrene	1	0.27	0.0026	0.0095	0.019	
205-99-2	Benzo(b)fluoranthene	1	0.27	0.0022	0.0095	0.019	
207-08-9	Benzo(k)fluoranthene	1	0.16	0.0022	0.0095	0.019	
191-24-2	Benzo(g,h,i)perylene	1	0.13	0.0022	0.0095	0.019	
218-01-9	Chrysene	1	0.29	0.0044	0.019	0.019	
53-70-3	Dibenz(a,h)anthracene	1	0.031	0.0022	0.0095	0.019	
206-44-0	Fluoranthene	1	0.61	0.0051	0.019	0.019	
86-73-7	Fluorene	1	0.091	0.0046	0.019	0.019	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.12	0.0031	0.0038	0.019	
91-57-6	2-Methylnaphthalene	1	0.0068	0.0052	0.019	0.019	J
91-20-3	Naphthalene	1	0.019	0.0064	0.019	0.019	U
85-01-8	Phenanthrene	1	0.65	0.0047	0.019	0.019	
129-00-0	Pyrene	1	0.71	0.0049	0.019	0.019	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.376	0.291	77	35 - 100	
2-Fluorobiphenyl	0.376	0.301	80	45 - 105	
o-Terphenyl	0.380	0.311	82	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	112844	7.873	97874	7.546	
Naphthalene-d8	462478	10.583	407297	10.262	
Acenaphthene-d10	196071	14.687	189519	14.365	
Phenanthrene-d10	339569	18.079	317445	17.798	
Chrysene-d12	251018	21.664	314770	21.453	
Perylene-d12	191631	23.418	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS221-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-16 File ID: 1304171-16.D

Sampled: 04/10/13 11:30 Prepared: 04/11/13 09:36 Analyzed: 04/11/13 17:57

Solids: 87.66 Preparation: 3550C Sonication Extract Initial/Final: 31.5 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.013	0.0053	0.019	0.019	J
208-96-8	Acenaphthylene	1	0.0054	0.0048	0.019	0.019	J
120-12-7	Anthracene	1	0.036	0.0046	0.019	0.019	
56-55-3	Benzo(a)anthracene	1	0.11	0.0031	0.0095	0.019	
50-32-8	Benzo(a)pyrene	1	0.10	0.0026	0.0095	0.019	
205-99-2	Benzo(b)fluoranthene	1	0.11	0.0022	0.0095	0.019	
207-08-9	Benzo(k)fluoranthene	1	0.084	0.0022	0.0095	0.019	
191-24-2	Benzo(g,h,i)perylene	1	0.066	0.0022	0.0095	0.019	
218-01-9	Chrysene	1	0.11	0.0044	0.019	0.019	
53-70-3	Dibenz(a,h)anthracene	1	0.017	0.0022	0.0095	0.019	J
206-44-0	Fluoranthene	1	0.19	0.0051	0.019	0.019	
86-73-7	Fluorene	1	0.013	0.0046	0.019	0.019	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.051	0.0031	0.0038	0.019	
91-57-6	2-Methylnaphthalene	1	0.019	0.0052	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0064	0.019	0.019	U
85-01-8	Phenanthrene	1	0.13	0.0047	0.019	0.019	
129-00-0	Pyrene	1	0.22	0.0049	0.019	0.019	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.362	0.283	78	35 - 100	
2-Fluorobiphenyl	0.362	0.289	80	45 - 105	
o-Terphenyl	0.366	0.293	80	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	127902	7.873	97874	7.546	
Naphthalene-d8	508491	10.584	407297	10.262	
Acenaphthene-d10	217557	14.687	189519	14.365	
Phenanthrene-d10	369683	18.079	317445	17.798	
Chrysene-d12	291512	21.664	314770	21.453	
Perylene-d12	199324	23.412	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-17 File ID: 1304171-17 x10.D

Sampled: 04/10/13 11:35 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 04:22

Solids: 84.08 Preparation: 3550C Sonication Extract Initial/Final: 30.6 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.20	0.055	0.20	0.20	U
208-96-8	Acenaphthylene	10	0.20	0.050	0.20	0.20	U
120-12-7	Anthracene	10	0.12	0.048	0.20	0.20	J
56-55-3	Benzo(a)anthracene	10	0.60	0.033	0.099	0.20	
50-32-8	Benzo(a)pyrene	10	0.72	0.027	0.099	0.20	
205-99-2	Benzo(b)fluoranthene	10	0.78	0.023	0.099	0.20	
207-08-9	Benzo(k)fluoranthene	10	0.45	0.023	0.099	0.20	
191-24-2	Benzo(g,h,i)perylene	10	0.44	0.022	0.099	0.20	
218-01-9	Chrysene	10	0.62	0.046	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.097	0.023	0.099	0.20	J
206-44-0	Fluoranthene	10	0.89	0.053	0.20	0.20	
86-73-7	Fluorene	10	0.20	0.048	0.20	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.37	0.032	0.040	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.054	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.067	0.20	0.20	U
85-01-8	Phenanthrene	10	0.37	0.049	0.20	0.20	
129-00-0	Pyrene	10	1.1	0.051	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.389	0.241	62	35 - 100	D
2-Fluorobiphenyl	0.389	0.288	74	45 - 105	D
o-Terphenyl	0.393	0.326	83	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	119535	7.838	97874	7.546	
Naphthalene-d8	523476	10.554	407297	10.262	
Acenaphthene-d10	201134	14.652	189519	14.365	
Phenanthrene-d10	386652	18.056	317445	17.798	
Chrysene-d12	317741	21.646	314770	21.453	
Perylene-d12	222446	23.395	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS223-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-18 File ID: 1304171-18 x10.D

Sampled: 04/10/13 11:40 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 04:58

Solids: 85.06 Preparation: 3550C Sonication Extract Initial/Final: 29.4 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.20	0.054	0.20	0.20	U
208-96-8	Acenaphthylene	10	0.20	0.049	0.20	0.20	U
120-12-7	Anthracene	10	0.22	0.047	0.20	0.20	
56-55-3	Benzo(a)anthracene	10	1.4	0.032	0.098	0.20	
50-32-8	Benzo(a)pyrene	10	1.3	0.027	0.098	0.20	
205-99-2	Benzo(b)fluoranthene	10	1.6	0.022	0.098	0.20	
207-08-9	Benzo(k)fluoranthene	10	0.79	0.023	0.098	0.20	
191-24-2	Benzo(g,h,i)perylene	10	0.70	0.022	0.098	0.20	
218-01-9	Chrysene	10	1.5	0.046	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.16	0.022	0.098	0.20	J
206-44-0	Fluoranthene	10	2.4	0.053	0.20	0.20	
86-73-7	Fluorene	10	0.20	0.047	0.20	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.63	0.032	0.039	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.054	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.066	0.20	0.20	U
85-01-8	Phenanthrene	10	0.21	0.048	0.20	0.20	
129-00-0	Pyrene	10	2.4	0.051	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.400	0.228	57	35 - 100	D
2-Fluorobiphenyl	0.400	0.248	62	45 - 105	D
o-Terphenyl	0.404	0.304	75	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	115777	7.838	97874	7.546	
Naphthalene-d8	534761	10.56	407297	10.262	
Acenaphthene-d10	206530	14.658	189519	14.365	
Phenanthrene-d10	398910	18.056	317445	17.798	
Chrysene-d12	356677	21.646	314770	21.453	
Perylene-d12	258044	23.395	230613	23.102	

* Values outside of QC limits

APPENDIX C

SUPPORT DOCUMENTATION

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304171

TriMatrix Laboratories received the cooler(s) for this work order on April 10, 2013, at 17:15pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASB238-0305	1304171-01	Soil	4/9/2013
DASB239-0305	1304171-02	Soil	4/9/2013
DASB240-0305	1304171-03	Soil	4/9/2013
DASB241-0305	1304171-04	Soil	4/9/2013
DASB242-0305	1304171-05	Soil	4/9/2013
DASB243-0305	1304171-06	Soil	4/9/2013
DASB-FD-01	1304171-07	Soil	4/9/2013
DASS213-0002	1304171-08	Soil	4/10/2013
DASS214-0002	1304171-09	Soil	4/10/2013
DASS215-0002	1304171-10	Soil	4/10/2013
DASS216-0002	1304171-11	Soil	4/10/2013
DASS217-0002	1304171-12	Soil	4/10/2013
DASS218-0002	1304171-13	Soil	4/10/2013
DASS219-0002	1304171-14	Soil	4/10/2013
DASS220-0002	1304171-15	Soil	4/10/2013
DASS221-0002	1304171-16	Soil	4/10/2013
DASS222-0002	1304171-17	Soil	4/10/2013
DASS223-0002	1304171-18	Soil	4/10/2013
DASB-FD-02	1304171-19	Soil	4/10/2013

No administrative issues were encountered during the receipt and analysis of this work order.

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304185

TriMatrix Laboratories received the cooler(s) for this work order on April 11, 2013, at 19:15pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASS201-0002	1304185-01	Soil	4/11/2013
DASS202-0002	1304185-02	Soil	4/11/2013
DASS203-0002	1304185-03	Soil	4/11/2013
DASS204-0002	1304185-04	Soil	4/11/2013
DASS205-0002	1304185-05	Soil	4/11/2013
DASS206-0002	1304185-06	Soil	4/11/2013
DASS207-0002	1304185-07	Soil	4/11/2013
DASB224-0507	1304185-08	Soil	4/11/2013
DASB225-0507	1304185-09	Soil	4/11/2013
DASB226-0507	1304185-10	Soil	4/11/2013
DASB227-0507	1304185-11	Soil	4/11/2013
DASB-FD-03	1304185-12	Soil	4/11/2013

No administrative issues were encountered during the receipt and analysis of this work order.

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	
1304171-17 DASS222-0002	Benzo(a)pyrene
1304171-17 DASS222-0002	Benzo(b)fluoranthene
1304171-17 DASS222-0002	Chrysene
1304171-17 DASS222-0002	Pyrene
1304185-11 DASB227-0507	Phenanthrene
1304185-11 DASB227-0507	Pyrene

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	
1304171-01 DASB238-0305	Benzo(b)fluoranthene
1304171-01 DASB238-0305	Phenanthrene
1304171-01 DASB238-0305	Pyrene
1304171-17 DASS222-0002	Benzo(a)anthracene
1304171-17 DASS222-0002	Fluoranthene
1304185-11 DASB227-0507	Anthracene
1304185-11 DASB227-0507	Benzo(a)anthracene
1304185-11 DASB227-0507	Benzo(b)fluoranthene
1304185-11 DASB227-0507	Chrysene
1304185-11 DASB227-0507	Fluoranthene

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:	
1303247-MS1	Dibenz(a,h)anthracene
1303247-MS1	Indeno(1,2,3-cd)pyrene
1303247-MS2	Benzo(b)fluoranthene
1303247-MS2	Benzo(k)fluoranthene
1303247-MSD1	Benzo(b)fluoranthene
1303247-MSD1	Benzo(k)fluoranthene

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte:	
1303247-MSD2	Benzo(b)fluoranthene
1303247-MSD2	Benzo(k)fluoranthene
1303247-MSD2	Dibenz(a,h)anthracene
1303302-MS1	Benzo(b)fluoranthene
1303302-MS1	Benzo(k)fluoranthene
1303302-MS1	Dibenz(a,h)anthracene
1303302-MS1	Indeno(1,2,3-cd)pyrene
1303302-MSD1	Dibenz(a,h)anthracene
1304171-01 DASB238-0305	Benzo(b)fluoranthene
1304171-01 DASB238-0305	Benzo(k)fluoranthene
1304171-02 DASB239-0305	Benzo(b)fluoranthene
1304171-02 DASB239-0305	Benzo(k)fluoranthene
1304171-03 DASB240-0305	Benzo(b)fluoranthene
1304171-03 DASB240-0305	Benzo(k)fluoranthene
1304171-03 DASB240-0305	Dibenz(a,h)anthracene
1304171-03 DASB240-0305	Naphthalene
1304171-04 DASB241-0305	2-Methylnaphthalene
1304171-04 DASB241-0305	Benzo(b)fluoranthene
1304171-04 DASB241-0305	Benzo(k)fluoranthene
1304171-05 DASB242-0305	Benzo(a)pyrene
1304171-05 DASB242-0305	Benzo(b)fluoranthene
1304171-05 DASB242-0305	Benzo(k)fluoranthene
1304171-05 DASB242-0305	Indeno(1,2,3-cd)pyrene
1304171-05 DASB242-0305	Nitrobenzene-d5
1304171-06 DASB243-0305	Benzo(b)fluoranthene
1304171-06 DASB243-0305	Benzo(k)fluoranthene
1304171-06 DASB243-0305	Dibenz(a,h)anthracene
1304171-07 DASB-FD-01	Benzo(b)fluoranthene
1304171-07 DASB-FD-01	Benzo(k)fluoranthene
1304171-07 DASB-FD-01	Dibenz(a,h)anthracene
1304171-08 DASS213-0002	2-Methylnaphthalene
1304171-08 DASS213-0002	Acenaphthylene
1304171-08 DASS213-0002	Benzo(b)fluoranthene
1304171-08 DASS213-0002	Benzo(k)fluoranthene
1304171-08 DASS213-0002	Fluorene
1304171-09 DASS214-0002	2-Methylnaphthalene
1304171-09 DASS214-0002	Anthracene

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

5560 Corporate Exchange Court SE ▲ Grand Rapids, MI 49512

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte:	1304171-09 DASS214-0002	Benzo(b)fluoranthene
	1304171-09 DASS214-0002	Benzo(k)fluoranthene
	1304171-09 DASS214-0002	Chrysene
	1304171-09 DASS214-0002	Nitrobenzene-d5
	1304171-10 DASS215-0002	Anthracene
	1304171-10 DASS215-0002	Benzo(b)fluoranthene
	1304171-10 DASS215-0002	Benzo(g,h,i)perylene
	1304171-10 DASS215-0002	Benzo(k)fluoranthene
	1304171-10 DASS215-0002	Chrysene
	1304171-10 DASS215-0002	Nitrobenzene-d5
	1304171-11 DASS216-0002	Benzo(b)fluoranthene
	1304171-11 DASS216-0002	Benzo(k)fluoranthene
	1304171-11 DASS216-0002	Dibenz(a,h)anthracene
	1304171-11 DASS216-0002	Indeno(1,2,3-cd)pyrene
	1304171-12 DASS217-0002	Benzo(b)fluoranthene
	1304171-12 DASS217-0002	Benzo(k)fluoranthene
	1304171-12 DASS217-0002	Fluorene
	1304171-13 DASS218-0002	Benzo(b)fluoranthene
	1304171-13 DASS218-0002	Benzo(k)fluoranthene
	1304171-13 DASS218-0002	Dibenz(a,h)anthracene
	1304171-14 DASS219-0002	2-Methylnaphthalene
	1304171-14 DASS219-0002	Benzo(b)fluoranthene
	1304171-14 DASS219-0002	Benzo(k)fluoranthene
	1304171-14 DASS219-0002	Dibenz(a,h)anthracene
	1304171-14 DASS219-0002	Naphthalene
	1304171-15 DASS220-0002	Benzo(b)fluoranthene
	1304171-15 DASS220-0002	Benzo(k)fluoranthene
	1304171-15 DASS220-0002	Dibenz(a,h)anthracene
	1304171-16 DASS221-0002	Benzo(b)fluoranthene
	1304171-16 DASS221-0002	Benzo(k)fluoranthene
	1304171-16 DASS221-0002	Fluorene
	1304171-17 DASS222-0002	Benzo(b)fluoranthene
	1304171-17 DASS222-0002	Benzo(k)fluoranthene
	1304171-17 DASS222-0002	Dibenz(a,h)anthracene
	1304171-17 DASS222-0002	Fluorene
	1304171-17 DASS222-0002	Naphthalene
	1304171-17 DASS222-0002	Nitrobenzene-d5

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte:	1304171-18 DASS223-0002	Benzo(b)fluoranthene
	1304171-18 DASS223-0002	Benzo(k)fluoranthene
	1304171-18 DASS223-0002	Dibenz(a,h)anthracene
	1304171-18 DASS223-0002	Naphthalene
	1304171-18 DASS223-0002	Nitrobenzene-d5
	1304171-19 DASB-FD-02	2-Methylnaphthalene
	1304171-19 DASB-FD-02	Benzo(b)fluoranthene
	1304171-19 DASB-FD-02	Benzo(k)fluoranthene
	1304171-19 DASB-FD-02	Dibenz(a,h)anthracene
	1304185-01 DASS201-0002	Acenaphthene
	1304185-01 DASS201-0002	Benzo(b)fluoranthene
	1304185-01 DASS201-0002	Benzo(k)fluoranthene
	1304185-01 DASS201-0002	Dibenz(a,h)anthracene
	1304185-01 DASS201-0002	Fluorene
	1304185-01 DASS201-0002	Nitrobenzene-d5
	1304185-02 DASS202-0002	2-Methylnaphthalene
	1304185-02 DASS202-0002	Benzo(b)fluoranthene
	1304185-02 DASS202-0002	Benzo(k)fluoranthene
	1304185-02 DASS202-0002	Naphthalene
	1304185-03 DASS203-0002	Acenaphthylene
	1304185-03 DASS203-0002	Anthracene
	1304185-03 DASS203-0002	Benzo(b)fluoranthene
	1304185-03 DASS203-0002	Benzo(k)fluoranthene
	1304185-03 DASS203-0002	Dibenz(a,h)anthracene
	1304185-04 DASS204-0002	Acenaphthene
	1304185-04 DASS204-0002	Anthracene
	1304185-04 DASS204-0002	Benzo(b)fluoranthene
	1304185-04 DASS204-0002	Benzo(k)fluoranthene
	1304185-04 DASS204-0002	Dibenz(a,h)anthracene
	1304185-04 DASS204-0002	Fluorene
	1304185-05 DASS205-0002	2-Methylnaphthalene
	1304185-05 DASS205-0002	Benzo(b)fluoranthene
	1304185-05 DASS205-0002	Benzo(k)fluoranthene
	1304185-05 DASS205-0002	Dibenz(a,h)anthracene
	1304185-05 DASS205-0002	Fluorene
	1304185-05 DASS205-0002	Naphthalene
	1304185-06 DASS206-0002	Acenaphthene

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte:	1304185-06 DASS206-0002	Anthracene
	1304185-06 DASS206-0002	Benzo(b)fluoranthene
	1304185-06 DASS206-0002	Benzo(k)fluoranthene
	1304185-06 DASS206-0002	Fluorene
	1304185-06 DASS206-0002	Naphthalene
	1304185-06 DASS206-0002	Nitrobenzene-d5
	1304185-07 DASS207-0002	2-Methylnaphthalene
	1304185-07 DASS207-0002	Benzo(b)fluoranthene
	1304185-07 DASS207-0002	Benzo(k)fluoranthene
	1304185-07 DASS207-0002	Dibenz(a,h)anthracene
	1304185-07 DASS207-0002	Naphthalene
	1304185-08 DASB224-0507	2-Methylnaphthalene
	1304185-08 DASB224-0507	Benzo(b)fluoranthene
	1304185-08 DASB224-0507	Benzo(k)fluoranthene
	1304185-08 DASB224-0507	Dibenz(a,h)anthracene
	1304185-08 DASB224-0507	Indeno(1,2,3-cd)pyrene
	1304185-08 DASB224-0507	Naphthalene
	1304185-09 DASB225-0507	2-Methylnaphthalene
	1304185-09 DASB225-0507	Benzo(b)fluoranthene
	1304185-09 DASB225-0507	Benzo(k)fluoranthene
	1304185-10 DASB226-0507	2-Methylnaphthalene
	1304185-10 DASB226-0507	Benzo(b)fluoranthene
	1304185-10 DASB226-0507	Benzo(k)fluoranthene
	1304185-10 DASB226-0507	Dibenz(a,h)anthracene
	1304185-10 DASB226-0507	Naphthalene
	1304185-10 DASB226-0507	Nitrobenzene-d5
	1304185-11 DASB227-0507	Benzo(b)fluoranthene
	1304185-11 DASB227-0507	Benzo(k)fluoranthene
	1304185-11 DASB227-0507	Dibenz(a,h)anthracene
	1304185-12 DASB-FD-03	2-Methylnaphthalene
	1304185-12 DASB-FD-03	Benzo(b)fluoranthene
	1304185-12 DASB-FD-03	Benzo(k)fluoranthene
	1304185-12 DASB-FD-03	Naphthalene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte: 1304171-09 DASS214-0002
1304171-10 DASS215-0002
1304171-11 DASS216-0002
1304171-12 DASS217-0002
1304171-17 DASS222-0002
1304171-18 DASS223-0002
1304185-01 DASS201-0002
1304185-03 DASS203-0002
1304185-04 DASS204-0002
1304185-06 DASS206-0002
1304185-10 DASB226-0507

Qualification: Surrogate results are unavailable due to positive results in the sample, resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample/Analyte: 1304171-06 DASB243-0305
1304171-14 DASS219-0002

Qualification: Surrogate results are unavailable due to sample matrix interference(s), resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample/Analyte: 1304171-12 DASS217-0002

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Individual sample results relate only to the sample tested.

CART 10 (2-21)

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2283 | PAGE 1 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412-921-7231	Tri Matrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412-443-0244	5560 Corp Exchange Ct. SE
		CARRIER/WAYBILL NUMBER		CITY, STATE
		— Lab Pick Up		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

	DATE YEAR 2013	TIME	SAMPLE ID (E.1304171)	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ML JAR)	TYPE OF ANALYSIS: Pb, AS, PAH	COMMENTS
1.	4/9	1350	DASB238-0305	238	3	5	SO	G	2	2	MS/MSD
2.	4/9	1353	DASB239-0305	239	3	5			1	1	
3.	4/9	1358	DASB240-0305	240	3	5			1	1	
4.	4/9	1402	DASB241-0305	241	3	5			1	1	
5.	4/9	1412	DASB242-0305	242	3	5			1	1	
6.	4/9	1408	DASB243-0305	243	3	5			1	1	
7.	4/9	0000	DASB-FD-01	QC	—	—	QC	G	1	1	
8.	4/10	1050	DASS213-0002	213	0	2	SO		1	1	
9.	4/10	1055	DASS214-0002	214					1	1	
10.	4/10	1100	DASS215-0002	215					1	1	
11.	4/10	1105	DASS216-0002	216					1	1	
12.	4/10	1110	DASS217-0002	217					1	1	
13.	4/10	1115	DASS218-0002	218					1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/10/13	1330	1. RECEIVED BY	4/10/13	1330
2. RELINQUISHED BY	4/10/13	1415	2. RECEIVED BY	4/10/13	1415
3. RELINQUISHED BY	4-10-13	1715	3. RECEIVED BY C. Nardin	4-10-13	1715

COMMENTS: * SB242 - Potentially high PAHs

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. Cart 10 (2-21) CHAIN OF CUSTODY | NUMBER № 2284 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412921 7231	TriMatrix/Gary Wood

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]	Jim Goerdt	412 443 0244	5560 Corp Exchange Ct. SE

CARRIER/WAYBILL NUMBER	CITY, STATE
Lab Pick Up	Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: 4°C

E-1304171

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ml/Jar)	TYPE OF ANALYSIS Pb, As, PAHs								COMMENTS
14.	4/10	1120	DASS219-0002	219	0	2	SO	G	1	1								
15.	↓	1125	DASS220-0002	220	↓	↓	↓	↓	1	1								
16.	↓	1130	DASS221-0002	221	↓	↓	↓	↓	1	1								
17.	↓	1135	DASS222-0002	222	↓	↓	↓	↓	2	2								MS/MSD
18.	↓	1140	DASS223-0002	223	↓	↓	↓	↓	1	1								
19.	↓	0000	DASB-FD-02	QC	-	-	QC	↓	1	1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4/10/13	1330	1. RECEIVED BY [signature]	4/10/13	1330
2. RELINQUISHED BY [signature]	4/10/13	1415	2. RECEIVED BY [signature]	4/10/13	1450
3. RELINQUISHED BY Ray Gibson	4/10/13	1415	3. RECEIVED BY J. Nardin	4-10-13	1715

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #: 130471
Receipt Record Page/Line #: 2-21	New / Add To:
	Project Chemist: CN
	Sample #s:

Recorded by (initials/date): JN 4-10-13

☑ Cooler ☐ Box ☐ Other ____

Qty Received: 2

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
1171596	1758	1171222	1805				

Cooler #	1171596	Cooler #	1171222	Cooler #		Cooler #	
Custody Seals:		Custody Seals:		Custody Seals:		Custody Seals:	
☑ None		☑ None		☐ None		☐ None	
☐ Present / Intact		☐ Present / Intact		☐ Present / Intact		☐ Present / Intact	
☐ Present / Not Intact		☐ Present / Not Intact		☐ Present / Not Intact		☐ Present / Not Intact	
Coolant Location:		Coolant Location:		Coolant Location:		Coolant Location:	
Dispersed / Top / Middle / Bottom		Dispersed / Top / Middle / Bottom		Dispersed / Top / Middle / Bottom		Dispersed / Top / Middle / Bottom	
Coolant/Temperature Taken Via:		Coolant/Temperature Taken Via:		Coolant/Temperature Taken Via:		Coolant/Temperature Taken Via:	
☑ Loose Ice / Avg 2-3 containers		☑ Loose Ice / Avg 2-3 containers		☐ Loose Ice / Avg 2-3 containers		☐ Loose Ice / Avg 2-3 containers	
☐ Bagged Ice / Avg 2-3 containers		☐ Bagged Ice / Avg 2-3 containers		☐ Bagged Ice / Avg 2-3 containers		☐ Bagged Ice / Avg 2-3 containers	
☐ Blue Ice / Avg 2-3 containers		☐ Blue Ice / Avg 2-3 containers		☐ Blue Ice / Avg 2-3 containers		☐ Blue Ice / Avg 2-3 containers	
☐ None / Avg 2-3 containers		☐ None / Avg 2-3 containers		☐ None / Avg 2-3 containers		☐ None / Avg 2-3 containers	
Alternate Temperature Taken Via:		Alternate Temperature Taken Via:		Alternate Temperature Taken Via:		Alternate Temperature Taken Via:	
☑ Temperature Blank (TB)		☐ Temperature Blank (TB)		☐ Temperature Blank (TB)		☐ Temperature Blank (TB)	
☐ 1 Container		☐ 1 Container		☐ 1 Container		☐ 1 Container	
Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C		Recorded °C / Correction Factor °C / Actual °C	
Temp Blank: 0 / 8.9		Temp Blank: 0 / 4.3		Temp Blank:		Temp Blank:	
TB location: Representative / Not Representative		TB location: Representative / Not Representative		TB location: Representative / Not Representative		TB location: Representative / Not Representative	
1: 7.9 / 0 / 7.9		1: 3.2 / 0 / 3.2		1		1	
2: 7.5 / 0 / 7.5		2: 7.6 / 0 / 7.6		2		2	
3: 7.3 / 0 / 7.3		3: 3.8 / 0 / 3.8		3		3	
Average °C: 7.6		Average °C: 6.2		Average °C		Average °C	
☐ Cooler ID on COC?		☐ Cooler ID on COC?		☐ Cooler ID on COC?		☐ Cooler ID on COC?	
☐ VOC Trip Blank received?		☐ VOC Trip Blank received?		☐ VOC Trip Blank received?		☐ VOC Trip Blank received?	

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2283 + #2284

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Average sample temperature ≤6° C?
☐	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-10-13	4-10-13	Yes / No

(3-12)

TETRA TECH NUS, INC. CART 9 CHAIN OF CUSTODY | NUMBER № 2285 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412 921 7231	Trimatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Gorall	412 443 0244	5560 Corp. Exchange Ch
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Trimatrix Pick up		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED:

TYPE OF ANALYSIS: Pb, As, PAHs 40C

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS									COMMENTS
4/11	0750	DASS201-0002	201	0	2	SO	G	1	1								1304185-01
	0755	DASS202-0002	202					1	1								-02
	0800	DASS203-0002	203					1	1								-03
	0805	DASS204-0002	204					1	1								-04
	0810	DASS205-0002	205					1	1								-05
	0820	DASS206-0002	206					1	1								-06
	0825	DASS207-0002	207					1	1								-07
	0850	DASB224-~~0305~~ 0507	224	5	7			1	1							-0507	-08
	0855	DASB225-~~0305~~ 0507	225					1	1							-0507	-09
	~~08~~ 0900	DASB226-~~0305~~ 0507	226					1	1							-0507	-10
	0905	DASB227-~~0305~~ 0507	227					2	2							-0507	-11
	0000	DASB-FD-03	QC	–	–	QC	G	1	1								-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4-11-13	1320	1. RECEIVED BY	4/11/13	1320
2. RELINQUISHED BY	4/11/13	1415	2. RECEIVED BY	4-11-13	1415
3. RELINQUISHED BY	4-11-13	1915	3. RECEIVED BY R. Hardin	4-11-13	1915

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #: 1304185
Receipt Record Page/Line #: 3-12	New / Add To:
	Project Chemist: GLW
	Sample #s:

Recorded by (initials/date)		Qty Received	
JN 4-11-13	☑ Cooler ☐ Box ☐ Other	1	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#) ☐ See Additional Cooler Information Form

Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM0702 / 1957	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		0	5.5
TB location: Representative / Not Representative			
1	5.1	0	5.1
2	3.4	0	3.4
3	4.5	0	4.5
Average °C			5.0
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

Cooler #	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2285

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials: _____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		■	Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☑	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-11-13	4-11-13	Yes / No

HOLDING TIME SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Method: Semivolatile Organic Compounds by EPA Method 8270C

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASB238-0305	04/09/13	04/10/13		04/11/13	2	14	04/11/13	0	40	
DASB239-0305	04/09/13	04/10/13		04/11/13	2	14	04/11/13	0	40	
DASB240-0305	04/09/13	04/10/13		04/11/13	2	14	04/12/13	1	40	
DASB241-0305	04/09/13	04/10/13		04/11/13	2	14	04/12/13	1	40	
DASB242-0305	04/09/13	04/10/13		04/11/13	2	14	04/11/13	0	40	
DASB243-0305	04/09/13	04/10/13		04/11/13	2	14	04/11/13	1	40	
DASB-FD-01	04/09/13	04/10/13		04/11/13	2	14	04/12/13	1	40	
DASS213-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	0	40	
DASS214-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	0	40	
DASS215-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	0	40	
DASS216-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	1	40	
DASS217-0002	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASS218-0002	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASS219-0002	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASS220-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	0	40	
DASS221-0002	04/10/13	04/10/13		04/11/13	1	14	04/11/13	0	40	
DASS222-0002	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASS223-0002	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASB-FD-02	04/10/13	04/10/13		04/11/13	1	14	04/12/13	1	40	
DASS201-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASS202-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASS203-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	

HOLDING TIME SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Method: Semivolatile Organic Compounds by EPA Method 8270C

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASS204-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASS205-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASS206-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASS207-0002	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASB224-0507	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASB225-0507	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASB226-0507	04/11/13	04/11/13		04/12/13	1	14	04/12/13	1	40	
DASB227-0507	04/11/13	04/11/13		04/12/13	1	14	04/12/13	0	40	
DASB-FD-03	04/11/13	04/11/13		04/12/13	1	14	04/12/13	1	40	

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB-CF-04	1304363-02	NM	4/23/2013	4/25/2013	4/25/2013	2	0	2
PCS	%	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/24/2013	1	0	1
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/12/2013	4/12/2013	4/12/2013	0	0	0
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS219-0002	1304171-14	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/L	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/L	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/L	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

Field Duplicate Precision

ANALYTE	DASB241-0305	DASB-FD-01	RPD	DIFFERENCE
2-METHYLNAPHTHALENE	ND	0.02	200.00	0.19
ACENAPHTHENE	0.23	0.065	111.86	0.165
ACENAPHTHYLENE	ND	0.023	200.00	0.187
ANTHRACENE	0.57	0.16	112.33	0.41
BENZO(A)ANTHRACENE	1.3	0.56	79.57	0.74
BENZO(A)PYRENE	1.1	0.34	105.56	0.76
BENZO(B)FLUORANTHENE	1.2	0.47	87.43	0.73
BENZO(G,H,I)PERYLENE	0.57	0.2	96.10	0.37
BENZO(K)FLUORANTHENE	0.64	0.23	94.25	0.41
CHRYSENE	1.3	0.39	107.69	0.91
DIBENZO(A,H)ANTHRACENE	0.11	0.044	85.71	0.066
FLUORANTHENE	2.3	0.74	102.63	1.56
FLUORENE	0.26	0.086	100.58	0.174
INDENO(1,2,3-CD)PYRENE	0.55	0.17	105.56	0.38
NAPHTHALENE	ND	0.017	200.00	0.193
PHENANTHRENE	2.1	0.68	102.16	1.42
PYRENE	3	0.85	111.69	2.15

Field Duplicate Precision

ANALYTE	DASS222-0002	DASB-FD-02	RPD	DIFFERENCE
ACENAPHTHENE	0.2	0.21	4.88	0.01
ACENAPHTHYLENE	ND	0.058	200.00	0.142
ANTHRACENE	0.12	0.53	126.15	0.41
BENZO(A)ANTHRACENE	0.6	1.4	80.00	0.8
BENZO(A)PYRENE	0.72	1.4	64.15	0.68
BENZO(B)FLUORANTHENE	0.78	1.6	68.91	0.82
BENZO(G,H,I)PERYLENE	0.44	0.86	64.62	0.42
BENZO(K)FLUORANTHENE	0.45	0.92	68.61	0.47
CHRYSENE	0.62	1.2	63.74	0.58
DIBENZO(A,H)ANTHRACENE	0.097	0.19	64.81	0.093
FLUORANTHENE	0.89	2.3	88.40	1.41
FLUORENE	ND	0.19	200.00	0.01
INDENO(1,2,3-CD)PYRENE	0.37	0.76	69.03	0.39
PHENANTHRENE	0.37	1.7	128.50	1.33
PYRENE	1.1	2.6	81.08	1.5

Field Duplicate Precision

ANALYTE	DASS203-0002	DASB-FD-03	RPD	DIFFERENCE
ACENAPHTHENE	ND	0.064	200.00	0.036
ACENAPHTHYLENE	ND	0.046	200.00	0.054
ANTHRACENE	0.093	0.47	133.93	0.377 ✓
BENZO(A)ANTHRACENE	0.22	0.92	✓ 122.81	0.7
BENZO(A)PYRENE	0.2	0.63	✓ 103.61	0.43
BENZO(B)FLUORANTHENE	0.23	0.81	✓ 111.54	0.58
BENZO(G,H,I)PERYLENE	0.097	0.3	102.27	0.203 ✓
BENZO(K)FLUORANTHENE	0.14	0.4	✓ 96.30	0.26
CHRYSENE	0.24	0.79	✓ 106.80	0.55
DIBENZO(A,H)ANTHRACENE	0.022	0.12	138.03	0.098
FLUORANTHENE	0.41	1.7	✓ 122.27	1.29
FLUORENE	ND	0.12	200.00	0.02
INDENO(1,2,3-CD)PYRENE	0.081	0.29	112.67	0.209 ✓
PHENANTHRENE	0.21	1.5	✓ 150.88	1.29
PYRENE	0.44	1.9	✓ 124.79	1.46

SAMPLE ID SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASB238-0305	1304171-01
DASB239-0305	1304171-02
DASB240-0305	1304171-03
DASB241-0305	1304171-04
DASB242-0305	1304171-05
DASB243-0305	1304171-06
DASB-FD-01	1304171-07
DASS213-0002	1304171-08
DASS214-0002	1304171-09
DASS215-0002	1304171-10
DASS216-0002	1304171-11
DASS217-0002	1304171-12
DASS218-0002	1304171-13
DASS219-0002	1304171-14
DASS220-0002	1304171-15
DASS221-0002	1304171-16
DASS222-0002	1304171-17
DASS223-0002	1304171-18
DASB-FD-02	1304171-19
DASS201-0002	1304185-01
DASS202-0002	1304185-02
DASS203-0002	1304185-03
DASS204-0002	1304185-04
DASS205-0002	1304185-05
DASS206-0002	1304185-06
DASS207-0002	1304185-07
DASB224-0507	1304185-08
DASB225-0507	1304185-09
DASB226-0507	1304185-10
DASB227-0507	1304185-11
DASB-FD-03	1304185-12

INITIAL CALIBRATION STANDARDS
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12010

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
3030363	dftpp tune	3D12010-TUN1	DFT0401d.D	04/01/13 23:29
3040059	10ppm BNA	3D12010-CAL5	10ic0402.D	04/02/13 00:25
3040050	0.5ppm BNA	3D12010-CAL1	05ic0402.D	04/02/13 01:01
3040053	1ppm BNA	3D12010-CAL2	1ic0402.D	04/02/13 01:36
3040055	2ppm BNA	3D12010-CAL3	2ic0402.D	04/02/13 02:11
3040057	5ppm BNA	3D12010-CAL4	5ic0402.D	04/02/13 02:46
3040061	15ppm BNA	3D12010-CAL6	15ic0402.D	04/02/13 03:21
3040063	20ppm BNA	3D12010-CAL7	20ic0402.D	04/02/13 03:56
3040064	25ppm BNA	3D12010-CAL8	25ic0402.D	04/02/13 04:30
3030696	10ppm BNA scv	3D12010-SCV1	scvbna0402.D	04/02/13 05:05

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D12010-TUN1
Injection Date: 04/01/13
Sequence: 3D12010

SDG: 1304171
Project: USCG Atwater Facility
Lab File ID: DFT0401d.D
Injection Time: 23:29
Calibration: 3D12002
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	43.4	PASS
68	Less than 2% of 69	1.46	PASS
69	Less than 200% of 198	43.9	PASS
70	Less than 2% of 69	0.458	PASS
127	40 - 60% of 198	50.2	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	21.8	PASS
365	1.0001 - 200% of 198	2.27	PASS
441	0.0001 - 99.9999% of 443	73.5	PASS
442	40.0001 - 200% of 198	67.8	PASS
443	17 - 23% of 442	19.8	PASS

INITIAL CALIBRATION DATA (Continued)
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Calibration: 3D12002

SDG: 1304171
Project: USCG Atwater Facility
Calibration Date: 04/01/13 09:31
Instrument: 308

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.121526	5.510634	14.43875	6.629395E-02			CCC (30)	
Acenaphthylene	1.806377	5.095022	14.01337	6.701715E-02			15	
Anthracene	1.082515	5.290174	17.94025	4.451184E-02			15	
Benzo(a)anthracene	0.9236851	5.027148	21.44025	2.284323E-02			15	
Benzo(a)pyrene	1.01751	7.033967	23.03188	1.928734E-02			CCC (30)	
Benzo(b)fluoranthene	1.082959	6.639685	22.62537	3.057797E-02			15	
Benzo(k)fluoranthene	1.084051	5.132336	22.65962	2.856803E-02			15	
Benzo(g,h,i)perylene	0.9110282	6.802208	25.184	6.306055E-02			15	
Chrysene	0.8637943	5.408299	21.47975	0.0230674			15	
Dibenz(a,h)anthracene	0.8591882	8.406009	24.73888	3.870046E-02			15	
Fluoranthene	1.0734	6.530408	19.73688	2.703257E-02			CCC (30)	
Fluorene	1.268453	4.34792	15.67312	6.048684E-02			15	
Indeno(1,2,3-cd)pyrene	1.04548	8.380097	24.7075	4.572643E-02			15	
2-Methylnaphthalene	0.581211	5.54386	11.9215	4.326375E-02			15	
Naphthalene	0.8792217	5.309528	10.308	4.557878E-02			15	
Phenanthrene	1.078067	5.687268	17.842	4.193031E-02			15	
Pyrene	1.088552	5.094553	20.025	2.588928E-02			15	
2-Fluorophenol	1.223348	7.000902	5.1945	0.3626669			15	
Phenol-d6	1.642988	4.966526	6.8645	0.2762328			15	
Nitrobenzene-d5	0.3293635	4.669151	8.6925	0.1210947			15	
2-Fluorobiphenyl	1.229164	6.738257	12.83875	6.409869E-02			15	
2,4,6-Tribromophenol	7.371287E-02	11.08117	16.242	6.657071E-02			15	
o-Terphenyl	0.5082389	8.11283	18.57937	0.0348139			15	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D12016-TUN1	DFT0411B.D	04/11/13 08:45
Calibration Check	3D12016-CCV1	10BNA0411A.D	04/11/13 10:17
Blank	1303247-BLK1	1303247-BLK1.D	04/11/13 12:02
LCS	1303247-BS1	1303247-BS1.D	04/11/13 12:37
DASB239-0305	1304171-02	1304171-02.D	04/11/13 13:13
DASB242-0305	1304171-05	1304171-05.D	04/11/13 13:49
DASB238-0305	1304171-01	1304171-01.D	04/11/13 14:24
DASS220-0002	1304171-15	1304171-15.D	04/11/13 17:22
DASS221-0002	1304171-16	1304171-16.D	04/11/13 17:57
DASS213-0002	1304171-08	1304171-08 10X.D	04/11/13 19:08
DASS214-0002	1304171-09	1304171-09 10X.D	04/11/13 19:44
DASS215-0002	1304171-10	1304171-10 10X.D	04/11/13 20:19

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D12016-TUN1
Lab File ID: DFT0411B.D
Injection Date: 04/11/13
Injection Time: 08:45
Sequence: 3D12016
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	40.9	PASS
68	Less than 2% of 69	1.19	PASS
69	Less than 200% of 198	41.5	PASS
70	Less than 2% of 69	0.155	PASS
127	40 - 60% of 198	49.1	PASS
197	Less than 1% of 198	0.275	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.02	PASS
275	10 - 30% of 198	22.5	PASS
365	1.0001 - 200% of 198	2.38	PASS
441	0.0001 - 99.9999% of 443	77.2	PASS
442	40.0001 - 200% of 198	77.6	PASS
443	17 - 23% of 442	19	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D12016-CCV1
Injection Date: 04/11/13
Calibration Date: 04/01/13 09:31
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Lab File ID: 10BNA0411A.D
Injection Time: 10:17
Calibration: 3D12002
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.99	1.121526	1.119965		-0.1	20
Acenaphthylene	A	10.0	9.91	1.806377	1.790535		-0.9	20
Anthracene	A	10.0	10.6	1.082515	1.141648		5.5	20
Benzo(a)anthracene	A	10.0	9.39	0.9236851	0.8669946		-6.1	20
Benzo(a)pyrene	A	10.0	10.1	1.01751	1.026122		0.8	20
Benzo(b)fluoranthene	A	10.0	9.37	1.082959	1.014974		-6.3	20
Benzo(k)fluoranthene	A	10.0	9.97	1.084051	1.080356		-0.3	20
Benzo(g,h,i)perylene	A	10.0	9.12	0.9110282	0.8309815		-8.8	20
Chrysene	A	10.0	10.0	0.8637943	0.8650246		0.1	20
Dibenz(a,h)anthracene	A	10.0	9.59	0.8591882	0.8236076		-4.1	20
Fluoranthene	A	10.0	9.67	1.0734	1.037687		-3.3	20
Fluorene	A	10.0	9.94	1.268453	1.260229		-0.6	20
Indeno(1,2,3-cd)pyrene	A	10.0	9.37	1.04548	0.9800221		-6.3	20
2-Methylnaphthalene	A	10.0	9.03	0.581211	0.5250736		-9.7	20
Naphthalene	A	10.0	9.49	0.8792217	0.8345218		-5.1	20
Phenanthrene	A	10.0	9.03	1.078067	0.9730981		-9.7	20
Pyrene	A	10.0	9.92	1.088552	1.079629		-0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

QC BATCH SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
QC Batch: 1303247
QC Batch Matrix: Soil
Preparation: 3550C Sonication Extraction

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303247-BLK1	04/11/13 09:36	
LCS	1303247-BS1	04/11/13 09:36	
DASB238-0305	1303247-MS1	04/11/13 09:36	
DASS222-0002	1303247-MS2	04/11/13 09:36	
DASB238-0305	1303247-MSD1	04/11/13 09:36	
DASS222-0002	1303247-MSD2	04/11/13 09:36	
DASB238-0305	1304171-01	04/11/13 09:36	DOD PAHs
DASB239-0305	1304171-02	04/11/13 09:36	DOD PAHs
DASB240-0305	1304171-03	04/11/13 09:36	DOD PAHs
DASB241-0305	1304171-04	04/11/13 09:36	DOD PAHs
DASB242-0305	1304171-05	04/11/13 09:36	DOD PAHs
DASB243-0305	1304171-06	04/11/13 09:36	DOD PAHs
DASB-FD-01	1304171-07	04/11/13 09:36	DOD PAHs
DASS213-0002	1304171-08	04/11/13 09:36	DOD PAHs
DASS214-0002	1304171-09	04/11/13 09:36	DOD PAHs
DASS215-0002	1304171-10	04/11/13 09:36	DOD PAHs
DASS216-0002	1304171-11	04/11/13 09:36	DOD PAHs
DASS217-0002	1304171-12	04/11/13 09:36	DOD PAHs
DASS218-0002	1304171-13	04/11/13 09:36	DOD PAHs
DASS219-0002	1304171-14	04/11/13 09:36	DOD PAHs
DASS220-0002	1304171-15	04/11/13 09:36	DOD PAHs
DASS221-0002	1304171-16	04/11/13 09:36	DOD PAHs
DASS222-0002	1304171-17	04/11/13 09:36	DOD PAHs
DASS223-0002	1304171-18	04/11/13 09:36	DOD PAHs
DASB-FD-02	1304171-19	04/11/13 09:36	DOD PAHs

METHOD BLANK DATA SHEET
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303247-BLK1 File ID: 1303247-BLK1.D

Prepared: 04/11/13 09:36 Analyzed: 04/11/13 12:02

Preparation: 3550C Sonication Extract Initial/Final: 29.9 g / 1 mL

QC Batch: 1303247 Sequence: 3D12016 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.017	mg/kg wet	0.0046	0.017	0.017	U
208-96-8	Acenaphthylene	0.017	mg/kg wet	0.0042	0.017	0.017	U
120-12-7	Anthracene	0.017	mg/kg wet	0.0040	0.017	0.017	U
56-55-3	Benzo(a)anthracene	0.0083	mg/kg wet	0.0028	0.0083	0.017	U
50-32-8	Benzo(a)pyrene	0.0083	mg/kg wet	0.0023	0.0083	0.017	U
205-99-2	Benzo(b)fluoranthene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
207-08-9	Benzo(k)fluoranthene	0.0083	mg/kg wet	0.0020	0.0083	0.017	U
191-24-2	Benzo(g,h,i)perylene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
218-01-9	Chrysene	0.017	mg/kg wet	0.0039	0.017	0.017	U
53-70-3	Dibenz(a,h)anthracene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
206-44-0	Fluoranthene	0.017	mg/kg wet	0.0045	0.017	0.017	U
86-73-7	Fluorene	0.017	mg/kg wet	0.0040	0.017	0.017	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	mg/kg wet	0.0027	0.0033	0.017	U
91-57-6	2-Methylnaphthalene	0.017	mg/kg wet	0.0046	0.017	0.017	U
91-20-3	Naphthalene	0.017	mg/kg wet	0.0056	0.017	0.017	U
85-01-8	Phenanthrene	0.017	mg/kg wet	0.0041	0.017	0.017	U
129-00-0	Pyrene	0.017	mg/kg wet	0.0043	0.017	0.017	U

System Monitoring Compound	Added (mg/kg wet)	Conc. (mg/kg wet)	% REC	QC Limits	Q
Nitrobenzene-d5	0.334	0.275	82	35 - 100	
2-Fluorobiphenyl	0.334	0.327	98	45 - 105	
o-Terphenyl	0.338	0.314	93	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	141223	7.873	97874	7.546	
Naphthalene-d8	567473	10.584	407297	10.262	
Acenaphthene-d10	219393	14.681	189519	14.365	
Phenanthrene-d10	405707	18.073	317445	17.798	
Chrysene-d12	434688	21.658	314770	21.453	
Perylene-d12	311150	23.401	230613	23.102	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12027

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D12027-TUN1	DFT0411d.D	04/11/13 21:30
Calibration Check	3D12027-CCV1	10c0411.D	04/11/13 21:51
DASB243-0305	1304171-06	1304171-06 x20.D	04/11/13 23:02
DASS216-0002	1304171-11	1304171-11 x10.D	04/11/13 23:38
DASS217-0002	1304171-12	1304171-12 x50.D	04/12/13 00:13
DASS218-0002	1304171-13	1304171-13 x10.D	04/12/13 00:49
DASB-FD-02	1304171-19	1304171-19 x10.D	04/12/13 02:00
DASB-FD-01	1304171-07	1304171-07.D	04/12/13 02:36
DASB240-0305	1304171-03	1304171-03 x10.D	04/12/13 03:11
DASB241-0305	1304171-04	1304171-04 x10.D	04/12/13 03:47
DASS222-0002	1304171-17	1304171-17 x10.D	04/12/13 04:22
DASS223-0002	1304171-18	1304171-18 x10.D	04/12/13 04:58
DASS222-0002	1303247-MS2	1303247-ms2 x10.D	04/12/13 05:34
DASS222-0002	1303247-MSD2	1303247-msd2 x10.D	04/12/13 06:09

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D12027-TUN1
Lab File ID: DFT0411d.D
Injection Date: 04/11/13
Injection Time: 21:30
Sequence: 3D12027
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	38.5	PASS
68	Less than 2% of 69	1.56	PASS
69	Less than 200% of 198	39.6	PASS
70	Less than 2% of 69	0.524	PASS
127	40 - 60% of 198	47.7	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.61	PASS
275	10 - 30% of 198	22.9	PASS
365	1.0001 - 200% of 198	2.38	PASS
441	0.0001 - 99.9999% of 443	74.1	PASS
442	40.0001 - 200% of 198	85.4	PASS
443	17 - 23% of 442	19.6	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D12027-CCV1
Lab File ID: 10c0411.D
Injection Date: 04/11/13
Injection Time: 21:51
Calibration Date: 04/01/13 09:31
Calibration: 3D12002
Sequence: 3D12027
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.74	1.121526	1.092729		-2.6	20
Acenaphthylene	A	10.0	9.76	1.806377	1.762611		-2.4	20
Anthracene	A	10.0	9.92	1.082515	1.073726		-0.8	20
Benzo(a)anthracene	A	10.0	9.71	0.9236851	0.8973187		-2.9	20
Benzo(a)pyrene	A	10.0	9.93	1.01751	1.010802		-0.7	20
Benzo(b)fluoranthene	A	10.0	8.99	1.082959	0.9739337		-10.1	20
Benzo(k)fluoranthene	A	10.0	10.3	1.084051	1.113728		2.7	20
Benzo(g,h,i)perylene	A	10.0	9.79	0.9110282	0.8917038		-2.1	20
Chrysene	A	10.0	9.51	0.8637943	0.8210894		-4.9	20
Dibenz(a,h)anthracene	A	10.0	10.0	0.8591882	0.8633519		0.5	20
Fluoranthene	A	10.0	9.33	1.0734	1.00103		-6.7	20
Fluorene	A	10.0	10.0	1.268453	1.270483		0.2	20
Indeno(1,2,3-cd)pyrene	A	10.0	9.93	1.04548	1.038045		-0.7	20
2-Methylnaphthalene	A	10.0	9.16	0.581211	0.5321801		-8.4	20
Naphthalene	A	10.0	9.59	0.8792217	0.8432138		-4.1	20
Phenanthrene	A	10.0	9.13	1.078067	0.9841979		-8.7	20
Pyrene	A	10.0	10.1	1.088552	1.103487		1.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D12034-TUN1	DFT0412B.D	04/12/13 08:22
Calibration Check	3D12034-CCV1	10BNA0412.D	04/12/13 08:42
DASS219-0002	1304171-14	1304171-14 20X.D	04/12/13 09:53
DASB238-0305	1303247-MS1	1303247-MS1.D	04/12/13 10:29
DASB238-0305	1303247-MSD1	1303247-MSD1.D	04/12/13 11:05
Blank	1303302-BLK1	1303302-BLK1.D	04/12/13 12:21
LCS	1303302-BS1	1303302-BS1.D	04/12/13 12:57
DASS207-0002	1304185-07	1304185-07.D	04/12/13 13:32
DASB224-0507	1304185-08	1304185-08.D	04/12/13 14:08
DASB225-0507	1304185-09	1304185-09.D	04/12/13 14:43
DASB227-0507	1304185-11	1304185-11.D	04/12/13 15:18
DASS201-0002	1304185-01	1304185-01 5X.D	04/12/13 17:05
DASS202-0002	1304185-02	1304185-02 5X.D	04/12/13 17:41
DASS203-0002	1304185-03	1304185-03 5X.D	04/12/13 18:16
DASS204-0002	1304185-04	1304185-04 5X.D	04/12/13 18:52
DASS205-0002	1304185-05	1304185-05 5X.D	04/12/13 19:27
DASS206-0002	1304185-06	1304185-06 5X.D	04/12/13 20:02

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D12034-TUN1
Lab File ID: DFT0412B.D
Injection Date: 04/12/13
Injection Time: 08:22
Sequence: 3D12034
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	37.3	PASS
68	Less than 2% of 69	1.54	PASS
69	Less than 200% of 198	38.9	PASS
70	Less than 2% of 69	0.295	PASS
127	40 - 60% of 198	46.5	PASS
197	Less than 1% of 198	0.0852	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.68	PASS
275	10 - 30% of 198	23.2	PASS
365	1.0001 - 200% of 198	2.52	PASS
441	0.0001 - 99.9999% of 443	76.7	PASS
442	40.0001 - 200% of 198	90.7	PASS
443	17 - 23% of 442	19.3	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D12034-CCV1
Injection Date: 04/12/13
Calibration Date: 04/01/13 09:31
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Lab File ID: 10BNA0412.D
Injection Time: 08:42
Calibration: 3D12002
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.88	1.121526	1.107789		-1.2	20
Acenaphthylene	A	10.0	9.87	1.806377	1.782236		-1.3	20
Anthracene	A	10.0	10.1	1.082515	1.094112		1.1	20
Benzo(a)anthracene	A	10.0	9.61	0.9236851	0.8873023		-3.9	20
Benzo(a)pyrene	A	10.0	10.2	1.01751	1.036808		1.9	20
Benzo(b)fluoranthene	A	10.0	9.42	1.082959	1.020053		-5.8	20
Benzo(k)fluoranthene	A	10.0	10.3	1.084051	1.112075		2.6	20
Benzo(g,h,i)perylene	A	10.0	9.75	0.9110282	0.8883183		-2.5	20
Chrysene	A	10.0	9.76	0.8637943	0.8426905		-2.4	20
Dibenz(a,h)anthracene	A	10.0	10.2	0.8591882	0.8782982		2.2	20
Fluoranthene	A	10.0	9.29	1.0734	0.9972613		-7.1	20
Fluorene	A	10.0	9.98	1.268453	1.266447		-0.2	20
Indeno(1,2,3-cd)pyrene	A	10.0	10.1	1.04548	1.054616		0.9	20
2-Methylnaphthalene	A	10.0	9.03	0.581211	0.5245583		-9.7	20
Naphthalene	A	10.0	9.47	0.8792217	0.8325463		-5.3	20
Phenanthrene	A	10.0	9.09	1.078067	0.9795614		-9.1	20
Pyrene	A	10.0	10.5	1.088552	1.141208		4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

QC BATCH SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303302 QC Batch Matrix: Soil

Preparation: 3550C Sonication Extraction

Sample Name	Lab Sample ID	Date Prepared	Observations
DASS201-0002	1304185-01	04/12/13 08:49	DOD PAHs
DASS202-0002	1304185-02	04/12/13 08:49	DOD PAHs
DASS203-0002	1304185-03	04/12/13 08:49	DOD PAHs
DASS204-0002	1304185-04	04/12/13 08:49	DOD PAHs
DASS205-0002	1304185-05	04/12/13 08:49	DOD PAHs
DASS206-0002	1304185-06	04/12/13 08:49	DOD PAHs
DASS207-0002	1304185-07	04/12/13 08:49	DOD PAHs
DASB224-0507	1304185-08	04/12/13 08:49	DOD PAHs
DASB225-0507	1304185-09	04/12/13 08:49	DOD PAHs
DASB226-0507	1304185-10	04/12/13 08:49	DOD PAHs
DASB227-0507	1304185-11	04/12/13 08:49	DOD PAHs
DASB-FD-03	1304185-12	04/12/13 08:49	DOD PAHs

METHOD BLANK DATA SHEET
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303302-BLK1 File ID: 1303302-BLK1.D

Prepared: 04/12/13 08:09 Analyzed: 04/12/13 12:21

Preparation: 3550C Sonication Extract Initial/Final: 29.8 g / 1 mL

QC Batch: 1303302 Sequence: 3D12034 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.017	mg/kg wet	0.0046	0.017	0.017	U
208-96-8	Acenaphthylene	0.017	mg/kg wet	0.0042	0.017	0.017	U
120-12-7	Anthracene	0.017	mg/kg wet	0.0040	0.017	0.017	U
56-55-3	Benzo(a)anthracene	0.0083	mg/kg wet	0.0028	0.0083	0.017	U
50-32-8	Benzo(a)pyrene	0.0083	mg/kg wet	0.0023	0.0083	0.017	U
205-99-2	Benzo(b)fluoranthene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
207-08-9	Benzo(k)fluoranthene	0.0083	mg/kg wet	0.0020	0.0083	0.017	U
191-24-2	Benzo(g,h,i)perylene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
218-01-9	Chrysene	0.017	mg/kg wet	0.0039	0.017	0.017	U
53-70-3	Dibenz(a,h)anthracene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
206-44-0	Fluoranthene	0.017	mg/kg wet	0.0045	0.017	0.017	U
86-73-7	Fluorene	0.017	mg/kg wet	0.0040	0.017	0.017	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	mg/kg wet	0.0027	0.0033	0.017	U
91-57-6	2-Methylnaphthalene	0.017	mg/kg wet	0.0046	0.017	0.017	U
91-20-3	Naphthalene	0.017	mg/kg wet	0.0056	0.017	0.017	U
85-01-8	Phenanthrene	0.017	mg/kg wet	0.0041	0.017	0.017	U
129-00-0	Pyrene	0.017	mg/kg wet	0.0043	0.017	0.017	U

System Monitoring Compound	Added (mg/kg wet)	Conc. (mg/kg wet)	% REC	QC Limits	Q
Nitrobenzene-d5	0.336	0.301	90	35 - 100	
2-Fluorobiphenyl	0.336	0.326	97	45 - 105	
o-Terphenyl	0.339	0.314	93	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	125254	7.832	97874	7.546	
Naphthalene-d8	515944	10.537	407297	10.262	
Acenaphthene-d10	215273	14.634	189519	14.365	
Phenanthrene-d10	390230	18.044	317445	17.798	
Chrysene-d12	383000	21.635	314770	21.453	
Perylene-d12	281969	23.383	230613	23.102	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D15022

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D15022-TUN1	dft0412d.D	04/12/13 21:21
Calibration Check	3D15022-CCV1	10c0412.D	04/12/13 21:41
DASB226-0507	1304185-10	1304185-10 x5.D	04/12/13 22:51
DASB-FD-03	1304185-12	1304185-12 x5.D	04/12/13 23:27

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D15022-TUN1
Lab File ID: dft0412d.D
Injection Date: 04/12/13
Injection Time: 21:21
Sequence: 3D15022
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	38	PASS
68	Less than 2% of 69	1.6	PASS
69	Less than 200% of 198	39.8	PASS
70	Less than 2% of 69	0.51	PASS
127	40 - 60% of 198	47.7	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.72	PASS
275	10 - 30% of 198	23.2	PASS
365	1.0001 - 200% of 198	2.43	PASS
441	0.0001 - 99.9999% of 443	76.7	PASS
442	40.0001 - 200% of 198	87.6	PASS
443	17 - 23% of 442	19.2	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D15022-CCV1
Lab File ID: 10c0412.D
Injection Date: 04/12/13
Injection Time: 21:41
Calibration Date: 04/01/13 09:31
Calibration: 3D12002
Sequence: 3D15022
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	11.1	1.121526	1.243767		10.9	20
Acenaphthylene	A	10.0	11.2	1.806377	2.017348		11.7	20
Anthracene	A	10.0	11.4	1.082515	1.229104		13.5	20
Benzo(a)anthracene	A	10.0	10.9	0.9236851	1.00507		8.8	20
Benzo(a)pyrene	A	10.0	11.4	1.01751	1.165457		14.5	20
Benzo(b)fluoranthene	A	10.0	11.6	1.082959	1.259607		16.3	20
Benzo(k)fluoranthene	A	10.0	10.8	1.084051	1.172069		8.1	20
Benzo(g,h,i)perylene	A	10.0	11.3	0.9110282	1.033051		13.4	20
Chrysene	A	10.0	10.9	0.8637943	0.9445882		9.4	20
Dibenz(a,h)anthracene	A	10.0	11.7	0.8591882	1.007948		17.3	20
Fluoranthene	A	10.0	10.8	1.0734	1.153604		7.5	20
Fluorene	A	10.0	11.3	1.268453	1.436378		13.2	20
Indeno(1,2,3-cd)pyrene	A	10.0	11.5	1.04548	1.205963		15.4	20
2-Methylnaphthalene	A	10.0	10.3	0.581211	0.5975747		2.8	20
Naphthalene	A	10.0	10.8	0.8792217	0.9459794		7.6	20
Phenanthrene	A	10.0	10.5	1.078067	1.127685		4.6	20
Pyrene	A	10.0	11.6	1.088552	1.257475		15.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D15025

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D15025-TUN1	dft0415.D	04/15/13 07:47
Calibration Check	3D15025-CCV1	10bna0415.D	04/15/13 08:07
DASB227-0507	1303302-MS1	1303302-ms1 2x.D	04/15/13 09:20
DASB227-0507	1303302-MSD1	1303302-msd1 2x.D	04/15/13 09:55

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D15025-TUN1
Lab File ID: dft0415.D
Injection Date: 04/15/13
Injection Time: 07:47
Sequence: 3D15025
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	36.7	PASS
68	Less than 2% of 69	1.66	PASS
69	Less than 200% of 198	38.9	PASS
70	Less than 2% of 69	0.519	PASS
127	40 - 60% of 198	46.9	PASS
197	Less than 1% of 198	0.369	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.54	PASS
275	10 - 30% of 198	23.3	PASS
365	1.0001 - 200% of 198	2.54	PASS
441	0.0001 - 99.9999% of 443	78.8	PASS
442	40.0001 - 200% of 198	90.8	PASS
443	17 - 23% of 442	19	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D15025-CCV1
Injection Date: 04/15/13
Calibration Date: 04/01/13 09:31
Sequence: 3D15025

SDG: 1304171
Project: USCG Atwater Facility
Lab File ID: 10bna0415.D
Injection Time: 08:07
Calibration: 3D12002
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.84	1.121526	1.10411		-1.6	20
Acenaphthylene	A	10.0	9.86	1.806377	1.780365		-1.4	20
Anthracene	A	10.0	9.98	1.082515	1.080201		-0.2	20
Benzo(a)anthracene	A	10.0	9.57	0.9236851	0.8841859		-4.3	20
Benzo(a)pyrene	A	10.0	10.1	1.01751	1.03114		1.3	20
Benzo(b)fluoranthene	A	10.0	9.36	1.082959	1.013276		-6.4	20
Benzo(k)fluoranthene	A	10.0	10.4	1.084051	1.125763		3.8	20
Benzo(g,h,i)perylene	A	10.0	9.56	0.9110282	0.8705588		-4.4	20
Chrysene	A	10.0	9.97	0.8637943	0.8613032		-0.3	20
Dibenz(a,h)anthracene	A	10.0	9.96	0.8591882	0.856096		-0.4	20
Fluoranthene	A	10.0	9.26	1.0734	0.9943338		-7.4	20
Fluorene	A	10.0	9.85	1.268453	1.249959		-1.5	20
Indeno(1,2,3-cd)pyrene	A	10.0	9.83	1.04548	1.027504		-1.7	20
2-Methylnaphthalene	A	10.0	9.13	0.581211	0.530815		-8.7	20
Naphthalene	A	10.0	9.40	0.8792217	0.8264541		-6.0	20
Phenanthrene	A	10.0	9.04	1.078067	0.9746742		-9.6	20
Pyrene	A	10.0	10.4	1.088552	1.128214		3.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D12016-CCV1)		**Lab File ID: 10BNA0411A.lAnalyzed: 04/11/13 10:17**					
Nitrobenzene-d5	9.03	8.69	0.33	+/-1.0	98	80 - 120	
2-Fluorobiphenyl	13.15	12.84	0.31	+/-1.0	97	80 - 120	
o-Terphenyl	18.81	18.58	0.23	+/-1.0	95	80 - 120	
Blank (1303247-BLK1)		**Lab File ID: 1303247-BLK1Analyzed: 04/11/13 12:02**					
Nitrobenzene-d5	9.05	8.69	0.35	+/-1.0	82	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	98	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	93	30 - 125	
LCS (1303247-BS1)		**Lab File ID: 1303247-BS1.DAnalyzed: 04/11/13 12:37**					
Nitrobenzene-d5	9.03	8.69	0.33	+/-1.0	85	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	91	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	91	30 - 125	
DASB239-0305 (1304171-02)		**Lab File ID: 1304171-02.D Analyzed: 04/11/13 13:13**					
Nitrobenzene-d5	9.04	8.69	0.35	+/-1.0	79	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	82	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	85	30 - 125	
DASB242-0305 (1304171-05)		**Lab File ID: 1304171-05.D Analyzed: 04/11/13 13:49**					
Nitrobenzene-d5	9.03	8.69	0.34	+/-1.0	93	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	77	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	73	30 - 125	
DASB238-0305 (1304171-01)		**Lab File ID: 1304171-01.D Analyzed: 04/11/13 14:24**					
Nitrobenzene-d5	9.02	8.69	0.33	+/-1.0	79	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	80	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	79	30 - 125	
DASS220-0002 (1304171-15)		**Lab File ID: 1304171-15.D Analyzed: 04/11/13 17:22**					
Nitrobenzene-d5	9.04	8.69	0.35	+/-1.0	77	35 - 100	
2-Fluorobiphenyl	13.15	12.84	0.31	+/-1.0	80	45 - 105	
o-Terphenyl	18.81	18.58	0.23	+/-1.0	82	30 - 125	
DASS221-0002 (1304171-16)		**Lab File ID: 1304171-16.D Analyzed: 04/11/13 17:57**					
Nitrobenzene-d5	9.03	8.69	0.34	+/-1.0	78	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	80	45 - 105	
o-Terphenyl	18.81	18.58	0.23	+/-1.0	80	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
DASS213-0002 (1304171-08)	**Lab File ID: 1304171-08 10 Analyzed: 04/11/13 19:08**						
Nitrobenzene-d5	9.24	8.69	0.54	+/-1.0	61	35 - 100	
2-Fluorobiphenyl	13.16	12.84	0.32	+/-1.0	73	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	113	30 - 125	
DASS214-0002 (1304171-09)	**Lab File ID: 1304171-09 10 Analyzed: 04/11/13 19:44**						
Nitrobenzene-d5	9.22	8.69	0.53	+/-1.0	90	35 - 100	
2-Fluorobiphenyl	13.17	12.84	0.33	+/-1.0	71	45 - 105	
o-Terphenyl	18.80	18.58	0.22	+/-1.0	74	30 - 125	
DASS215-0002 (1304171-10)	**Lab File ID: 1304171-10 10 Analyzed: 04/11/13 20:19**						
Nitrobenzene-d5	9.34	8.69	0.64	+/-1.0	71	35 - 100	
2-Fluorobiphenyl	13.20	12.84	0.36	+/-1.0	66	45 - 105	
o-Terphenyl	18.81	18.58	0.23	+/-1.0	68	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12027

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D12027-CCV1)		**Lab File ID: 10c0411.D**		**Analyzed: 04/11/13 21:51**			
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	96	80 - 120	
2-Fluorobiphenyl	13.11	12.84	0.27	+/-1.0	95	80 - 120	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	91	80 - 120	
DASS216-0002 (1304171-11)		**Lab File ID: 1304171-11 x1**		**Analyzed: 04/11/13 23:38**			
Nitrobenzene-d5	9.19	8.69	0.49	+/-1.0	63	35 - 100	
2-Fluorobiphenyl	13.12	12.84	0.28	+/-1.0	73	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	76	30 - 125	
DASS218-0002 (1304171-13)		**Lab File ID: 1304171-13 x1**		**Analyzed: 04/12/13 00:49**			
Nitrobenzene-d5	9.10	8.69	0.41	+/-1.0	60	35 - 100	
2-Fluorobiphenyl	13.12	12.84	0.28	+/-1.0	71	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	72	30 - 125	
DASB-FD-02 (1304171-19)		**Lab File ID: 1304171-19 x1**		**Analyzed: 04/12/13 02:00**			
Nitrobenzene-d5	9.12	8.69	0.42	+/-1.0	69	35 - 100	
2-Fluorobiphenyl	13.13	12.84	0.29	+/-1.0	76	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	87	30 - 125	
DASB-FD-01 (1304171-07)		**Lab File ID: 1304171-07.D**		**Analyzed: 04/12/13 02:36**			
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	70	35 - 100	
2-Fluorobiphenyl	13.11	12.84	0.27	+/-1.0	69	45 - 105	
o-Terphenyl	18.79	18.58	0.21	+/-1.0	65	30 - 125	
DASB240-0305 (1304171-03)		**Lab File ID: 1304171-03 x1**		**Analyzed: 04/12/13 03:11**			
Nitrobenzene-d5	9.15	8.69	0.46	+/-1.0	44	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	66	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	79	30 - 125	
DASB241-0305 (1304171-04)		**Lab File ID: 1304171-04 x1**		**Analyzed: 04/12/13 03:47**			
Nitrobenzene-d5	9.09	8.69	0.40	+/-1.0	61	35 - 100	
2-Fluorobiphenyl	13.12	12.84	0.28	+/-1.0	65	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	75	30 - 125	
DASS222-0002 (1304171-17)		**Lab File ID: 1304171-17 x1**		**Analyzed: 04/12/13 04:22**			
Nitrobenzene-d5	9.14	8.69	0.45	+/-1.0	62	35 - 100	
2-Fluorobiphenyl	13.14	12.84	0.30	+/-1.0	74	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	83	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12027

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
DASS223-0002 (1304171-18)	**Lab File ID: 1304171-18 x1(Analyzed: 04/12/13 04:58**						
Nitrobenzene-d5	9.27	8.69	0.58	+/-1.0	57	35 - 100	
2-Fluorobiphenyl	13.15	12.84	0.32	+/-1.0	62	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	75	30 - 125	
Matrix Spike (1303247-MS2)	**Lab File ID: 1303247-ms2 xAnalyzed: 04/12/13 05:34**						
Nitrobenzene-d5	9.08	8.69	0.39	+/-1.0	74	35 - 100	
2-Fluorobiphenyl	13.13	12.84	0.29	+/-1.0	78	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	88	30 - 125	
Matrix Spike Dup (1303247-MSD2)	**Lab File ID: 1303247-msd2 Analyzed: 04/12/13 06:09**						
Nitrobenzene-d5	9.09	8.69	0.39	+/-1.0	71	35 - 100	
2-Fluorobiphenyl	13.13	12.84	0.29	+/-1.0	79	45 - 105	
o-Terphenyl	18.78	18.58	0.20	+/-1.0	82	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D12034-CCV1)		**Lab File ID: 10BNA0412.D Analyzed: 04/12/13 08:42**					
Nitrobenzene-d5	8.98	8.69	0.28	+/-1.0	97	80 - 120	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	97	80 - 120	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	92	80 - 120	
Matrix Spike (1303247-MS1)		**Lab File ID: 1303247-MS1.DAnalyzed: 04/12/13 10:29**					
Nitrobenzene-d5	8.97	8.69	0.28	+/-1.0	80	35 - 100	
2-Fluorobiphenyl	13.09	12.84	0.25	+/-1.0	80	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	73	30 - 125	
Matrix Spike Dup (1303247-MSD1)		**Lab File ID: 1303247-MSD1Analyzed: 04/12/13 11:05**					
Nitrobenzene-d5	8.97	8.69	0.28	+/-1.0	86	35 - 100	
2-Fluorobiphenyl	13.09	12.84	0.25	+/-1.0	83	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	89	30 - 125	
Blank (1303302-BLK1)		**Lab File ID: 1303302-BLK1Analyzed: 04/12/13 12:21**					
Nitrobenzene-d5	9.00	8.69	0.31	+/-1.0	90	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	97	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	93	30 - 125	
LCS (1303302-BS1)		**Lab File ID: 1303302-BS1.DAnalyzed: 04/12/13 12:57**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	74	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	81	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	82	30 - 125	
DASS207-0002 (1304185-07)		**Lab File ID: 1304185-07.D Analyzed: 04/12/13 13:32**					
Nitrobenzene-d5	8.99	8.69	0.30	+/-1.0	79	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	84	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	77	30 - 125	
DASB224-0507 (1304185-08)		**Lab File ID: 1304185-08.D Analyzed: 04/12/13 14:08**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	77	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	78	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	73	30 - 125	
DASB225-0507 (1304185-09)		**Lab File ID: 1304185-09.D Analyzed: 04/12/13 14:43**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	75	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	76	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	74	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
DASB227-0507 (1304185-11)		**Lab File ID: 1304185-11.D Analyzed: 04/12/13 15:18**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	78	35 - 100	
2-Fluorobiphenyl	13.10	12.84	0.26	+/-1.0	84	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	82	30 - 125	
DASS201-0002 (1304185-01)		**Lab File ID: 1304185-01 5XAnalyzed: 04/12/13 17:05**					
Nitrobenzene-d5	9.19	8.69	0.50	+/-1.0	66	35 - 100	
2-Fluorobiphenyl	13.17	12.84	0.33	+/-1.0	68	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	76	30 - 125	
DASS202-0002 (1304185-02)		**Lab File ID: 1304185-02 5XAnalyzed: 04/12/13 17:41**					
Nitrobenzene-d5	9.23	8.69	0.53	+/-1.0	64	35 - 100	
2-Fluorobiphenyl	13.15	12.84	0.31	+/-1.0	70	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	74	30 - 125	
DASS203-0002 (1304185-03)		**Lab File ID: 1304185-03 5XAnalyzed: 04/12/13 18:16**					
Nitrobenzene-d5	9.19	8.69	0.49	+/-1.0	54	35 - 100	
2-Fluorobiphenyl	13.17	12.84	0.33	+/-1.0	68	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	70	30 - 125	
DASS204-0002 (1304185-04)		**Lab File ID: 1304185-04 5XAnalyzed: 04/12/13 18:52**					
Nitrobenzene-d5	9.19	8.69	0.50	+/-1.0	68	35 - 100	
2-Fluorobiphenyl	13.17	12.84	0.33	+/-1.0	79	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	78	30 - 125	
DASS205-0002 (1304185-05)		**Lab File ID: 1304185-05 5XAnalyzed: 04/12/13 19:27**					
Nitrobenzene-d5	9.22	8.69	0.53	+/-1.0	68	35 - 100	
2-Fluorobiphenyl	13.15	12.84	0.32	+/-1.0	78	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	76	30 - 125	
DASS206-0002 (1304185-06)		**Lab File ID: 1304185-06 5XAnalyzed: 04/12/13 20:02**					
Nitrobenzene-d5	9.28	8.69	0.59	+/-1.0	62	35 - 100	
2-Fluorobiphenyl	13.16	12.84	0.32	+/-1.0	68	45 - 105	
o-Terphenyl	18.77	18.58	0.19	+/-1.0	70	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15022

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D15022-CCV1)		**Lab File ID: 10c0412.D**		**Analyzed: 04/12/13 21:41**			
Nitrobenzene-d5	8.95	8.69	0.25	+/-1.0	108	80 - 120	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	107	80 - 120	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	103	80 - 120	
DASB226-0507 (1304185-10)		**Lab File ID: 1304185-10 x5.Analyzed: 04/12/13 22:51**					
Nitrobenzene-d5	9.11	8.69	0.42	+/-1.0	66	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	75	30 - 125	
DASB-FD-03 (1304185-12)		**Lab File ID: 1304185-12 x5.Analyzed: 04/12/13 23:27**					
Nitrobenzene-d5	9.07	8.69	0.38	+/-1.0	68	35 - 100	
2-Fluorobiphenyl	13.07	12.84	0.23	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	73	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D15025-CCV1)		**Lab File ID: 10bna0415.D Analyzed: 04/15/13 08:07**					
Nitrobenzene-d5	8.94	8.69	0.25	+/-1.0	96	80 - 120	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	97	80 - 120	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	92	80 - 120	
Matrix Spike (1303302-MS1)		**Lab File ID: 1303302-ms1 2Analyzed: 04/15/13 09:20**					
Nitrobenzene-d5	8.95	8.69	0.26	+/-1.0	70	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	74	30 - 125	
Matrix Spike Dup (1303302-MSD1)		**Lab File ID: 1303302-msd1 Analyzed: 04/15/13 09:55**					
Nitrobenzene-d5	8.95	8.69	0.26	+/-1.0	69	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	71	30 - 125	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
QC Batch: 1303247

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303247-MS1
Preparation: 3550C Sonication Extraction
Initial/Final: 31 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.387	0.0115	0.368	92	45 - 110	mg/kg dry
Acenaphthylene	0.387	0.00695	0.350	89	45 - 105	mg/kg dry
Anthracene	0.387	0.0151	0.358	89	55 - 105	mg/kg dry
Benzo(a)anthracene	0.387	0.112	0.514	104	50 - 110	mg/kg dry
Benzo(a)pyrene	0.387	0.128	0.500	96	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.387	0.121	0.568	116 *	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.387	0.0834	0.397	81	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.387	0.0879	0.423	87	40 - 125	mg/kg dry
Chrysene	0.387	0.105	0.503	103	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.387	0.0204	0.374	92	40 - 125	mg/kg dry
Fluoranthene	0.387	0.128	0.429	78	55 - 115	mg/kg dry
Fluorene	0.387	0.00654	0.363	92	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.387	0.0757	0.441	94	40 - 120	mg/kg dry
2-Methylnaphthalene	0.387	ND	0.300	78	45 - 105	mg/kg dry
Naphthalene	0.387	ND	0.320	83	40 - 105	mg/kg dry
Phenanthrene	0.387	0.0658	0.552	126 *	50 - 110	mg/kg dry
Pyrene	0.387	0.192	0.704	132 *	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303247

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303247-MSD1

Preparation: 3550C Sonication Extraction

Initial/Final: 29.6 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.405	0.379	91	3	30	45 - 110	mg/kg dry
Acenaphthylene	0.405	0.360	87	3	30	45 - 105	mg/kg dry
Anthracene	0.405	0.393	93	9	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.405	0.502	96	2	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.405	0.487	88	3	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.405	0.569	111	0.1	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.405	0.427	85	7	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.405	0.394	76	7	30	40 - 125	mg/kg dry
Chrysene	0.405	0.483	93	4	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.405	0.335	78	11	30	40 - 125	mg/kg dry
Fluoranthene	0.405	0.395	66	8	30	55 - 115	mg/kg dry
Fluorene	0.405	0.368	89	1	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.405	0.398	80	10	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.405	0.309	76	3	30	45 - 105	mg/kg dry
Naphthalene	0.405	0.338	84	5	30	40 - 105	mg/kg dry
Phenanthrene	0.405	0.506	109	9	30	50 - 110	mg/kg dry
Pyrene	0.405	0.612	104	14	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303247

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303247-MS2

Preparation: 3550C Sonication Extraction

Initial/Final: 28.5 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.417	ND	0.401	96	45 - 110	mg/kg dry
Acenaphthylene	0.417	ND	0.388	93	45 - 105	mg/kg dry
Anthracene	0.417	0.117	0.505	93	55 - 105	mg/kg dry
Benzo(a)anthracene	0.417	0.602	1.18	138 *	50 - 110	mg/kg dry
Benzo(a)pyrene	0.417	0.715	1.33	147 *	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.417	0.781	1.39	147 *	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.417	0.451	0.972	125	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.417	0.443	0.876	104	40 - 125	mg/kg dry
Chrysene	0.417	0.618	1.28	159 *	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.417	0.0972	0.463	88	40 - 125	mg/kg dry
Fluoranthene	0.417	0.894	1.45	134 *	55 - 115	mg/kg dry
Fluorene	0.417	ND	0.367	88	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.417	0.365	0.789	101	40 - 120	mg/kg dry
2-Methylnaphthalene	0.417	ND	0.250	60	45 - 105	mg/kg dry
Naphthalene	0.417	ND	0.338	81	40 - 105	mg/kg dry
Phenanthrene	0.417	0.373	0.705	80	50 - 110	mg/kg dry
Pyrene	0.417	1.09	1.86	184 *	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303247

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303247-MSD2

Preparation: 3550C Sonication Extraction

Initial/Final: 29.2 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.407	0.375	92	7	30	45 - 110	mg/kg dry
Acenaphthylene	0.407	0.387	95	0.3	30	45 - 105	mg/kg dry
Anthracene	0.407	0.436	78	15	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.407	1.03	104	14	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.407	1.27	135 *	5	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.407	1.39	150 *	0.06	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.407	0.937	119	4	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.407	0.843	98	4	30	40 - 125	mg/kg dry
Chrysene	0.407	1.16	133 *	10	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.407	0.464	90	0.2	30	40 - 125	mg/kg dry
Fluoranthene	0.407	1.21	78	18	30	55 - 115	mg/kg dry
Fluorene	0.407	0.346	85	6	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.407	0.766	98	3	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.407	0.224	55	11	30	45 - 105	mg/kg dry
Naphthalene	0.407	0.318	78	6	30	40 - 105	mg/kg dry
Phenanthrene	0.407	0.631	63	11	30	50 - 110	mg/kg dry
Pyrene	0.407	1.62	131 *	14	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303302

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303302-MS1

Preparation: 3550C Sonication Extraction

Initial/Final: 30.6 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.389	0.0342	0.354	82	45 - 110	mg/kg dry
Acenaphthylene	0.389	0.0121	0.316	78	45 - 105	mg/kg dry
Anthracene	0.389	0.0643	0.535	121 *	55 - 105	mg/kg dry
Benzo(a)anthracene	0.389	0.212	0.712	129 *	50 - 110	mg/kg dry
Benzo(a)pyrene	0.389	0.183	0.571	100	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.389	0.224	0.682	118 *	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.389	0.120	0.428	79	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.389	0.0844	0.422	87	40 - 125	mg/kg dry
Chrysene	0.389	0.190	0.659	121 *	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.389	0.0188	0.341	83	40 - 125	mg/kg dry
Fluoranthene	0.389	0.330	0.976	166 *	55 - 115	mg/kg dry
Fluorene	0.389	0.0510	0.379	84	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.389	0.0823	0.437	91	40 - 120	mg/kg dry
2-Methylnaphthalene	0.389	0.0129	0.267	65	45 - 105	mg/kg dry
Naphthalene	0.389	0.0159	0.289	70	40 - 105	mg/kg dry
Phenanthrene	0.389	0.233	0.977	191 *	50 - 110	mg/kg dry
Pyrene	0.389	0.398	1.13	189 *	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303302

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303302-MSD1

Preparation: 3550C Sonication Extraction

Initial/Final: 29.4 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.405	0.377	85	6	30	45 - 110	mg/kg dry
Acenaphthylene	0.405	0.327	78	4	30	45 - 105	mg/kg dry
Anthracene	0.405	0.462	98	15	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.405	0.620	101	14	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.405	0.515	82	10	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.405	0.593	91	14	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.405	0.381	64	12	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.405	0.403	79	5	30	40 - 125	mg/kg dry
Chrysene	0.405	0.613	104	7	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.405	0.342	80	0.3	30	40 - 125	mg/kg dry
Fluoranthene	0.405	0.722	97	30	30	55 - 115	mg/kg dry
Fluorene	0.405	0.419	91	10	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.405	0.394	77	11	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.405	0.306	72	14	30	45 - 105	mg/kg dry
Naphthalene	0.405	0.316	74	9	30	40 - 105	mg/kg dry
Phenanthrene	0.405	0.807	142 *	19	30	50 - 110	mg/kg dry
Pyrene	0.405	0.940	134 *	19	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303247-BS1
Preparation: 3550C Sonication Extraction
Initial/Final: 30.2 g / 1 mL

QC Batch: 1303247
Sequence: 3D12016

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.331	0.309	93	45 - 110	mg/kg wet
Acenaphthylene	0.331	0.304	92	45 - 105	mg/kg wet
Anthracene	0.331	0.331	100	55 - 105	mg/kg wet
Benzo(a)anthracene	0.331	0.293	89	50 - 110	mg/kg wet
Benzo(a)pyrene	0.331	0.318	96	50 - 110	mg/kg wet
Benzo(b)fluoranthene	0.331	0.268	81	45 - 115	mg/kg wet
Benzo(k)fluoranthene	0.331	0.353	106	45 - 125	mg/kg wet
Benzo(g,h,i)perylene	0.331	0.306	93	40 - 125	mg/kg wet
Chrysene	0.331	0.346	104	55 - 110	mg/kg wet
Dibenz(a,h)anthracene	0.331	0.314	95	40 - 125	mg/kg wet
Fluoranthene	0.331	0.307	93	55 - 115	mg/kg wet
Fluorene	0.331	0.302	91	50 - 110	mg/kg wet
Indeno(1,2,3-cd)pyrene	0.331	0.309	93	40 - 120	mg/kg wet
2-Methylnaphthalene	0.331	0.260	78	45 - 105	mg/kg wet
Naphthalene	0.331	0.285	86	40 - 105	mg/kg wet
Phenanthrene	0.331	0.286	86	50 - 110	mg/kg wet
Pyrene	0.331	0.317	96	45 - 125	mg/kg wet

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303302-BS1
Preparation: 3550C Sonication Extraction
Initial/Final: 30.1 g / 1 mL
Sequence: 3D12034

QC Batch: 1303302

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.332	0.275	83	45 - 110	mg/kg wet
Acenaphthylene	0.332	0.268	81	45 - 105	mg/kg wet
Anthracene	0.332	0.289	87	55 - 105	mg/kg wet
Benzo(a)anthracene	0.332	0.272	82	50 - 110	mg/kg wet
Benzo(a)pyrene	0.332	0.287	86	50 - 110	mg/kg wet
Benzo(b)fluoranthene	0.332	0.285	86	45 - 115	mg/kg wet
Benzo(k)fluoranthene	0.332	0.286	86	45 - 125	mg/kg wet
Benzo(g,h,i)perylene	0.332	0.252	76	40 - 125	mg/kg wet
Chrysene	0.332	0.307	92	55 - 110	mg/kg wet
Dibenz(a,h)anthracene	0.332	0.276	83	40 - 125	mg/kg wet
Fluoranthene	0.332	0.269	81	55 - 115	mg/kg wet
Fluorene	0.332	0.280	84	50 - 110	mg/kg wet
Indeno(1,2,3-cd)pyrene	0.332	0.265	80	40 - 120	mg/kg wet
2-Methylnaphthalene	0.332	0.230	69	45 - 105	mg/kg wet
Naphthalene	0.332	0.253	76	40 - 105	mg/kg wet
Phenanthrene	0.332	0.266	80	50 - 110	mg/kg wet
Pyrene	0.332	0.320	96	45 - 125	mg/kg wet

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D12016-CCV1)			Lab File ID: 10BNA0411A.D			Analyzed: 04/11/13 10:17			
1,4-Dichlorobenzene-d4	124988	7.856	97874	7.546	128	50 - 200	0.3100	+/-0.50	
Naphthalene-d8	519171	10.583	407297	10.262	127	50 - 200	0.3210	+/-0.50	
Acenaphthene-d10	223782	14.687	189519	14.365	118	50 - 200	0.3220	+/-0.50	
Phenanthrene-d10	381534	18.079	317445	17.798	120	50 - 200	0.2810	+/-0.50	
Chrysene-d12	389860	21.658	314770	21.453	124	50 - 200	0.2050	+/-0.50	
Perylene-d12	276381	23.406	230613	23.102	120	50 - 200	0.3040	+/-0.50	
Blank (1303247-BLK1)			Lab File ID: 1303247-BLK1.D			Analyzed: 04/11/13 12:02			
1,4-Dichlorobenzene-d4	141223	7.873	97874	7.546	144	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	567473	10.584	407297	10.262	139	50 - 200	0.3220	+/-0.50	
Acenaphthene-d10	219393	14.681	189519	14.365	116	50 - 200	0.3160	+/-0.50	
Phenanthrene-d10	405707	18.073	317445	17.798	128	50 - 200	0.2750	+/-0.50	
Chrysene-d12	434688	21.658	314770	21.453	138	50 - 200	0.2050	+/-0.50	
Perylene-d12	311150	23.401	230613	23.102	135	50 - 200	0.2990	+/-0.50	
LCS (1303247-BS1)			Lab File ID: 1303247-BS1.D			Analyzed: 04/11/13 12:37			
1,4-Dichlorobenzene-d4	131056	7.873	97874	7.546	134	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	541296	10.584	407297	10.262	133	50 - 200	0.3220	+/-0.50	
Acenaphthene-d10	229164	14.687	189519	14.365	121	50 - 200	0.3220	+/-0.50	
Phenanthrene-d10	386215	18.073	317445	17.798	122	50 - 200	0.2750	+/-0.50	
Chrysene-d12	397383	21.658	314770	21.453	126	50 - 200	0.2050	+/-0.50	
Perylene-d12	284530	23.407	230613	23.102	123	50 - 200	0.3050	+/-0.50	
DASB239-0305 (1304171-02)			Lab File ID: 1304171-02.D			Analyzed: 04/11/13 13:13			
1,4-Dichlorobenzene-d4	135346	7.873	97874	7.546	138	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	533501	10.578	407297	10.262	131	50 - 200	0.3160	+/-0.50	
Acenaphthene-d10	221778	14.675	189519	14.365	117	50 - 200	0.3100	+/-0.50	
Phenanthrene-d10	396849	18.073	317445	17.798	125	50 - 200	0.2750	+/-0.50	
Chrysene-d12	373688	21.658	314770	21.453	119	50 - 200	0.2050	+/-0.50	
Perylene-d12	264394	23.401	230613	23.102	115	50 - 200	0.2990	+/-0.50	
DASB242-0305 (1304171-05)			Lab File ID: 1304171-05.D			Analyzed: 04/11/13 13:49			
1,4-Dichlorobenzene-d4	144574	7.879	97874	7.546	148	50 - 200	0.3330	+/-0.50	
Naphthalene-d8	534340	10.589	407297	10.262	131	50 - 200	0.3270	+/-0.50	
Acenaphthene-d10	233668	14.681	189519	14.365	123	50 - 200	0.3160	+/-0.50	
Phenanthrene-d10	415599	18.073	317445	17.798	131	50 - 200	0.2750	+/-0.50	
Chrysene-d12	367067	21.658	314770	21.453	117	50 - 200	0.2050	+/-0.50	
Perylene-d12	273745	23.406	230613	23.102	119	50 - 200	0.3040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Calibration: 3D12002
Sequence: 3D12016
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASB238-0305 (1304171-01)			Lab File ID: 1304171-01.D			Analyzed: 04/11/13 14:24			
1,4-Dichlorobenzene-d4	134404	7.867	97874	7.546	137	50 - 200	0.3210	+/-0.50	
Naphthalene-d8	540921	10.578	407297	10.262	133	50 - 200	0.3160	+/-0.50	
Acenaphthene-d10	224216	14.681	189519	14.365	118	50 - 200	0.3160	+/-0.50	
Phenanthrene-d10	368535	18.073	317445	17.798	116	50 - 200	0.2750	+/-0.50	
Chrysene-d12	250749	21.658	314770	21.453	80	50 - 200	0.2050	+/-0.50	
Perylene-d12	193108	23.406	230613	23.102	84	50 - 200	0.3040	+/-0.50	
DASS220-0002 (1304171-15)			Lab File ID: 1304171-15.D			Analyzed: 04/11/13 17:22			
1,4-Dichlorobenzene-d4	112844	7.873	97874	7.546	115	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	462478	10.583	407297	10.262	114	50 - 200	0.3210	+/-0.50	
Acenaphthene-d10	196071	14.687	189519	14.365	103	50 - 200	0.3220	+/-0.50	
Phenanthrene-d10	339569	18.079	317445	17.798	107	50 - 200	0.2810	+/-0.50	
Chrysene-d12	251018	21.664	314770	21.453	80	50 - 200	0.2110	+/-0.50	
Perylene-d12	191631	23.418	230613	23.102	83	50 - 200	0.3160	+/-0.50	
DASS221-0002 (1304171-16)			Lab File ID: 1304171-16.D			Analyzed: 04/11/13 17:57			
1,4-Dichlorobenzene-d4	127902	7.873	97874	7.546	131	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	508491	10.584	407297	10.262	125	50 - 200	0.3220	+/-0.50	
Acenaphthene-d10	217557	14.687	189519	14.365	115	50 - 200	0.3220	+/-0.50	
Phenanthrene-d10	369683	18.079	317445	17.798	116	50 - 200	0.2810	+/-0.50	
Chrysene-d12	291512	21.664	314770	21.453	93	50 - 200	0.2110	+/-0.50	
Perylene-d12	199324	23.412	230613	23.102	86	50 - 200	0.3100	+/-0.50	
DASS213-0002 (1304171-08)			Lab File ID: 1304171-08 10X.D			Analyzed: 04/11/13 19:08			
1,4-Dichlorobenzene-d4	121247	7.879	97874	7.546	124	50 - 200	0.3330	+/-0.50	
Naphthalene-d8	467995	10.589	407297	10.262	115	50 - 200	0.3270	+/-0.50	
Acenaphthene-d10	187849	14.687	189519	14.365	99	50 - 200	0.3220	+/-0.50	
Phenanthrene-d10	317071	18.079	317445	17.798	100	50 - 200	0.2810	+/-0.50	
Chrysene-d12	329221	21.664	314770	21.453	105	50 - 200	0.2110	+/-0.50	
Perylene-d12	229826	23.418	230613	23.102	100	50 - 200	0.3160	+/-0.50	
DASS214-0002 (1304171-09)			Lab File ID: 1304171-09 10X.D			Analyzed: 04/11/13 19:44			
1,4-Dichlorobenzene-d4	98975	7.867	97874	7.546	101	50 - 200	0.3210	+/-0.50	
Naphthalene-d8	441162	10.595	407297	10.262	108	50 - 200	0.3330	+/-0.50	
Acenaphthene-d10	174908	14.693	189519	14.365	92	50 - 200	0.3280	+/-0.50	
Phenanthrene-d10	272961	18.085	317445	17.798	86	50 - 200	0.2870	+/-0.50	
Chrysene-d12	172927	21.669	314770	21.453	55	50 - 200	0.2160	+/-0.50	
Perylene-d12	118016	23.424	230613	23.102	51	50 - 200	0.3220	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12016

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASS215-0002 (1304171-10)			Lab File ID:	1304171-10 10X.D		Analyzed:	04/11/13 20:19		
1,4-Dichlorobenzene-d4	103568	7.873	97874	7.546	106	50 - 200	0.3270	+/-0.50	
Naphthalene-d8	445787	10.601	407297	10.262	109	50 - 200	0.3390	+/-0.50	
Acenaphthene-d10	172057	14.693	189519	14.365	91	50 - 200	0.3280	+/-0.50	
Phenanthrene-d10	339637	18.091	317445	17.798	107	50 - 200	0.2930	+/-0.50	
Chrysene-d12	234381	21.669	314770	21.453	74	50 - 200	0.2160	+/-0.50	
Perylene-d12	166439	23.424	230613	23.102	72	50 - 200	0.3220	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Calibration: 3D12002
Sequence: 3D12027
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D12027-CCV1)			Lab File ID:	10c0411.D		Analyzed:	04/11/13 21:51		
1,4-Dichlorobenzene-d4	128686	7.821	97874	7.546	131	50 - 200	0.2750	+/-0.50	
Naphthalene-d8	538469	10.549	407297	10.262	132	50 - 200	0.2870	+/-0.50	
Acenaphthene-d10	239207	14.652	189519	14.365	126	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	427791	18.05	317445	17.798	135	50 - 200	0.2520	+/-0.50	
Chrysene-d12	400443	21.64	314770	21.453	127	50 - 200	0.1870	+/-0.50	
Perylene-d12	291603	23.383	230613	23.102	126	50 - 200	0.2810	+/-0.50	
DASB243-0305 (1304171-06)			Lab File ID:	1304171-06 x20.D		Analyzed:	04/11/13 23:02		
1,4-Dichlorobenzene-d4	116573	7.826	97874	7.546	119	50 - 200	0.2800	+/-0.50	
Naphthalene-d8	535212	10.548	407297	10.262	131	50 - 200	0.2860	+/-0.50	
Acenaphthene-d10	218978	14.646	189519	14.365	116	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	406503	18.044	317445	17.798	128	50 - 200	0.2460	+/-0.50	
Chrysene-d12	359711	21.64	314770	21.453	114	50 - 200	0.1870	+/-0.50	
Perylene-d12	259807	23.377	230613	23.102	113	50 - 200	0.2750	+/-0.50	
DASS216-0002 (1304171-11)			Lab File ID:	1304171-11 x10.D		Analyzed:	04/11/13 23:38		
1,4-Dichlorobenzene-d4	101669	7.826	97874	7.546	104	50 - 200	0.2800	+/-0.50	
Naphthalene-d8	463643	10.548	407297	10.262	114	50 - 200	0.2860	+/-0.50	
Acenaphthene-d10	171762	14.646	189519	14.365	91	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	332595	18.05	317445	17.798	105	50 - 200	0.2520	+/-0.50	
Chrysene-d12	265380	21.635	314770	21.453	84	50 - 200	0.1820	+/-0.50	
Perylene-d12	183722	23.383	230613	23.102	80	50 - 200	0.2810	+/-0.50	
DASS217-0002 (1304171-12)			Lab File ID:	1304171-12 x50.D		Analyzed:	04/12/13 00:13		
1,4-Dichlorobenzene-d4	100414	7.832	97874	7.546	103	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	495538	10.548	407297	10.262	122	50 - 200	0.2860	+/-0.50	
Acenaphthene-d10	188491	14.646	189519	14.365	99	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	360618	18.05	317445	17.798	114	50 - 200	0.2520	+/-0.50	
Chrysene-d12	272021	21.64	314770	21.453	86	50 - 200	0.1870	+/-0.50	
Perylene-d12	185815	23.383	230613	23.102	81	50 - 200	0.2810	+/-0.50	
DASS218-0002 (1304171-13)			Lab File ID:	1304171-13 x10.D		Analyzed:	04/12/13 00:49		
1,4-Dichlorobenzene-d4	107486	7.832	97874	7.546	110	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	495601	10.548	407297	10.262	122	50 - 200	0.2860	+/-0.50	
Acenaphthene-d10	197390	14.646	189519	14.365	104	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	369202	18.05	317445	17.798	116	50 - 200	0.2520	+/-0.50	
Chrysene-d12	273151	21.64	314770	21.453	87	50 - 200	0.1870	+/-0.50	
Perylene-d12	196473	23.383	230613	23.102	85	50 - 200	0.2810	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Calibration: 3D12002
Sequence: 3D12027
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASB-FD-02 (1304171-19)			Lab File ID: 1304171-19 x10.D			Analyzed: 04/12/13 02:00			
1,4-Dichlorobenzene-d4	103857	7.827	97874	7.546	106	50 - 200	0.2810	+/-0.50	
Naphthalene-d8	488809	10.554	407297	10.262	120	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	194856	14.652	189519	14.365	103	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	359518	18.05	317445	17.798	113	50 - 200	0.2520	+/-0.50	
Chrysene-d12	286804	21.64	314770	21.453	91	50 - 200	0.1870	+/-0.50	
Perylene-d12	209760	23.389	230613	23.102	91	50 - 200	0.2870	+/-0.50	
DASB-FD-01 (1304171-07)			Lab File ID: 1304171-07.D			Analyzed: 04/12/13 02:36			
1,4-Dichlorobenzene-d4	127349	7.832	97874	7.546	130	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	539557	10.543	407297	10.262	132	50 - 200	0.2810	+/-0.50	
Acenaphthene-d10	232066	14.652	189519	14.365	122	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	330374	18.062	317445	17.798	104	50 - 200	0.2640	+/-0.50	
Chrysene-d12	253487	21.664	314770	21.453	81	50 - 200	0.2110	+/-0.50	
Perylene-d12	209779	23.418	230613	23.102	91	50 - 200	0.3160	+/-0.50	
DASB240-0305 (1304171-03)			Lab File ID: 1304171-03 x10.D			Analyzed: 04/12/13 03:11			
1,4-Dichlorobenzene-d4	124992	7.832	97874	7.546	128	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	544683	10.554	407297	10.262	134	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	214934	14.652	189519	14.365	113	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	409891	18.056	317445	17.798	129	50 - 200	0.2580	+/-0.50	
Chrysene-d12	369720	21.646	314770	21.453	117	50 - 200	0.1930	+/-0.50	
Perylene-d12	271790	23.395	230613	23.102	118	50 - 200	0.2930	+/-0.50	
DASB241-0305 (1304171-04)			Lab File ID: 1304171-04 x10.D			Analyzed: 04/12/13 03:47			
1,4-Dichlorobenzene-d4	112069	7.832	97874	7.546	115	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	497609	10.554	407297	10.262	122	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	204516	14.652	189519	14.365	108	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	370111	18.056	317445	17.798	117	50 - 200	0.2580	+/-0.50	
Chrysene-d12	254103	21.646	314770	21.453	81	50 - 200	0.1930	+/-0.50	
Perylene-d12	185272	23.395	230613	23.102	80	50 - 200	0.2930	+/-0.50	
DASS222-0002 (1304171-17)			Lab File ID: 1304171-17 x10.D			Analyzed: 04/12/13 04:22			
1,4-Dichlorobenzene-d4	119535	7.838	97874	7.546	122	50 - 200	0.2920	+/-0.50	
Naphthalene-d8	523476	10.554	407297	10.262	129	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	201134	14.652	189519	14.365	106	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	386652	18.056	317445	17.798	122	50 - 200	0.2580	+/-0.50	
Chrysene-d12	317741	21.646	314770	21.453	101	50 - 200	0.1930	+/-0.50	
Perylene-d12	222446	23.395	230613	23.102	96	50 - 200	0.2930	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12027

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASS223-0002 (1304171-18)			Lab File ID: 1304171-18 x10.D			Analyzed: 04/12/13 04:58			
1,4-Dichlorobenzene-d4	115777	7.838	97874	7.546	118	50 - 200	0.2920	+/-0.50	
Naphthalene-d8	534761	10.56	407297	10.262	131	50 - 200	0.2980	+/-0.50	
Acenaphthene-d10	206530	14.658	189519	14.365	109	50 - 200	0.2930	+/-0.50	
Phenanthrene-d10	398910	18.056	317445	17.798	126	50 - 200	0.2580	+/-0.50	
Chrysene-d12	356677	21.646	314770	21.453	113	50 - 200	0.1930	+/-0.50	
Perylene-d12	258044	23.395	230613	23.102	112	50 - 200	0.2930	+/-0.50	
Matrix Spike (1303247-MS2)			Lab File ID: 1303247-ms2 x10.D			Analyzed: 04/12/13 05:34			
1,4-Dichlorobenzene-d4	119860	7.832	97874	7.546	122	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	511241	10.554	407297	10.262	126	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	214913	14.652	189519	14.365	113	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	388087	18.056	317445	17.798	122	50 - 200	0.2580	+/-0.50	
Chrysene-d12	306951	21.646	314770	21.453	98	50 - 200	0.1930	+/-0.50	
Perylene-d12	222266	23.395	230613	23.102	96	50 - 200	0.2930	+/-0.50	
Matrix Spike Dup (1303247-MSD2)			Lab File ID: 1303247-msd2 x10.D			Analyzed: 04/12/13 06:09			
1,4-Dichlorobenzene-d4	112911	7.832	97874	7.546	115	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	507743	10.554	407297	10.262	125	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	205375	14.652	189519	14.365	108	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	374301	18.056	317445	17.798	118	50 - 200	0.2580	+/-0.50	
Chrysene-d12	283669	21.646	314770	21.453	90	50 - 200	0.1930	+/-0.50	
Perylene-d12	203144	23.395	230613	23.102	88	50 - 200	0.2930	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D12034-CCV1)			Lab File ID: 10BNA0412.D			Analyzed: 04/12/13 08:42			
1,4-Dichlorobenzene-d4	129303	7.809	97874	7.546	132	50 - 200	0.2630	+/-0.50	
Naphthalene-d8	531287	10.531	407297	10.262	130	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	229652	14.634	189519	14.365	121	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	404211	18.038	317445	17.798	127	50 - 200	0.2400	+/-0.50	
Chrysene-d12	367705	21.629	314770	21.453	117	50 - 200	0.1760	+/-0.50	
Perylene-d12	272153	23.371	230613	23.102	118	50 - 200	0.2690	+/-0.50	
DASS219-0002 (1304171-14)			Lab File ID: 1304171-14 20X.D			Analyzed: 04/12/13 09:53			
1,4-Dichlorobenzene-d4	100850	7.815	97874	7.546	103	50 - 200	0.2690	+/-0.50	
Naphthalene-d8	499287	10.531	407297	10.262	123	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	203345	14.629	189519	14.365	107	50 - 200	0.2640	+/-0.50	
Phenanthrene-d10	373223	18.032	317445	17.798	118	50 - 200	0.2340	+/-0.50	
Chrysene-d12	284592	21.629	314770	21.453	90	50 - 200	0.1760	+/-0.50	
Perylene-d12	213658	23.371	230613	23.102	93	50 - 200	0.2690	+/-0.50	
Matrix Spike (1303247-MS1)			Lab File ID: 1303247-MS1.D			Analyzed: 04/12/13 10:29			
1,4-Dichlorobenzene-d4	117075	7.809	97874	7.546	120	50 - 200	0.2630	+/-0.50	
Naphthalene-d8	479225	10.525	407297	10.262	118	50 - 200	0.2630	+/-0.50	
Acenaphthene-d10	203916	14.634	189519	14.365	108	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	333703	18.038	317445	17.798	105	50 - 200	0.2400	+/-0.50	
Chrysene-d12	206008	21.634	314770	21.453	65	50 - 200	0.1810	+/-0.50	
Perylene-d12	154762	23.371	230613	23.102	67	50 - 200	0.2690	+/-0.50	
Matrix Spike Dup (1303247-MSD1)			Lab File ID: 1303247-MSD1.D			Analyzed: 04/12/13 11:05			
1,4-Dichlorobenzene-d4	115245	7.815	97874	7.546	118	50 - 200	0.2690	+/-0.50	
Naphthalene-d8	471778	10.525	407297	10.262	116	50 - 200	0.2630	+/-0.50	
Acenaphthene-d10	196247	14.634	189519	14.365	104	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	275270	18.038	317445	17.798	87	50 - 200	0.2400	+/-0.50	
Chrysene-d12	184124	21.635	314770	21.453	58	50 - 200	0.1820	+/-0.50	
Perylene-d12	135724	23.377	230613	23.102	59	50 - 200	0.2750	+/-0.50	
Blank (1303302-BLK1)			Lab File ID: 1303302-BLK1.D			Analyzed: 04/12/13 12:21			
1,4-Dichlorobenzene-d4	125254	7.832	97874	7.546	128	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	515944	10.537	407297	10.262	127	50 - 200	0.2750	+/-0.50	
Acenaphthene-d10	215273	14.634	189519	14.365	114	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	390230	18.044	317445	17.798	123	50 - 200	0.2460	+/-0.50	
Chrysene-d12	383000	21.635	314770	21.453	122	50 - 200	0.1820	+/-0.50	
Perylene-d12	281969	23.383	230613	23.102	122	50 - 200	0.2810	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (1303302-BS1)			Lab File ID:	1303302-BS1.D		Analyzed:	04/12/13 12:57		
1,4-Dichlorobenzene-d4	132590	7.826	97874	7.546	135	50 - 200	0.2800	+/-0.50	
Naphthalene-d8	569140	10.537	407297	10.262	140	50 - 200	0.2750	+/-0.50	
Acenaphthene-d10	240533	14.64	189519	14.365	127	50 - 200	0.2750	+/-0.50	
Phenanthrene-d10	426580	18.044	317445	17.798	134	50 - 200	0.2460	+/-0.50	
Chrysene-d12	368769	21.634	314770	21.453	117	50 - 200	0.1810	+/-0.50	
Perylene-d12	268812	23.383	230613	23.102	117	50 - 200	0.2810	+/-0.50	
DASS207-0002 (1304185-07)			Lab File ID:	1304185-07.D		Analyzed:	04/12/13 13:32		
1,4-Dichlorobenzene-d4	123975	7.827	97874	7.546	127	50 - 200	0.2810	+/-0.50	
Naphthalene-d8	515637	10.531	407297	10.262	127	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	219299	14.634	189519	14.365	116	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	389320	18.038	317445	17.798	123	50 - 200	0.2400	+/-0.50	
Chrysene-d12	274178	21.635	314770	21.453	87	50 - 200	0.1820	+/-0.50	
Perylene-d12	210904	23.383	230613	23.102	91	50 - 200	0.2810	+/-0.50	
DASB224-0507 (1304185-08)			Lab File ID:	1304185-08.D		Analyzed:	04/12/13 14:08		
1,4-Dichlorobenzene-d4	127883	7.826	97874	7.546	131	50 - 200	0.2800	+/-0.50	
Naphthalene-d8	531432	10.531	407297	10.262	130	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	228504	14.634	189519	14.365	121	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	397763	18.044	317445	17.798	125	50 - 200	0.2460	+/-0.50	
Chrysene-d12	308945	21.634	314770	21.453	98	50 - 200	0.1810	+/-0.50	
Perylene-d12	226740	23.383	230613	23.102	98	50 - 200	0.2810	+/-0.50	
DASB225-0507 (1304185-09)			Lab File ID:	1304185-09.D		Analyzed:	04/12/13 14:43		
1,4-Dichlorobenzene-d4	131715	7.821	97874	7.546	135	50 - 200	0.2750	+/-0.50	
Naphthalene-d8	548043	10.531	407297	10.262	135	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	232906	14.634	189519	14.365	123	50 - 200	0.2690	+/-0.50	
Phenanthrene-d10	396370	18.044	317445	17.798	125	50 - 200	0.2460	+/-0.50	
Chrysene-d12	290240	21.635	314770	21.453	92	50 - 200	0.1820	+/-0.50	
Perylene-d12	206956	23.383	230613	23.102	90	50 - 200	0.2810	+/-0.50	
DASB227-0507 (1304185-11)			Lab File ID:	1304185-11.D		Analyzed:	04/12/13 15:18		
1,4-Dichlorobenzene-d4	120783	7.826	97874	7.546	123	50 - 200	0.2800	+/-0.50	
Naphthalene-d8	496006	10.531	407297	10.262	122	50 - 200	0.2690	+/-0.50	
Acenaphthene-d10	212972	14.64	189519	14.365	112	50 - 200	0.2750	+/-0.50	
Phenanthrene-d10	361474	18.044	317445	17.798	114	50 - 200	0.2460	+/-0.50	
Chrysene-d12	267060	21.634	314770	21.453	85	50 - 200	0.1810	+/-0.50	
Perylene-d12	191396	23.383	230613	23.102	83	50 - 200	0.2810	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASS201-0002 (1304185-01)			Lab File ID:	1304185-01 5X.D		Analyzed:	04/12/13 17:05		
1,4-Dichlorobenzene-d4	111608	7.832	97874	7.546	114	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	503315	10.56	407297	10.262	124	50 - 200	0.2980	+/-0.50	
Acenaphthene-d10	195445	14.646	189519	14.365	103	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	357805	18.056	317445	17.798	113	50 - 200	0.2580	+/-0.50	
Chrysene-d12	291519	21.64	314770	21.453	93	50 - 200	0.1870	+/-0.50	
Perylene-d12	208950	23.389	230613	23.102	91	50 - 200	0.2870	+/-0.50	
DASS202-0002 (1304185-02)			Lab File ID:	1304185-02 5X.D		Analyzed:	04/12/13 17:41		
1,4-Dichlorobenzene-d4	118497	7.832	97874	7.546	121	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	529309	10.56	407297	10.262	130	50 - 200	0.2980	+/-0.50	
Acenaphthene-d10	217497	14.646	189519	14.365	115	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	401830	18.05	317445	17.798	127	50 - 200	0.2520	+/-0.50	
Chrysene-d12	324321	21.64	314770	21.453	103	50 - 200	0.1870	+/-0.50	
Perylene-d12	220992	23.389	230613	23.102	96	50 - 200	0.2870	+/-0.50	
DASS203-0002 (1304185-03)			Lab File ID:	1304185-03 5X.D		Analyzed:	04/12/13 18:16		
1,4-Dichlorobenzene-d4	120205	7.838	97874	7.546	123	50 - 200	0.2920	+/-0.50	
Naphthalene-d8	518246	10.56	407297	10.262	127	50 - 200	0.2980	+/-0.50	
Acenaphthene-d10	198506	14.652	189519	14.365	105	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	380830	18.062	317445	17.798	120	50 - 200	0.2640	+/-0.50	
Chrysene-d12	323053	21.64	314770	21.453	103	50 - 200	0.1870	+/-0.50	
Perylene-d12	232041	23.395	230613	23.102	101	50 - 200	0.2930	+/-0.50	
DASS204-0002 (1304185-04)			Lab File ID:	1304185-04 5X.D		Analyzed:	04/12/13 18:52		
1,4-Dichlorobenzene-d4	113906	7.832	97874	7.546	116	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	501518	10.578	407297	10.262	123	50 - 200	0.3160	+/-0.50	
Acenaphthene-d10	187636	14.646	189519	14.365	99	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	366947	18.061	317445	17.798	116	50 - 200	0.2630	+/-0.50	
Chrysene-d12	281033	21.64	314770	21.453	89	50 - 200	0.1870	+/-0.50	
Perylene-d12	194682	23.389	230613	23.102	84	50 - 200	0.2870	+/-0.50	
DASS205-0002 (1304185-05)			Lab File ID:	1304185-05 5X.D		Analyzed:	04/12/13 19:27		
1,4-Dichlorobenzene-d4	103195	7.832	97874	7.546	105	50 - 200	0.2860	+/-0.50	
Naphthalene-d8	473429	10.554	407297	10.262	116	50 - 200	0.2920	+/-0.50	
Acenaphthene-d10	186843	14.646	189519	14.365	99	50 - 200	0.2810	+/-0.50	
Phenanthrene-d10	348292	18.05	317445	17.798	110	50 - 200	0.2520	+/-0.50	
Chrysene-d12	244396	21.64	314770	21.453	78	50 - 200	0.1870	+/-0.50	
Perylene-d12	159769	23.389	230613	23.102	69	50 - 200	0.2870	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D12034

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASS206-0002 (1304185-06)			Lab File ID: 1304185-06 5X.D			Analyzed: 04/12/13 20:02			
1,4-Dichlorobenzene-d4	115835	7.827	97874	7.546	118	50 - 200	0.2810	+/-0.50	
Naphthalene-d8	499074	10.572	407297	10.262	123	50 - 200	0.3100	+/-0.50	
Acenaphthene-d10	194685	14.652	189519	14.365	103	50 - 200	0.2870	+/-0.50	
Phenanthrene-d10	385124	18.056	317445	17.798	121	50 - 200	0.2580	+/-0.50	
Chrysene-d12	306856	21.64	314770	21.453	97	50 - 200	0.1870	+/-0.50	
Perylene-d12	205442	23.395	230613	23.102	89	50 - 200	0.2930	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Calibration: 3D12002
Sequence: 3D15022
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D15022-CCV1)			Lab File ID:	10c0412.D		Analyzed:	04/12/13 21:41		
1,4-Dichlorobenzene-d4	123771	7.762	97874	7.546	126	50 - 200	0.2160	+/-0.50	
Naphthalene-d8	515600	10.496	407297	10.262	127	50 - 200	0.2340	+/-0.50	
Acenaphthene-d10	226304	14.599	189519	14.365	119	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	395081	18.009	317445	17.798	124	50 - 200	0.2110	+/-0.50	
Chrysene-d12	372466	21.611	314770	21.453	118	50 - 200	0.1580	+/-0.50	
Perylene-d12	269012	23.342	230613	23.102	117	50 - 200	0.2400	+/-0.50	
DASB226-0507 (1304185-10)			Lab File ID:	1304185-10 x5.D		Analyzed:	04/12/13 22:51		
1,4-Dichlorobenzene-d4	124491	7.786	97874	7.546	127	50 - 200	0.2400	+/-0.50	
Naphthalene-d8	539955	10.502	407297	10.262	133	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	222363	14.594	189519	14.365	117	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	391219	18.003	317445	17.798	123	50 - 200	0.2050	+/-0.50	
Chrysene-d12	348747	21.605	314770	21.453	111	50 - 200	0.1520	+/-0.50	
Perylene-d12	251439	23.336	230613	23.102	109	50 - 200	0.2340	+/-0.50	
DASB-FD-03 (1304185-12)			Lab File ID:	1304185-12 x5.D		Analyzed:	04/12/13 23:27		
1,4-Dichlorobenzene-d4	117833	7.78	97874	7.546	120	50 - 200	0.2340	+/-0.50	
Naphthalene-d8	521385	10.502	407297	10.262	128	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	217101	14.594	189519	14.365	115	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	378290	18.003	317445	17.798	119	50 - 200	0.2050	+/-0.50	
Chrysene-d12	276675	21.605	314770	21.453	88	50 - 200	0.1520	+/-0.50	
Perylene-d12	190098	23.336	230613	23.102	82	50 - 200	0.2340	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D15025-CCV1)			Lab File ID: 10bna0415.D			Analyzed: 04/15/13 08:07			
1,4-Dichlorobenzene-d4	129241	7.768	97874	7.546	132	50 - 200	0.2220	+/-0.50	
Naphthalene-d8	534723	10.496	407297	10.262	131	50 - 200	0.2340	+/-0.50	
Acenaphthene-d10	233456	14.599	189519	14.365	123	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	411122	18.009	317445	17.798	130	50 - 200	0.2110	+/-0.50	
Chrysene-d12	375481	21.605	314770	21.453	119	50 - 200	0.1520	+/-0.50	
Perylene-d12	271212	23.337	230613	23.102	118	50 - 200	0.2350	+/-0.50	
Matrix Spike (1303302-MS1)			Lab File ID: 1303302-ms1 2x.D			Analyzed: 04/15/13 09:20			
1,4-Dichlorobenzene-d4	127771	7.774	97874	7.546	131	50 - 200	0.2280	+/-0.50	
Naphthalene-d8	558108	10.49	407297	10.262	137	50 - 200	0.2280	+/-0.50	
Acenaphthene-d10	241187	14.594	189519	14.365	127	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	395626	18.009	317445	17.798	125	50 - 200	0.2110	+/-0.50	
Chrysene-d12	310388	21.611	314770	21.453	99	50 - 200	0.1580	+/-0.50	
Perylene-d12	238870	23.342	230613	23.102	104	50 - 200	0.2400	+/-0.50	
Matrix Spike Dup (1303302-MSD1)			Lab File ID: 1303302-msd1 2x.D			Analyzed: 04/15/13 09:55			
1,4-Dichlorobenzene-d4	129330	7.78	97874	7.546	132	50 - 200	0.2340	+/-0.50	
Naphthalene-d8	550091	10.496	407297	10.262	135	50 - 200	0.2340	+/-0.50	
Acenaphthene-d10	228437	14.593	189519	14.365	121	50 - 200	0.2280	+/-0.50	
Phenanthrene-d10	395371	18.009	317445	17.798	125	50 - 200	0.2110	+/-0.50	
Chrysene-d12	293999	21.605	314770	21.453	93	50 - 200	0.1520	+/-0.50	
Perylene-d12	229810	23.336	230613	23.102	100	50 - 200	0.2340	+/-0.50	

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT USCG Cutwater Facility		JOB NUMBER SDG 1304171	
SUBJECT Sample Calculation			
BASED ON		DRAWING NUMBER	
BY Conn Cognetti	CHECKED BY	APPROVED BY	DATE May 14, 2013

Sample DAS5217-0002, Cpyrene

$$\frac{144610}{272021} * 50 * \frac{5\ ng/uL}{1.088552} * \frac{1\ mL}{28.7\ g} * \frac{1}{0.8674} = 4.9\ mg/kg$$

Sample Calculation

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS217-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304171-12 File ID: 1304171-12 x50.D

Sampled: 04/10/13 11:10 Prepared: 04/11/13 09:36 Analyzed: 04/12/13 00:13

Solids: 86.74 Preparation: 3550C Sonication Extract Initial/Final: 28.7 g / 1 mL

QC Batch: 1303247 Sequence: 3D12027 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	50	0.96	0.27	0.96	0.96	U
208-96-8	Acenaphthylene	50	0.96	0.24	0.96	0.96	U
120-12-7	Anthracene	50	0.48	0.23	0.96	0.96	J
56-55-3	Benzo(a)anthracene	50	2.0	0.16	0.48	0.96	
50-32-8	Benzo(a)pyrene	50	2.1	0.13	0.48	0.96	
205-99-2	Benzo(b)fluoranthene	50	2.2	0.11	0.48	0.96	
207-08-9	Benzo(k)fluoranthene	50	1.2	0.11	0.48	0.96	
191-24-2	Benzo(g,h,i)perylene	50	1.4	0.11	0.48	0.96	
218-01-9	Chrysene	50	2.1	0.22	0.96	0.96	
53-70-3	Dibenz(a,h)anthracene	50	0.28	0.11	0.48	0.96	J
206-44-0	Fluoranthene	50	3.7	0.26	0.96	0.96	
86-73-7	Fluorene	50	0.96	0.23	0.96	0.96	U
193-39-5	Indeno(1,2,3-cd)pyrene	50	1.0	0.15	0.19	0.96	
91-57-6	2-Methylnaphthalene	50	0.96	0.26	0.96	0.96	U
91-20-3	Naphthalene	50	0.96	0.32	0.96	0.96	U
85-01-8	Phenanthrene	50	1.8	0.24	0.96	0.96	
129-00-0	Pyrene	50	4.9	0.25	0.96	0.96	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	100414	7.832	97874	7.546	
Naphthalene-d8	495538	10.548	407297	10.262	
Acenaphthene-d10	188491	14.646	189519	14.365	
Phenanthrene-d10	360618	18.05	317445	17.798	
Chrysene-d12	272021	21.64	314770	21.453	
Perylene-d12	185815	23.383	230613	23.102	

* Values outside of QC limits

Quantitation Report (QT Reviewed) Sample Calculation

Data Path : C:\msdchem\1\DATA\041113a_308\
Data File : 1304171-12 x50.D
Acq On : 12 Apr 2013 00:13
Operator : DWJ
Sample : 1304171-12 x50 DA55217-0002 Inst : 308
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 07:46:09 2013
Quant Method : C:\msdchem\1\METHODS\040213bna.M
Quant Title : 8270/625 BNA
QLast Update : Fri Apr 12 07:33:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.832	152	100414	5.00 ng/uL	# 0.01
21) Naphthalene-d8	10.548	136	495538	5.00 ng/uL	# 0.00
43) Acenaphthene-d10	14.646	164	188491	5.00 ng/uL	0.00
67) Phenanthrene-d10	18.050	188	360618	5.00 ng/uL	0.00
82) Chrysene-d12	21.640	240	272021	5.00 ng/uL	# 0.00
93) Perylene-d12	23.383	264	185815	5.00 ng/uL	# 0.00
System Monitoring Compounds					
4) 2-Fluorophenol	5.466	112	3018	0.12 ng/uL	0.00
7) Phenol-d6	7.541	99	343	0.01 ng/uL	0.34
22) Nitrobenzene-d5	9.243	82	127	0.00 ng/uL	0.26
24) Decafluorobiphenyl	9.202	334	2128	0.11 ng/uL	0.00
48) 2-Fluorobiphenyl	13.113	172	4722	0.10 ng/uL	0.00
71) 2,4,6-Tribromophenol	0.000	330	0	0.00 ng/uL	
79) o-Terphenyl	18.773	230	6135	0.17 ng/uL	-0.01
Target Compounds					Qvalue
2) N-Nitroso-dimethylamine	0.000		0	N.D.	
3) Pyridine	2.925	79	3060	0.11 ng/uL#	14
5) Aniline	0.000		0	N.D.	
6) Benzaldehyde	0.000		0	N.D.	
8) Phenol	0.000		0	N.D.	
9) Bis(2-chloroethyl)ether	0.000		0	N.D.	
10) 2-Chlorophenol	0.000		0	N.D.	
11) 1,3-Dichlorobenzene	0.000		0	N.D.	
12) 1,4-Dichlorobenzene	0.000		0	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) Bis(2-chloroisipropyl)...	0.000		0	N.D.	
15) Benzyl Alcohol	0.000		0	N.D.	
16) 2-Methylphenol	0.000		0	N.D.	
17) Acetophenone	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
19) 4-Methylphenol	0.000		0	N.D.	
20) N-Nitroso-di-n-propyla...	0.000		0	N.D.	
23) Nitrobenzene	0.000		0	N.D.	
25) Isophorone	9.598	82	53	0.00 ng/uL#	58
26) 2-Chloroaniline	0.000		0	N.D.	
27) 2-Nitrophenol	0.000		0	N.D.	
28) 2,4-Dimethylphenol	0.000		0	N.D.	
29) Bis(2-chlorethoxy)methane	0.000		0	N.D.	
30) 2,4-Dichlorophenol	0.000		0	N.D.	
31) Benzoic Acid	10.554	105	247	1.02 ng/uL#	1
32) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
33) Naphthalene	10.595	128	1969	0.02 ng/uL#	42
34) 4-Chloroaniline	0.000		0	N.D.	
35) 2,6-Dichlorophenol	0.000		0	N.D.	
36) Hexachlorobutadiene	0.000		0	N.D.	
37) Caprolactam	0.000		0	N.D.	
38) 1,2-Bis(2-chloroethoxy...	0.000		0	N.D.	
39) 4-Chloro-3-methylphenol	0.000		0	N.D.	
40) 2-Methylnaphthalene	12.210	142	176	0.00 ng/uL#	17
41) 1-Methylnaphthalene	12.431	142	1193	0.02 ng/uL#	20

Quantitation Report (QT Reviewed)

Sample Calculation

ata Path : C:\msdchem\1\DATA\041113a_308\
Data File : 1304171-12 x50.D
Acq On : 12 Apr 2013 00:13
Operator : DWJ
Sample : 1304171-12 x50 Inst : 308
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 12 07:46:09 2013
Quant Method : C:\msdchem\1\METHODS\040213bna.M
Quant Title : 8270/625 BNA
QLast Update : Fri Apr 12 07:33:19 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,3 Dinitrobenzene	0.000		0	N.D.	
44) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.	
45) Hexachlorocyclopentadiene	0.000		0	N.D.	
46) 2,4,6-Trichlorophenol	0.000		0	N.D.	
47) 2,4,5-Trichlorophenol	0.000		0	N.D.	
49) 2-Chloronaphthalene	0.000		0	N.D.	
50) 1,1'-Biphenyl	0.000		0	N.D.	
51) 2-Nitroaniline	0.000		0	N.D.	
52) Acenaphthylene	14.314	152	3949	0.06 ng/uL#	66
53) 2,6-Dinitrotoluene	0.000		0	N.D.	
54) Dimethyl Phthalate	0.000		0	N.D.	
55) 3-Nitroaniline	0.000		0	N.D.	
56) Acenaphthene	14.728	153	2322	0.05 ng/uL#	92
57) 2,4-Dinitrophenol	0.000		0	N.D.	
58) Dibenzofuran	15.287	168	174	0.00 ng/uL	91
59) 4-Nitrophenol	0.000		0	N.D.	
60) 2,4-Dinitrotoluene	0.000		0	N.D.	
61) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
62) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
63) Fluorene	15.981	166	4214m	0.09 ng/uL	
64) Diethyl Phthalate	15.829	149	2855	0.06 ng/uL	95
65) 4-Chlorophenyl Phenyl ...	0.000		0	N.D.	
66) 4-Nitroaniline	0.000		0	N.D.	
68) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
69) N-Nitroso-diphenylamine	0.000		0	N.D.	
70) 1,2-Diphenylhydrazine	16.377	182	1570	0.11 ng/uL#	1
72) 4-Bromophenyl Phenyl E...	0.000		0	N.D.	
73) Hexachlorobenzene	0.000		0	N.D.	
74) Atrazine	0.000		0	N.D.	
75) Pentachlorophenol	0.000		0	N.D.	
76) Phenanthrene	18.091	178	68458	0.88 ng/uL	97
77) Anthracene	18.190	178	18411	0.24 ng/uL#	93
78) Carbazole	18.563	167	376	0.01 ng/uL#	56
80) Di-n-butyl Phthalate	19.344	149	589	0.01 ng/uL	100
81) Fluoroanthene	19.938	202	141692	1.83 ng/uL	98
83) Benzidine	20.702	184	133	1.03 ng/uL#	1
84) Pyrene	20.230	202	144610	2.44 ng/uL	97
85) Butyl Benzyl Phthalate	20.877	149	291	0.01 ng/uL	100
86) Bis(2-ethylhexyl) adipate	21.133	129	253	0.01 ng/uL#	100
87) Benzo(a)anthracene	21.629	228	51261	1.02 ng/uL#	91
88) 3,3'-Dichlorobenzidine	21.500	252	221	0.42 ng/uL	92
89) Chrysene	21.664	228	50194	1.07 ng/uL	98
90) Bis(2-ethylhexyl)phtha...	21.664	149	693	0.01 ng/uL#	58
91) Dicyclohexyl Phthalate	21.664	149	497	0.01 ng/uL#	100
92) Di-n-octyl Phthalate	22.357	149	363	0.01 ng/uL#	74
94) Benzo(b)fluoroanthene	22.876	252	43718m	1.09 ng/uL	
95) Benzo(k)fluoranthene	22.894	252	25070m	0.62 ng/uL	
96) Benzo(a)pyrene	23.302	252	39108	1.03 ng/uL	96
97) Indeno(1,2,3-cd)pyrene	25.114	276	19718	0.51 ng/uL	90
98) Dibenz(a,h)anthracene	25.138	278	4319	0.14 ng/uL#	54
99) Benzo(g,h,i)Perylene	25.633	276	24285	0.72 ng/uL	93

Sample Calculation

INITIAL CALIBRATION DATA (Continued)

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Calibration: 3D12002

SDG: 1304171

Project: USCG Atwater Facility

Calibration Date: 04/01/13 09:31

Instrument: 308

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.121526	5.510634	14.43875	6.629395E-02			CCC (30)	
Acenaphthylene	1.806377	5.095022	14.01337	6.701715E-02			15	
Anthracene	1.082515	5.290174	17.94025	4.451184E-02			15	
Benzo(a)anthracene	0.9236851	5.027148	21.44025	2.284323E-02			15	
Benzo(a)pyrene	1.01751	7.033967	23.03188	1.928734E-02			CCC (30)	
Benzo(b)fluoranthene	1.082959	6.639685	22.62537	3.057797E-02			15	
Benzo(k)fluoranthene	1.084051	5.132336	22.65962	2.856803E-02			15	
Benzo(g,h,i)perylene	0.9110282	6.802208	25.184	6.306055E-02			15	
Chrysene	0.8637943	5.408299	21.47975	0.0230674			15	
Dibenz(a,h)anthracene	0.8591882	8.406009	24.73888	3.870046E-02			15	
Fluoranthene	1.0734	6.530408	19.73688	2.703257E-02			CCC (30)	
Fluorene	1.268453	4.34792	15.67312	6.048684E-02			15	
Indeno(1,2,3-cd)pyrene	1.04548	8.380097	24.7075	4.572643E-02			15	
2-Methylnaphthalene	0.581211	5.54386	11.9215	4.326375E-02			15	
Naphthalene	0.8792217	5.309528	10.308	4.557878E-02			15	
Phenanthrene	1.078067	5.687268	17.842	4.193031E-02			15	
Pyrene	1.088552	5.094553	20.025	2.588928E-02			15	
2-Fluorophenol	1.223348	7.000902	5.1945	0.3626669			15	
Phenol-d6	1.642988	4.966526	6.8645	0.2762328			15	
Nitrobenzene-d5	0.3293635	4.669151	8.6925	0.1210947			15	
2-Fluorobiphenyl	1.229164	6.738257	12.83875	6.409869E-02			15	
2,4,6-Tribromophenol	7.371287E-02	11.08117	16.242	6.657071E-02			15	
o-Terphenyl	0.5082389	8.11283	18.57937	0.0348139			15	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**J. LOGAN**	**DATE:**	**May 17, 2013**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –ARSENIC AND LEAD**
USCG ATWATER FACILITY
SAMPLE DELIVERY GROUP (SDG) – 1304171

SAMPLES: 31/Soil/

DASB-FD-01	DASB-FD-02	DASB-FD-03
DASB224-0507	DASB225-0507	DASB226-0507
DASB227-0507	DASB238-0305	DASB239-0305
DASB240-0305	DASB241-0305	DASB242-0305
DASB243-0305	DASS201-0002	DASS202-0002
DASS203-0002	DASS204-0002	DASS205-0002
DASS206-0002	DASS207-0002	DASS213-0002
DASS214-0002	DASS215-0002	DASS216-0002
DASS217-0002	DASS218-0002	DASS219-0002
DASS220-0002	DASS221-0002	DASS222-0002
DASS223-0002		

Overview

The sample set for USCG Atwater Facility, SDG 1304171 consists of thirty one (31) soil environmental samples. This SDG contained three field duplicate pairs: DASB-FD-01/DASB241-0305, DASB-FD-02/DASS222-0002, and DASB-FD-03/DASS203-0002.

All samples were analyzed for arsenic and lead. The samples were collected by TetraTech on April 9th, 10th, and 11th, 2013 and analyzed by TriMatrix Laboratories Inc. Metals analyses were conducted using method 6020A. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Instrument performance and tuning
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Surrogate Recoveries
* • Internal Standard Recoveries
* • Field Duplicate Precision
* • Laboratory Control Sample (LCS) Results
* • Matrix Spike/ Matrix Spike Duplicate (MS/MSD) Results
* • Detection Limits
* • Analyte Quantitation

* - Quality control criteria were met for this parameter.

Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

METALS:

The matrix spike duplicate for preparation batch 1303272 had a percent recovery > 120% for arsenic. The recoveries for the MS, post-digestion spike (PDS), and LCS were within QC limits. The positive arsenic result for sample DASS222-0002 was qualified as estimated (J).

Notes:

The following contaminant was detected in the calibration blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Lead	0.00016 mg/L	0.08 mg/kg

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot, percent solids, and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were raised to the reporting limit and were qualified as non-detected (U).

Internal standard recoveries were not listed on a summary form. The validator verified that all recoveries met the 70%-120% acceptance criteria with the raw data.

Sample DASS220-0002 was re-digested for lead because the initial concentration reported by the laboratory was higher than previous sampling data. Additionally the project manager requested the re-check of the sample result because the x-ray fluorescence (XRF) measurement of the sample was approximately 22 mg/kg. The re-digestion and re-analysis sample concentration for lead was comparable (at 13 mg/kg) to XRF data. The re-analysis data was used for validation.

Results were reported on a dry weight basis.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for "National Functional Guidelines for Inorganic Data Validation", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", October 2010.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02435	NSAMPLE	DASB224-0507			DASB225-0507			DASB226-0507			DASB227-0507		
SDG: 1304171	LAB_ID	1304185-08			1304185-09			1304185-10			1304185-11		
FRACTION: M	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.0			79.0			76.0			84.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		5.1			2.6			4.2			5.9		
LEAD		63			31			35			72		

PROJ_NO: 02435	NSAMPLE	DASB238-0305			DASB239-0305			DASB240-0305			DASB241-0305		
SDG: 1304171	LAB_ID	1304171-01			1304171-02			1304171-03			1304171-04		
FRACTION: M	SAMP_DATE	4/9/2013			4/9/2013			4/9/2013			4/9/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.0			82.0			82.0			81.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		4.5			5.5			7.2			7.7		
LEAD		56			13			120			320		

PROJ_NO: 02435	NSAMPLE	DASB242-0305			DASB243-0305			DASB-FD-01			DASB-FD-02		
SDG: 1304171	LAB_ID	1304171-05			1304171-06			1304171-07			1304171-19		
FRACTION: M	SAMP_DATE	4/9/2013			4/9/2013			4/9/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	85.0			81.0			81.0			84.0		
	DUP_OF							DASB241-0305			DASS222-0002		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		7			6.2			8			4.8		
LEAD		18			38			270			470		

PROJ_NO: 02435	NSAMPLE	DASB-FD-03			DASS201-0002			DASS202-0002			DASS203-0002		
SDG: 1304171	LAB_ID	1304185-12			1304185-01			1304185-02			1304185-03		
FRACTION: M	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	83.0			81.0			79.0			83.0		
	DUP_OF	DASS203-0002											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		5.3			6.7			6.3			5.2		
LEAD		29			66			39			29		

PROJ_NO: 02435	NSAMPLE	DASS204-0002			DASS205-0002			DASS206-0002			DASS207-0002		
SDG: 1304171	LAB_ID	1304185-04			1304185-05			1304185-06			1304185-07		
FRACTION: M	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	79.0			82.0			78.0			85.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		6.2			6.1			8.9			6.1		
LEAD		40			21			410			99		

PROJ_NO: 02435	NSAMPLE	DASS213-0002			DASS214-0002			DASS215-0002			DASS216-0002		
SDG: 1304171	LAB_ID	1304171-08			1304171-09			1304171-10			1304171-11		
FRACTION: M	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			79.0			90.0			81.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		8.3			8.7			7.2			6.8		
LEAD		720			290			370			180		

PROJ_NO: 02435	NSAMPLE	DASS217-0002			DASS218-0002			DASS219-0002			DASS220-0002		
SDG: 1304171	LAB_ID	1304171-12			1304171-13			1304171-14			1304171-15		
FRACTION: M	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			85.0			79.0			88.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		9			9.2			6			18		
LEAD		530			660			270					

PROJ_NO: 02435	NSAMPLE	DASS220-0002RE			DASS221-0002			DASS222-0002			DASS223-0002		
SDG: 1304171	LAB_ID	1304171-15			1304171-16			1304171-17			1304171-18		
FRACTION: M	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013			4/10/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	88.0			88.0			84.0			85.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC					5.1			5.9	J	D	4.2		
LEAD		13			35			720			16		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-FD-01

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 00:00
Solids: 80.92
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-07
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5204 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	8.0	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:59
7439-92-1	Lead, Total	50	270	mg/kg dry wt.	0.33	1.0	5.0		04/12/13 12:28

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-FD-02

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 00:00
Solids: 84.14
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-19
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5442 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.8	mg/kg dry wt.	0.015	0.046	0.092		04/12/13 11:51
7439-92-1	Lead, Total	100	470	mg/kg dry wt.	0.61	1.8	9.2		04/12/13 13:34

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-FD-03

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 00:00
Solids: 83.12
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-12
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5101 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.3	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:46
7439-92-1	Lead, Total	5	29	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 11:50

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB224-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:50
Solids: 84.57
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-08
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5203 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.1	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:12
7439-92-1	Lead, Total	10	63	mg/kg dry wt.	0.066	0.20	1.0		04/15/13 11:15

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB225-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:55
Solids: 78.96
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-09
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5075 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	2.6	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:15
7439-92-1	Lead, Total	5	31	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 11:18

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB226-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 09:00
Solids: 76.20
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-10
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5066 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.2	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:29
7439-92-1	Lead, Total	5	35	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 11:21

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 09:05
Solids: 84.01
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-11
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5066 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.9	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:32
7439-92-1	Lead, Total	10	72	mg/kg dry wt.	0.066	0.20	1.0		04/15/13 11:24

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 13:50
Solids: 83.45
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-01
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5008 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.5	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:25
7439-92-1	Lead, Total	10	56	mg/kg dry wt.	0.066	0.20	1.0		04/12/13 11:54

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB239-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 13:53
Solids: 82.47
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-02
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5113 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.5	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:39
7439-92-1	Lead, Total	5	13	mg/kg dry wt.	0.033	0.10	0.50		04/12/13 12:14

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB240-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 13:58
Solids: 81.71
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-03
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5025 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	7.2	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:42
7439-92-1	Lead, Total	25	120	mg/kg dry wt.	0.16	0.50	2.5		04/12/13 12:17

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB241-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 14:02
Solids: 81.37
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-04
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.507 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	7.7	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:45
7439-92-1	Lead, Total	50	320	mg/kg dry wt.	0.33	1.0	5.0		04/12/13 12:19

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB242-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 14:12
Solids: 84.79
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-05
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.509 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	7.0	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:53
7439-92-1	Lead, Total	5	18	mg/kg dry wt.	0.033	0.10	0.50		04/12/13 12:22

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB243-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/09/13 14:08
Solids: 80.70
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-06
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5223 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.2	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 10:56
7439-92-1	Lead, Total	5	38	mg/kg dry wt.	0.033	0.10	0.50		04/12/13 12:25

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS201-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 07:50
Solids: 81.03
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-01
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.515 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.7	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 09:54
7439-92-1	Lead, Total	10	66	mg/kg dry wt.	0.066	0.20	1.0		04/15/13 10:49

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS202-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 07:55
Solids: 79.33
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-02
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.504 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.3	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 09:57
7439-92-1	Lead, Total	5	39	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 10:52

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS203-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:00
Solids: 83.15
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-03
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5131 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.2	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:00
7439-92-1	Lead, Total	5	29	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 11:01

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS204-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:05
Solids: 79.18
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-04
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5092 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.2	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:03
7439-92-1	Lead, Total	10	40	mg/kg dry wt.	0.066	0.20	1.0		04/15/13 11:04

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS205-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:10
Solids: 81.86
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-05
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5108 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.1	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:06
7439-92-1	Lead, Total	5	21	mg/kg dry wt.	0.033	0.10	0.50		04/15/13 11:07

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS206-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:20
Solids: 77.79
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-06
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5082 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	8.9	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:09
7439-92-1	Lead, Total	50	410	mg/kg dry wt.	0.33	1.0	5.0		04/15/13 11:09

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS207-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 08:25
Solids: 85.40
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304185-07
Prepared: 04/12/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.511 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.1	mg/kg dry wt.	0.016	0.050	0.10		04/15/13 10:24
7439-92-1	Lead, Total	25	99	mg/kg dry wt.	0.16	0.50	2.5		04/15/13 11:12

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS213-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 10:50
Solids: 86.57
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-08
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5082 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	8.3	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:02
7439-92-1	Lead, Total	100	720	mg/kg dry wt.	0.66	2.0	10		04/12/13 12:37

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS214-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 10:55
Solids: 78.68
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-09
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5224 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	8.7	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:05
7439-92-1	Lead, Total	50	290	mg/kg dry wt.	0.33	1.0	5.0		04/12/13 12:40

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS215-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:00
Solids: 89.75
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-10
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5238 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	7.2	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:08
7439-92-1	Lead, Total	50	370	mg/kg dry wt.	0.33	1.0	5.0		04/12/13 12:43

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS216-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:05
Solids: 80.68
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-11
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5136 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.8	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:10
7439-92-1	Lead, Total	25	180	mg/kg dry wt.	0.16	0.50	2.5		04/12/13 12:45

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS217-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:10
Solids: 86.74
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-12
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5383 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	5	9.0	mg/kg dry wt.	0.076	0.23	0.46		04/12/13 13:36
7439-92-1	Lead, Total	100	530	mg/kg dry wt.	0.61	1.9	9.3		04/12/13 12:48

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS218-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:15
Solids: 84.52
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-13
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5133 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	9.2	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:16
7439-92-1	Lead, Total	100	660	mg/kg dry wt.	0.66	2.0	10		04/12/13 12:51

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS219-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:20
Solids: 79.48
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-14
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.503 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.0	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:19
7439-92-1	Lead, Total	50	270	mg/kg dry wt.	0.33	1.0	5.0		04/12/13 12:54

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS220-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:25
Solids: 87.72
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-15
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5053 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	5	18	mg/kg dry wt.	0.082	0.25	0.50		04/12/13 13:00
7439-92-1	Lead, Total	1000	5900	mg/kg dry wt.	6.6	20	100		04/12/13 13:45

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS220-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:25
Solids: 87.72
QC Batch: 1303384

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-15RE1
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5046 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7439-92-1	Lead, Total	5	13	mg/kg dry wt.	0.033	0.10	0.50		04/16/13 10:38

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS221-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:30
Solids: 87.66
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-16
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5359 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.1	mg/kg dry wt.	0.015	0.047	0.093		04/12/13 11:31
7439-92-1	Lead, Total	5	35	mg/kg dry wt.	0.031	0.093	0.47		04/12/13 13:02

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:35
Solids: 84.08
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-17
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.531 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.9	mg/kg dry wt.	0.015	0.047	0.094		04/12/13 11:34
7439-92-1	Lead, Total	200	720	mg/kg dry wt.	1.2	3.8	19		04/12/13 13:48

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS223-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/10/13 11:40
Solids: 85.06
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1304171-18
Prepared: 04/11/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5154 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.2	mg/kg dry wt.	0.016	0.050	0.10		04/12/13 11:48
7439-92-1	Lead, Total	5	16	mg/kg dry wt.	0.033	0.10	0.50		04/12/13 13:31

APPENDIX C

SUPPORT DOCUMENTATION

TETRA TECH NUS, INC. (2-21) CHAIN OF CUSTODY | NUMBER № 2283 | PAGE 1 OF 2

CART 10

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412-921-7231	Tri Matrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 412-443-0244	ADDRESS: 5560 Corp Exchange Ct. SE
		CARRIER/WAYBILL NUMBER: — Lab Pick Up		CITY, STATE: Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

	DATE YEAR 2013	TIME	SAMPLE ID (E.1304171)	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ml Jar)	TYPE OF ANALYSIS: Pb, As, PAH	COMMENTS
1.	4/9	1350	DASB238-0305	238	3	5	SO	G	2	2	MS/MSD
2.	4/9	1353	DASB239-0305	239	3	5			1	1	
3.	4/9	1358	DASB240-0305	240	3	5			1	1	
4.	4/9	1402	DASB241-0305	241	3	5			1	1	
5.	4/9	1442	DASB242-0305	242	3	5			1	1	
6.	4/9	1408	DASB243-0305	243	3	5			1	1	
7.	4/9	0000	DASB-FD-01	QC	–	–	QC	G	1	1	
8.	4/10	1050	DASS213-0002	213	0	2	SO		1	1	
9.	4/10	1055	DASS214-0002	214					1	1	
10.	4/10	1100	DASS215-0002	215					1	1	
11.	4/10	1105	DASS216-0002	216					1	1	
12.	4/10	1110	DASS217-0002	217					1	1	
13.	4/10	1115	DASS218-0002	218					1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/10/13	1330	1. RECEIVED BY	4/10/13	1330
2. RELINQUISHED BY	4/10/13	1715	2. RECEIVED BY	4/10/13	1715
3. RELINQUISHED BY	4-10-13	1715	3. RECEIVED BY: L. Nardin	4-10-13	1715

COMMENTS: * SB242 - Potentially high PAHs

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. Cart 10 (2-21) CHAIN OF CUSTODY | NUMBER № 2284 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412921 7231	TriMatrix/Gary Wood

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]	Jim Goerdt	412 443 0244	5560 Corp Exchange Ct. SE

CARRIER/WAYBILL NUMBER	CITY, STATE
Lab Pick Up	Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: 4°C

E 1304171

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (500ml/Jar)	TYPE OF ANALYSIS Pb, As, PAHs								COMMENTS
14.	4/10	1120	DASS219-0002	219	0	2	SO	G	1	1								
15.	↓	1125	DASS220-0002	220	↓	↓	↓	↓	1	1								
16.	↓	1130	DASS221-0002	221	↓	↓	↓	↓	1	1								
17.	↓	1135	DASS222-0002	222	↓	↓	↓	↓	2	2								MS/MSD
18.	↓	1140	DASS223-0002	223	↓	↓	↓	↓	1	1								
19.	↓	0000	DASB-FD-02	QC	-	-	QC	↓	1	1								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4/10/13	1330	1. RECEIVED BY [signature]	4/10/13	1330
2. RELINQUISHED BY [signature]	4/10/13	1415	2. RECEIVED BY [signature]	4/10/13	1450
3. RELINQUISHED BY Ray Johnson	4/10/13	1415	3. RECEIVED BY D. Hardin	4-10-13	1715

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

(3-12)

TETRA TECH NUS, INC. CERT 9 CHAIN OF CUSTODY | NUMBER № 2285 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412 921 7231	Trimatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412 443 0244	5560 Corp. Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Trimatrix Pick up		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4oC
TYPE OF ANALYSIS: Pb, As, PAHs

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	Pb, As, PAHs	COMMENTS
4/11	0750	DASS201-0002	201	0	2	SO	G	1	1	1304185-01
	0755	DASS202-0002	202					1	1	-02
	0800	DASS203-0002	203					1	1	-03
	0805	DASS204-0002	204					1	1	-04
	0810	DASS205-0002	205					1	1	-05
	0820	DASS206-0002	206					1	1	-06
	0825	DASS207-0002	207					1	1	-07
	0850	DASB224-~~0505~~ 0507	224	5	7			1	1	-0507 -08
	0855	DASB225-~~0505~~ 0507	225					1	1	-0507 -09
	~~08~~ 0900	DASB226-~~0505~~ 0507	226					1	1	-0507 -10
	0905	DASB227-~~0505~~ 0507	227					2	2	-0507 -11
	0000	DASB-FD-03	QC	–	–	QC	G	1	1	-12

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4-11-13	1320	1. RECEIVED BY	4/11/13	1320
2. RELINQUISHED BY	4/11/13	1415	2. RECEIVED BY	4-11-13	1415
3. RELINQUISHED BY	4-11-13	1915	3. RECEIVED BY R. Hardin	4-11-13	1915

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

TETRA TECH NUS - Pittsburgh
USCG Atwater Facility

SDG Executive Summary

This case narrative applies to samples received on April 10, 2013 through April 11, 2013. All samples were scheduled for analysis in accordance with parameters outlined on the field chain of custody record, the TriMatrix bid form, and/or oral and written correspondence between TETRA TECH NUS - Pittsburgh and TriMatrix Laboratories, Inc.

Each sample receipt event was assigned a unique TriMatrix work order number. Sample receipt documentation is included in section A of this data package.

Project Technical Issues/Problems

Project-related data qualification designations and reporting conventions are included in Attachment 1 - *Project Technical Narrative.*

QA/QC Data Qualifications/Narrations

Quality assurance issues and/or quality control data qualifications and narrations related to the analysis and reporting of this SDG are presented in Attachment 2 - *Statement of Data Qualifications.* The absence of a statement page for a particular analyte group (*e.g.* Percent Solids) implies that no qualifying statements were generated for that analyte.

Data Review and Approval

All data was peer-reviewed by a second analyst, and then by appropriate data management staff against laboratory quality control requirements and project specifications. It was then reviewed and approved by the group supervisor/manager prior to further review by the project chemist.

Data Deliverables

This report relates only to the sample(s) as received. Estimates of analytical uncertainties for the test results contained within this report are available upon request. Test results are in compliance with the requirements of the DoD Quality Systems Manual for Environmental Laboratories Version 4.2, the National Environmental Laboratory Accreditation Conference (NELAC), and one or more of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

The data deliverables, both hardcopy and/or electronic (EDD), that comprise this data package are intended to comply with the documents referenced in the introductory section of this narrative. If requested, the EDD will be issued separately from this hardcopy report. Hold time reports for each test procedure are presented following the CLP-like forms section of this report.

Gary L. Wood, Project Chemist

4/30/13
Date

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

Sample Information

Sample ID: 1304171-08 DASS213-0002
Autosampler Position: 60
Sample Date/Time: Friday, April 12, 2013 12:37:28
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):
Number of Replicates: 3
Sample File: C:\Elandata\Sample\3D12014.sam
Method File: c:\elandata\Method\Trimatrix_DoD4.2_Solid_6020A_114.mth
Dataset File: C:\Elandata\DataSet\3D12014\1304171-08.061
Tuning File: C:\Elandata\Tuning\12APR2013_6020A_A.tun
Optimization File: C:\Elandata\Optimize\12APR2013_6020A.dac

$0.072960 \frac{mg}{L} \times \frac{0.05L}{0.5082g} \times \frac{1000g}{1kg} \times \frac{1}{0.8657\%} \times 100DF = 717.8 \frac{mg}{kg}$

reported as $720 \frac{mg}{kg}$

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Report Unit
[>	Ge	72	417357.509	417357.509				mg/L
[	As	75	1891.745	0.001	0.000636	0.000	36.044	mg/L
[	Pb	208	914310.924	1.907	0.072960	0.001	1.492	mg/L
[>	Bi	209	478694.397	478694.397				mg/L

QC Calculated Values

×100

	Analyte	Mass	Int Std % Recovery
[>	Ge	71.922	108.916
[	As	74.922	
[	Pb	207.977	
[>	Bi	208.980	101.789

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Replicates

Repeat 1

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	420273.045	420273.045		mg/L
As	75	1877.464	0.001	0.000630	mg/L
Pb	208	902503.800	1.875	0.071728	mg/L
Bi	209	480599.106	480599.106		mg/L

Repeat 2

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	413014.401	413014.401		mg/L
As	75	2001.209	0.001	0.000664	mg/L
Pb	208	915984.537	1.918	0.073359	mg/L
Bi	209	476940.604	476949.604		mg/L

Repeat 3

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	418785.082	418785.082		mg/L
As	75	1766.562	0.001	0.000405	mg/L
Pb	208	924444.436	1.929	0.073792	mg/L
Bi	209	478534.481	478534.481		mg/L

USCG: ATWATER FACILITY - DETROIT, MI

SAMPLE LOCATION	SAMPLE ID	SAMPLE AREA	XRF ANALYSIS DATE	PARAMETERS	XRF Reading Numbers	1st (ppm)	2nd (ppm)	3rd (ppm)	LIMITS of DETECTION (ppm)	Auto Generated AVG (ppm)	FBL Analysis
DA-SB-201	DA-SB-201	Area 1	4/11/2013	Pb	18,19,20	132	49	27	4	69.33	66.0
				As		11	10	7	3	9.33	6.7
DA-SB-202	DA-SB-202	Area 1	4/11/2013	Pb	14,15,16	30	23	40	4	31.00	39.0
				As		7	6	7	3	6.67	6.3
DA-SB-203	DA-SB-203	Area 1	4/11/2013	Pb	2,3,4	23	18	25	4	22.00	29.0
				As		7	12	11	3	10.00	5.2
DA-SB-204	DA-SB-204	Area 1	4/11/2013	Pb	21,22,23	37	104	29	4	56.67	40.0
				As		6	26	7	3	13.00	6.2
DA-SB-205	DA-SB-205	Area 1	4/11/2013	Pb	24,25,26	35	27	20	4	27.33	21.0
				As		9	8	11	3	9.33	6.1
DA-SB-206	DA-SB-206	Area 1	4/11/2013	Pb	27,28,29	450	642	297	4	463.00	410.00
				As		27	21	13	3	20.33	8.9
DA-SB-207	DA-SB-207	Area 1	4/11/2013	Pb	30,31,32	141	140	90	4	123.67	99.0
				As		17	11	10	3	12.67	6.1
DA-SB-208	DA-SB-208	Area 2	4/14/2013	Pb	2,3,4	297	140	165	4	200.67	340.0
				As		15	22	14	3	17.00	7.7
DA-SB-209	DA-SB-209	Area 2	4/14/2013	Pb	6,7,8	536	581	621	4	579.33	510.00
				As		20	22	32	3	24.67	11.0
DA-SB-210	DA-SB-210	Area 2	4/14/2013	Pb	9,10,11	5.4	5.5	5.5	4	5:47	2.7
				As		4.5	4.5	4.5	3	4.50	2.3
DA-SB-211	DA-SB-211	Area 2	4/14/2013	Pb	13,14,15	96	24	423	4	181.00	43.0
				As		12	9	15	3	12.00	5.8
DA-SB-212	DA-SB-212	Area 2	4/14/2013	Pb	16,17,18	111	206	112	4	143.00	220.0
				As		17	13	15	3	15.00	5.4
DA-SB-213	DA-SS-213-0002	Area 3	4/10/2013	Pb	17,18,19	446	715	605	4	588.67	720.00
				As		19	37	34	3	30.00	8.3
DA-SB-214	DA-SS-214-0002	Area 3	4/10/2013	Pb	32,33,34	332	336	219	4	295.67	290.0
				As		23	16	14	3	17.67	8.7
DA-SB-215	DA-SS-215-0002	Area 3	4/10/2013	Pb	35,36,37	1172	426	441	4	679.67	370.0
				As		53	62	46	3	53.67	7.2
DA-SB-216	DA-SS-216-0002	Area 3	4/10/2013	Pb	20,21,22	250	416	202	4	289.33	180.0
				As		26	16	30	3	24.00	6.8
DA-SB-217	DA-SS-217-0002	Area 3	4/10/2013	Pb	23,24,25	285	647	672	4	534.67	530.00
				As		37	42	40	3	39.67	9.0
DA-SB-218	DA-SS-218-0002	Area 3	4/10/2013	Pb	2,3,4	578	648	675	4	633.67	660.00
				As		28	23	34	3	28.33	9.2
DA-SB-219	DA-SS-219-0002	Area 3	4/10/2013	Pb	5,6,7	300	361	206	4	289.00	270.0
				As		31	25	25	3	27.00	6.0
DA-SB-220	DA-SS-220-0002	Area 3	4/10/2013	Pb	26,27,28	20	26	19	4	21.67	5900/13
				As		7	7	7	3	7.00	18.0
DA-SB-221	DA-SS-221-0002	Area 3	4/10/2013	Pb	29,30,31	107	58	83	4	82.67	35.0
				As		14	11	17	3	14.00	5.1
DA-SB-222	DA-SS-222-0002	Area 3	4/10/2013	Pb	8,9,10	977	794	26	4	599.00	720.00

STATEMENT OF DATA QUALIFICATIONS

Total Metals by EPA 6000/7000 Series Methods

Qualification:	The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.	
Analysis:	USEPA-6020A	
Sample/Analyte:	1304171-17 DASS222-0002	Arsenic
Qualification:	The RPD between the MS and MSD results exceeded the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.	
Analysis:	USEPA-6020A	
Sample/Analyte:	1304171-17 DASS222-0002	Arsenic
Qualification:	Matrix QC results are not available due to sample dilution.	
Analysis:	USEPA-6020A	
Sample/Analyte:	1304171-17 DASS222-0002	Lead
Qualification:	The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; matrix QC results are not available.	
Analysis:	USEPA-6020A	
Sample/Analyte:	1304171-01 DASB238-0305	Lead
	1304185-11 DASB227-0507	Lead

Field Duplicate

	DASB-FD-01	DASB241-0305	units	RPD	%D	CRDL	LOD	MDL
Arsenic	8	7.7	mg/kg	3.82 ✓	0.3	0.1	0.05	0.016
Lead	270	320	mg/kg	-16.95 ✓	-50	5	1	0.33

	DASB-FD-02	DASS222-0002	units	RPD	%D	CRDL	LOD	MDL
Arsenic	4.8	5.9	mg/kg	-20.56 ✓	-1.1	0.092	0.046	0.015
Lead	470	720	mg/kg	-42.02	OL-250	9.2	1.8	0.61

	DASB-FD-03	DASS203-0002	units	RPD	%D	CRDL	LOD	MDL
Arsenic	5.3	5.2	mg/kg	1.90 ✓	0.1	0.1	0.05	0.016
Lead	29	29	mg/kg	0.00 ✓	0	0.5	0.1	0.033

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304171

TriMatrix Laboratories received the cooler(s) for this work order on April 10, 2013, at 17:15pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASB238-0305	1304171-01	Soil	4/9/2013
DASB239-0305	1304171-02	Soil	4/9/2013
DASB240-0305	1304171-03	Soil	4/9/2013
DASB241-0305	1304171-04	Soil	4/9/2013
DASB242-0305	1304171-05	Soil	4/9/2013
DASB243-0305	1304171-06	Soil	4/9/2013
DASB-FD-01	1304171-07	Soil	4/9/2013
DASS213-0002	1304171-08	Soil	4/10/2013
DASS214-0002	1304171-09	Soil	4/10/2013
DASS215-0002	1304171-10	Soil	4/10/2013
DASS216-0002	1304171-11	Soil	4/10/2013
DASS217-0002	1304171-12	Soil	4/10/2013
DASS218-0002	1304171-13	Soil	4/10/2013
DASS219-0002	1304171-14	Soil	4/10/2013
DASS220-0002	1304171-15	Soil	4/10/2013
DASS221-0002	1304171-16	Soil	4/10/2013
DASS222-0002	1304171-17	Soil	4/10/2013
DASS223-0002	1304171-18	Soil	4/10/2013
DASB-FD-02	1304171-19	Soil	4/10/2013

No administrative issues were encountered during the receipt and analysis of this work order.

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304185

TriMatrix Laboratories received the cooler(s) for this work order on April 11, 2013, at 19:15pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASS201-0002	1304185-01	Soil	4/11/2013
DASS202-0002	1304185-02	Soil	4/11/2013
DASS203-0002	1304185-03	Soil	4/11/2013
DASS204-0002	1304185-04	Soil	4/11/2013
DASS205-0002	1304185-05	Soil	4/11/2013
DASS206-0002	1304185-06	Soil	4/11/2013
DASS207-0002	1304185-07	Soil	4/11/2013
DASB224-0507	1304185-08	Soil	4/11/2013
DASB225-0507	1304185-09	Soil	4/11/2013
DASB226-0507	1304185-10	Soil	4/11/2013
DASB227-0507	1304185-11	Soil	4/11/2013
DASB-FD-03	1304185-12	Soil	4/11/2013

No administrative issues were encountered during the receipt and analysis of this work order.

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SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative

Sample Result Reporting Convention

Sample results are reported as LOD "U" (e.g. 0.001 U) if the target analyte was not detected at or above the detection limit (DL). The LOD is the Limit of Detection as defined in the DoD QSM and numerically determined by TriMatrix.

If a sample for an organic analyte is reanalyzed and also reported, the second analysis includes the suffix "RE*n*" where *n* = the first, second, etc. reanalysis. If a sample is reanalyzed for confirmation purposes but that confirmation was not performed simultaneously, the second set of sample results is reported on a second Form 1 since the confirmation analysis did not occur at the same time and/or date.

Percent Solids and Metals Data Reporting

Unless otherwise noted, all soil samples requiring metals analysis are dried at 50° to 60° C to a constant weight prior to acid digestion. In order to report results on a dry weight basis, correction for percent solids is not applicable.

Data Qualifier Designation

If applicable, sample results are qualified with:

- a "U" flag as defined above;
- a "J" flag if the analyte was detected, but the concentration is greater than the DL and less than the LOQ (the Limit of Quantitation as defined in the DoD QSM);
- a "B" flag if the analyte was detected above one-half the LOQ (above the LOQ for a common laboratory contaminant) in the associated method blank, and the sample concentration was less than or equal to ten times the method blank result;
- a "E" flag if the analyte exceeded the instrument calibration range;
- a "N" flag for a non-target analyte identified as a tentatively identified compound using mass spectrometry;
- a LIMS-generated statement of qualification that will be reported in Attachment 2 to this narrative.

Batch and Analytical Batch Designation

A Quality Control (QC) Batch is a seven-digit number that associates all samples that have been prepared together (or analyzed together if there is no preparation). Quality Control batches are limited to no more than twenty samples, excluding batch QC (method blanks, control spikes, etc.). Some batches may contain multiple sets of method blanks (BLK) and laboratory control samples (BS), where a set of method quality control analyses were prepared in concert with each set of samples on a given day.

An Analytical Batch (or Sequence) is a seven-digit number that associates all samples analyzed as a set under one analytical run.

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Total Metals by EPA 6000/7000 Series Methods

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Arsenic

Qualification: The RPD between the MS and MSD results exceeded the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Arsenic

Qualification: Matrix QC results are not available due to sample dilution.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-17 DASS222-0002 Lead

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was greater than or equal to 4 times the spiked amount; matrix QC results are not available.

Analysis: USEPA-6020A

Sample/Analyte: 1304171-01 DASB238-0305 Lead
1304185-11 DASB227-0507 Lead

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Individual sample results relate only to the sample tested.

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #: 130H71
Receipt Record Page/Line #: 2-21	New / Add To: ON
	Project Chemist:
	Sample #s:

Recorded by (initials/date): JN 4-10-13	☑ Cooler ☐ Box ☐ Other	Qty Received: 2	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
1171596	1758	1171223	1805				

Cooler #	1171596	1171223		
Custody Seals:	☑ None	☑ None	☐ None	☐ None
	☐ Present / Intact	☐ Present / Intact	☐ Present / Intact	☐ Present / Intact
	☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact
Coolant Location:	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☑ Loose Ice / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers
	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers
	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers
	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☑ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)
	☐ 1 Container	☐ 1 Container	☐ 1 Container	☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C				
Temp Blank	0 / 8.9	0 / 4.3		
TB location: Representative / Not Representative	Representative	Representative	Representative / Not Representative	Representative / Not Representative
1	7.9 / 0 / 7.9	5.2 / 0 / 5.2		
2	7.5 / 0 / 7.5	7.6 / 0 / 7.6		
3	7.3 / 0 / 7.3	3.8 / 0 / 3.8		
Average °C	7.6	6.2		
☐ Cooler ID on COC?				
☐ VOC Trip Blank received?				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2283 + #2284

Check Sample Preservation

N/A	Yes	No	
	☐	☑	Average sample temperature ≤6° C?
☐	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	■		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-10-13	4-10-13	Yes / No

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #: 1304185
Receipt Record Page/Line #: 3-12	New / Add To
	Project Chemist: GLW
	Sample #s

Recorded by (initials/date)		Qty Received	Thermometer Used
JN 4-11-13	☑ Cooler ☐ Box ☐ Other_____	1	☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM0702 / 1957	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
Cooler # / Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
	☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0		5.5
TB location: Representative / Not Representative			
1	5.1	0	5.1
2	3.4	0	3.4
3	4.5	0	4.5
Average °C			5.0

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: #2285

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Intials:_____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑		☐	Completed Sample Preservation Verification Form?
☑		☐	■ Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-11-13	4-11-13	Yes / No

TRIMATRIX LABORATORIES

SAMPLE RECEIVING NON-CONFORMANCE REPORT

Client: Tetra Tech	Work Order #: 1304171
Receipt Log #: 2-21	Completed By (initials/date): DN 4-10-13
	Project Chemist: [illegible]

List non-conformance issues associated with this work order in the chart below/left. Identify discrepancies between the COC and sample tags in the chart below/right. Add comments as needed.

COC ID #	Line #	Type of Problem										COC					Sample Tag					Line Item Comments
		Discrepancy	Missing Container	Broken Container	Label Missing / Incomplete	Label Illegible	Low Volume	Inappropriate Container	Headspace	Not Listed on COC	Preservation	Sample Field ID	Date Sampled	Time Sampled	Container Type	Qty	Sample Field ID	Date Sampled	Time Sampled	Container Type	Qty	
											✓											

General Comments: Notify Client via SRC
↳ No VOCs
↳ Soils

Project Chemist (initials/date): [illegible] 4/11/13

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/11/13 6:30AM-2:30PM
INST#218@91.8-93.9C#270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1303272-BLK1		Apr-11-13 06:30	MAS	0.5	50				
1303272-BS1		Apr-11-13 06:30	MAS	0.5	50		2041319	20	
1303272-MS1		Apr-11-13 06:30	MAS	0.5058	50	1304171-01	2041319	20	
1303272-MS2		Apr-11-13 06:30	MAS	0.5227	50	1304171-17	2041319	20	
1303272-MSD1		Apr-11-13 06:30	MAS	0.5055	50	1304171-01	2041319	20	
1303272-MSD2		Apr-11-13 06:30	MAS	0.5095	50	1304171-17	2041319	20	
1303272-PS1		Apr-12-13 09:45	DSC	).04006	4	1304171-01	2050765	20	[Spk] 0.5008g->50mL; 4mL->4mL; Spiked
1303272-PS2		Apr-12-13 09:45	DSC	0.04248	4	1304171-17	2050765	20	[Spk] 0.531g->50mL; 4mL->4mL; Spiked
1303272-PS3		Apr-12-13 09:45	DSC	).01001	1	1304171-01	2050765	50	[Spk] 0.5008g->50mL; 1mL->1mL; Spiked
1303272-PS4		Apr-12-13 09:45	DSC	).00053	0.05	1304171-17	2050765	50	[Spk] 0.531g->50mL; 0.05mL->0.05mL; S
1304171-01	A	Apr-11-13 06:30	MAS	0.5008	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-02	A	Apr-11-13 06:30	MAS	0.5113	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-03	A	Apr-11-13 06:30	MAS	0.5025	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-04	A	Apr-11-13 06:30	MAS	0.507	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-05	A	Apr-11-13 06:30	MAS	0.509	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-06	A	Apr-11-13 06:30	MAS	0.5223	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-07	A	Apr-11-13 06:30	MAS	0.5204	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:

Analyst Initials:

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/11/13 6:30AM-2:30PM
INST#218@91.8-93.9C#270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1304171-08	A	Apr-11-13 06:30	MAS	0.5082	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-09	A	Apr-11-13 06:30	MAS	0.5224	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-10	A	Apr-11-13 06:30	MAS	0.5238	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-11	A	Apr-11-13 06:30	MAS	0.5136	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-12	A	Apr-11-13 06:30	MAS	0.5383	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-13	A	Apr-11-13 06:30	MAS	0.5133	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-14	A	Apr-11-13 06:30	MAS	0.503	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-15	A	Apr-11-13 06:30	MAS	0.5053	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-16	A	Apr-11-13 06:30	MAS	0.5359	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-17	A	Apr-11-13 06:30	MAS	0.531	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-18	A	Apr-11-13 06:30	MAS	0.5154	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304171-19	A	Apr-11-13 06:30	MAS	0.5442	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303272 QC Batch Matrix: Soil

Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303272-BLK1	04/11/13 06:30	
LCS	1303272-BS1	04/11/13 06:30	
DASB238-0305	1303272-MS1	04/11/13 06:30	
DASS222-0002	1303272-MS2	04/11/13 06:30	
DASB238-0305	1303272-MSD1	04/11/13 06:30	
DASS222-0002	1303272-MSD2	04/11/13 06:30	
DASB238-0305	1304171-01	04/11/13 06:30	
DASB239-0305	1304171-02	04/11/13 06:30	
DASB240-0305	1304171-03	04/11/13 06:30	
DASB241-0305	1304171-04	04/11/13 06:30	
DASB242-0305	1304171-05	04/11/13 06:30	
DASB243-0305	1304171-06	04/11/13 06:30	
DASB-FD-01	1304171-07	04/11/13 06:30	
DASS213-0002	1304171-08	04/11/13 06:30	
DASS214-0002	1304171-09	04/11/13 06:30	
DASS215-0002	1304171-10	04/11/13 06:30	
DASS216-0002	1304171-11	04/11/13 06:30	
DASS217-0002	1304171-12	04/11/13 06:30	
DASS218-0002	1304171-13	04/11/13 06:30	
DASS219-0002	1304171-14	04/11/13 06:30	
DASS220-0002	1304171-15	04/11/13 06:30	
DASS221-0002	1304171-16	04/11/13 06:30	
DASS222-0002	1304171-17	04/11/13 06:30	
DASS223-0002	1304171-18	04/11/13 06:30	
DASB-FD-02	1304171-19	04/11/13 06:30	

Metals, Soil, 3050B Digestion

Batch comments:

RDB 4-12-13 8:00AM-4:00PM
INST#218 @92.8-92.8 C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1303314-BLK1		Apr-12-13 08:00	RDB	0.5	50				
1303314-BS1		Apr-12-13 08:00	RDB	0.5	50		2041319	20	
1303314-MS1		Apr-12-13 08:00	RDB	0.526	50	1304185-11	2041319	20	
1303314-MSD1		Apr-12-13 08:00	RDB	0.5103	50	1304185-11	2041319	20	
1303314-PS1		Apr-15-13 08:00	DSC	).04052(	4	1304185-11	2050765	20	[Spk] 0.5066g->50mL; 4mL->4mL; Spiked
1303314-PS2		Apr-15-13 08:00	DSC	).01013:	1	1304185-11	2050765	50	[Spk] 0.5066g->50mL; 1mL->1mL; Spiked
1304185-01	A	Apr-12-13 08:00	RDB	0.515	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-02	A	Apr-12-13 08:00	RDB	0.504	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-03	A	Apr-12-13 08:00	RDB	0.5131	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-04	A	Apr-12-13 08:00	RDB	0.5092	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-05	A	Apr-12-13 08:00	RDB	0.5108	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-06	A	Apr-12-13 08:00	RDB	0.5082	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-07	A	Apr-12-13 08:00	RDB	0.511	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-08	A	Apr-12-13 08:00	RDB	0.5203	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-09	A	Apr-12-13 08:00	RDB	0.5075	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

Metals, Soil, 3050B Digestion

Batch comments:

RDB 4-12-13 8:00AM-4:00PM
INST#218 @92.8-92.8 C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client: Source ID	Client: Spike ID	Client: uL Spike	Comments
1304185-10	A	Apr-12-13 08:00	RDB	0.5066	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-11	A	Apr-12-13 08:00	RDB	0.5066	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304185-12	A	Apr-12-13 08:00	RDB	0.5101	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303314 QC Batch Matrix: Soil

Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303314-BLK1	04/12/13 08:00	
LCS	1303314-BS1	04/12/13 08:00	
DASB227-0507	1303314-MS1	04/12/13 08:00	
DASB227-0507	1303314-MSD1	04/12/13 08:00	
DASS201-0002	1304185-01	04/12/13 08:00	
DASS202-0002	1304185-02	04/12/13 08:00	
DASS203-0002	1304185-03	04/12/13 08:00	
DASS204-0002	1304185-04	04/12/13 08:00	
DASS205-0002	1304185-05	04/12/13 08:00	
DASS206-0002	1304185-06	04/12/13 08:00	
DASS207-0002	1304185-07	04/12/13 08:00	
DASB224-0507	1304185-08	04/12/13 08:00	
DASB225-0507	1304185-09	04/12/13 08:00	
DASB226-0507	1304185-10	04/12/13 08:00	
DASB227-0507	1304185-11	04/12/13 08:00	
DASB-FD-03	1304185-12	04/12/13 08:00	

: 01131

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303314-BLK1 File ID: 3d15002-020

Prepared: 04/12/13 08:00 Analyzed: 04/15/13 09:49

Preparation: 3050B Digestion Initial/Final: 0.5 g / 50 mL

QC Batch: 1303314 Sequence: 3D15002 Calibration: 3D15005 Instrument: 114

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7440-38-2	Arsenic, Total	0.050	mg/kg dry wt.	0.016	0.050	0.10	U
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303314

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303314-MS1

Preparation: 3050B Digestion

Initial/Final: 0.526 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.80	5.89	9.00	82	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303314

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303314-MSD1

Preparation: 3050B Digestion

Initial/Final: 0.5103 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.92	10.1	107	11	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.01
Preparation: 3050B Digestion
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303314-PS1
Lab Source ID: 1304185-11
Initial/Final: 0.040528 g / 4 mL
Sequence: 3D15002

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0777	0.0597	mg/L	0.0200	90	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.01
Preparation: 3050B Digestion
QC Batch: 1303314

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303314-PS2
Lab Source ID: 1304185-11
Initial/Final: 0.010132 g / 1 mL
Sequence: 3D15002

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	0.917	0.730	mg/L	0.200	93	75 - 125

* Values outside of QC limits

SERIAL DILUTION
USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.01
QC Batch: 3D15002

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 3D15002-SRD1
Lab Source ID: 1304185-11
Sequence: 3D15002

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0597		0.0587		2.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION

USEPA-6020A

DASB227-0507

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 84.01

QC Batch: 3D15002

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 3D15002-SRD2

Lab Source ID: 1304185-11

Sequence: 3D15002

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0730		0.0719		1.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303314-BS1
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL

QC Batch: 1303314
Sequence: 3D15002

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	4.00	3.90	97	80 - 120	mg/kg dry wt.
Lead, Total	4.00	3.98	99	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

PREPARATION BATCH 1303384

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/15/13 6:30AM-3:00PM
INST#218@92.7C- 93.9C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1303384-BLK1		Apr-15-13 06:30	MAS	0.5	50				
1303384-BS1		Apr-15-13 06:30	MAS	0.5	50		2041319	20	
1303384-MS1		Apr-15-13 06:30	MAS	0.5186	50	1304212-03	2041319	20	
1303384-MSD1		Apr-15-13 06:30	MAS	0.5061	50	1304212-03	2041319	20	
1303384-PS1		Apr-16-13 10:00	MSM	).04025(	4	1304212-03	2050765	20	[Spk] 0.5032g->50mL; 4mL->4mL; Spiked
1304171-15RE1	A	Apr-15-13 06:30	MAS	0.5046	50	TETRA TECH NUS - Pittsburgh			From 1303272 by MAS on Apr-15-13 From 1303272 by MAS on Apr-15-13
Pb Total 6020 (DoD)									
1304208-01	A	Apr-15-13 06:30	MAS	0.5142	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304208-02	A	Apr-15-13 06:30	MAS	0.5172	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304208-03	A	Apr-15-13 06:30	MAS	0.5301	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304208-04	A	Apr-15-13 06:30	MAS	0.5059	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304208-05	A	Apr-15-13 06:30	MAS	0.5318	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304208-06	A	Apr-15-13 06:30	MAS	0.5009	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-01	A	Apr-15-13 06:30	MAS	0.545	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-02	A	Apr-15-13 06:30	MAS	0.5003	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:

Analyst Initials:

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/15/13 6:30AM-3:00PM
INST#218@92.7C- 93.9C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1304212-03	A	Apr-15-13 06:30	MAS	0.5032	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-04	A	Apr-15-13 06:30	MAS	0.5145	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-05	A	Apr-15-13 06:30	MAS	0.501	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-06	A	Apr-15-13 06:30	MAS	0.5083	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-07	A	Apr-15-13 06:30	MAS	0.5033	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-08	A	Apr-15-13 06:30	MAS	0.5049	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-09	A	Apr-15-13 06:30	MAS	0.5047	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-10	A	Apr-15-13 06:30	MAS	0.5068	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-11	A	Apr-15-13 06:30	MAS	0.5492	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
QC Batch: 1303384
QC Batch Matrix: Soil
Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303384-BLK1	04/15/13 06:30	
LCS	1303384-BS1	04/15/13 06:30	
DASS220-0002	1304171-15RE1	04/15/13 06:30	From 1303272 by MAS on Apr-15-13

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303384-BLK1 File ID: 3d16007-013

Prepared: 04/15/13 06:30 Analyzed: 04/16/13 10:13

Preparation: 3050B Digestion Initial/Final: 0.5 g / 50 mL

QC Batch: 1303384 Sequence: 3D16007 Calibration: 3D16005 Instrument: 335

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303384

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303384-BS1

Preparation: 3050B Digestion

Initial/Final: 0.5 g / 50 mL

Sequence: 3D16007

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Lead, Total	4.00	4.12	103	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12008
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D12014-CAL1	3d12014-001	04/12/13 09:46
Cal Standard	3D12014-CAL2	3d12014-002	04/12/13 09:49
Cal Standard	3D12014-CAL3	3d12014-003	04/12/13 09:51
Cal Standard	3D12014-CAL4	3d12014-004	04/12/13 09:54
Cal Standard	3D12014-CAL5	3d12014-005	04/12/13 09:57
Cal Standard	3D12014-CAL6	3d12014-006	04/12/13 10:00
Secondary Cal Check	3D12014-SCV1	3d12014-007	04/12/13 10:03
Calibration Check	3D12014-CCV1	3d12014-007	04/12/13 10:03
Calibration Blank	3D12014-CCB1	3d12014-008	04/12/13 10:06
Interference Check A	3D12014-IFA1	3d12014-009	04/12/13 10:08
Interference Check B	3D12014-IFB1	3d12014-010	04/12/13 10:11
Calibration Check	3D12014-CCV2	3d12014-011	04/12/13 10:14
Calibration Blank	3D12014-CCB2	3d12014-012	04/12/13 10:17
Blank	1303272-BLK1	3d12014-013	04/12/13 10:20
LCS	1303272-BS1	3d12014-014	04/12/13 10:22
DASB238-0305	1304171-01	3d12014-015	04/12/13 10:25
DASB238-0305	1303272-MS1	3d12014-016	04/12/13 10:28
DASB238-0305	1303272-MSD1	3d12014-017	04/12/13 10:31
DASB238-0305	3D12014-SRD1	3d12014-018	04/12/13 10:34
DASB238-0305	1303272-PS1	3d12014-019	04/12/13 10:37
DASB239-0305	1304171-02	3d12014-020	04/12/13 10:39
DASB240-0305	1304171-03	3d12014-021	04/12/13 10:42
DASB241-0305	1304171-04	3d12014-022	04/12/13 10:45
Calibration Check	3D12014-CCV3	3d12014-023	04/12/13 10:48
Calibration Blank	3D12014-CCB3	3d12014-024	04/12/13 10:51
DASB242-0305	1304171-05	3d12014-025	04/12/13 10:53
DASB243-0305	1304171-06	3d12014-026	04/12/13 10:56
DASB-FD-01	1304171-07	3d12014-027	04/12/13 10:59
DASS213-0002	1304171-08	3d12014-028	04/12/13 11:02
DASS214-0002	1304171-09	3d12014-029	04/12/13 11:05
DASS215-0002	1304171-10	3d12014-030	04/12/13 11:08
DASS216-0002	1304171-11	3d12014-031	04/12/13 11:10

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12008
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
DASS218-0002	1304171-13	3d12014-033	04/12/13 11:16
DASS219-0002	1304171-14	3d12014-034	04/12/13 11:19
Calibration Check	3D12014-CCV4	3d12014-035	04/12/13 11:22
Calibration Blank	3D12014-CCB4	3d12014-036	04/12/13 11:24
DASS221-0002	1304171-16	3d12014-038	04/12/13 11:31
DASS222-0002	1304171-17	3d12014-039	04/12/13 11:34
DASS222-0002	3D12014-SRD2	3d12014-042	04/12/13 11:43
DASS222-0002	1303272-PS2	3d12014-043	04/12/13 11:46
DASS223-0002	1304171-18	3d12014-044	04/12/13 11:48
DASB-FD-02	1304171-19	3d12014-045	04/12/13 11:51
DASB238-0305	1304171-01	3d12014-046	04/12/13 11:54
Calibration Check	3D12014-CCV5	3d12014-047	04/12/13 11:57
Calibration Blank	3D12014-CCB5	3d12014-048	04/12/13 12:00
DASB238-0305	3D12014-SRD3	3d12014-051	04/12/13 12:08
DASB238-0305	1303272-PS3	3d12014-052	04/12/13 12:11
DASB239-0305	1304171-02	3d12014-053	04/12/13 12:14
DASB240-0305	1304171-03	3d12014-054	04/12/13 12:17
DASB241-0305	1304171-04	3d12014-055	04/12/13 12:19
DASB242-0305	1304171-05	3d12014-056	04/12/13 12:22
DASB243-0305	1304171-06	3d12014-057	04/12/13 12:25
DASB-FD-01	1304171-07	3d12014-058	04/12/13 12:28
Calibration Check	3D12014-CCV6	3d12014-059	04/12/13 12:31
Calibration Blank	3D12014-CCB6	3d12014-060	04/12/13 12:34
DASS213-0002	1304171-08	3d12014-061	04/12/13 12:37
DASS214-0002	1304171-09	3d12014-062	04/12/13 12:40
DASS215-0002	1304171-10	3d12014-063	04/12/13 12:43
DASS216-0002	1304171-11	3d12014-064	04/12/13 12:45
DASS217-0002	1304171-12	3d12014-065	04/12/13 12:48
DASS218-0002	1304171-13	3d12014-066	04/12/13 12:51
DASS219-0002	1304171-14	3d12014-067	04/12/13 12:54
DASS220-0002	1304171-15	3d12014-069	04/12/13 13:00
DASS221-0002	1304171-16	3d12014-070	04/12/13 13:02

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D12008
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	3D12014-CCV7	3d12014-071	04/12/13 13:05
Calibration Blank	3D12014-CCB7	3d12014-072	04/12/13 13:08
DASS222-0002	1303272-MS2	3d12014-078	04/12/13 13:25
DASS222-0002	1303272-MSD2	3d12014-079	04/12/13 13:28
DASS223-0002	1304171-18	3d12014-080	04/12/13 13:31
DASB-FD-02	1304171-19	3d12014-081	04/12/13 13:34
DASS217-0002	1304171-12	3d12014-082	04/12/13 13:36
Calibration Check	3D12014-CCV8	3d12014-083	04/12/13 13:39
Calibration Blank	3D12014-CCB8	3d12014-084	04/12/13 13:42
DASS220-0002	1304171-15	3d12014-085	04/12/13 13:45
DASS222-0002	1304171-17	3d12014-086	04/12/13 13:48
DASS222-0002	3D12014-SRD4	3d12014-087	04/12/13 13:51
DASS222-0002	1303272-PS4	3d12014-088	04/12/13 13:53
Calibration Check	3D12014-CCV9	3d12014-089	04/12/13 13:56
Calibration Blank	3D12014-CCB9	3d12014-090	04/12/13 13:59

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D12014
Calibration: 3D12008
Control Limt: +/- 10.00%
Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D12014-CCV1	Arsenic	0.0400	0.0378	95	mg/L	04/12/13 10:03
	Lead	0.0400	0.0397	99	mg/L	04/12/13 10:03
3D12014-CCV2	Arsenic	0.0400	0.0381	95	mg/L	04/12/13 10:14
	Lead	0.0400	0.0396	99	mg/L	04/12/13 10:14
3D12014-CCV3	Arsenic	0.0400	0.0378	94	mg/L	04/12/13 10:48
	Lead	0.0400	0.0404	101	mg/L	04/12/13 10:48
3D12014-CCV4	Arsenic	0.0400	0.0383	96	mg/L	04/12/13 11:22
	Lead	0.0400	0.0403	101	mg/L	04/12/13 11:22
3D12014-CCV5	Arsenic	0.0400	0.0373	93	mg/L	04/12/13 11:57
	Lead	0.0400	0.0400	100	mg/L	04/12/13 11:57
3D12014-CCV6	Arsenic	0.0400	0.0396	99	mg/L	04/12/13 12:31
	Lead	0.0400	0.0423	106	mg/L	04/12/13 12:31
3D12014-CCV7	Arsenic	0.0400	0.0373	93	mg/L	04/12/13 13:05
	Lead	0.0400	0.0407	102	mg/L	04/12/13 13:05
3D12014-CCV8	Arsenic	0.0400	0.0367	92	mg/L	04/12/13 13:39
	Lead	0.0400	0.0399	100	mg/L	04/12/13 13:39
3D12014-CCV9	Lead	0.0400	0.0398	99	mg/L	04/12/13 13:56

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Laboratory ID: 3D12014-SCV1
Instrument: 114
Sequence: 3D12014
Calibration: 3D12008

Analyte	Expected	Found	% R	QC Limit	Units
Arsenic	0.0400	0.0378	95	90-110	mg/L
Lead	0.0400	0.0397	99	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D12014
Calibration: 3D12008
Instrument ID: 114

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D12014-CCB1	Arsenic	-0.00023	mg/L	0.00016	0.00050	0.0010	J	04/12/13 10:06
	Lead	0.000019	mg/L	0.000066	0.00020	0.0010	U	04/12/13 10:06
3D12014-CCB2	Arsenic	-0.00014	mg/L	0.00016	0.00050	0.0010	U	04/12/13 10:17
	Lead	0.000013	mg/L	0.000066	0.00020	0.0010	U	04/12/13 10:17
3D12014-CCB3	Arsenic	-0.000068	mg/L	0.00016	0.00050	0.0010	U	04/12/13 10:51
	Lead	0.000095	mg/L	0.000066	0.00020	0.0010	J	04/12/13 10:51
3D12014-CCB4	Arsenic	0.000012	mg/L	0.00016	0.00050	0.0010	U	04/12/13 11:24
	Lead	0.00016	mg/L	0.000066	0.00020	0.0010	J	04/12/13 11:24
3D12014-CCB5	Arsenic	-0.00015	mg/L	0.00016	0.00050	0.0010	U	04/12/13 12:00
	Lead	0.000080	mg/L	0.000066	0.00020	0.0010	J	04/12/13 12:00
3D12014-CCB6	Arsenic	-0.00012	mg/L	0.00016	0.00050	0.0010	U	04/12/13 12:34
	Lead	0.000015	mg/L	0.000066	0.00020	0.0010	U	04/12/13 12:34
3D12014-CCB7	Arsenic	-0.00036	mg/L	0.00016	0.00050	0.0010	J	04/12/13 13:08
	Lead	0.000041	mg/L	0.000066	0.00020	0.0010	U	04/12/13 13:08
3D12014-CCB8	Arsenic	-0.00030	mg/L	0.00016	0.00050	0.0010	J	04/12/13 13:42
	Lead	0.000049	mg/L	0.000066	0.00020	0.0010	U	04/12/13 13:42
3D12014-CCB9	Lead	0.0000090	mg/L	0.000066	0.00020	0.0010	U	04/12/13 13:59

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Sequence: 3D12014

Calibration: 3D12008

Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units
3D12014-IFA1	Arsenic	0.00	0.0000390		mg/L
	Lead	0.00	-0.0000560		mg/L
3D12014-IFB1	Arsenic	0.0200	0.0185	92	mg/L
	Lead	0.0200	0.0193	96	mg/L

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D15002

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D15005
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D15002-CAL1	3d15002-001	04/15/13 08:26
Cal Standard	3D15002-CAL2	3d15002-002	04/15/13 08:29
Cal Standard	3D15002-CAL3	3d15002-003	04/15/13 08:31
Cal Standard	3D15002-CAL4	3d15002-004	04/15/13 08:34
Cal Standard	3D15002-CAL5	3d15002-005	04/15/13 08:37
Cal Standard	3D15002-CAL6	3d15002-006	04/15/13 08:40
Secondary Cal Check	3D15002-SCV1	3d15002-014	04/15/13 09:31
Calibration Check	3D15002-CCV1	3d15002-014	04/15/13 09:31
Calibration Blank	3D15002-CCB1	3d15002-015	04/15/13 09:34
Interference Check A	3D15002-IFA1	3d15002-016	04/15/13 09:37
Interference Check B	3D15002-IFB1	3d15002-017	04/15/13 09:40
Calibration Check	3D15002-CCV2	3d15002-018	04/15/13 09:42
Calibration Blank	3D15002-CCB2	3d15002-019	04/15/13 09:45
Blank	1303314-BLK1	3d15002-020	04/15/13 09:49
LCS	1303314-BS1	3d15002-021	04/15/13 09:51
DASS201-0002	1304185-01	3d15002-022	04/15/13 09:54
DASS202-0002	1304185-02	3d15002-023	04/15/13 09:57
DASS203-0002	1304185-03	3d15002-024	04/15/13 10:00
DASS204-0002	1304185-04	3d15002-025	04/15/13 10:03
DASS205-0002	1304185-05	3d15002-026	04/15/13 10:06
DASS206-0002	1304185-06	3d15002-027	04/15/13 10:09
DASB224-0507	1304185-08	3d15002-028	04/15/13 10:12
DASB225-0507	1304185-09	3d15002-029	04/15/13 10:15
Calibration Check	3D15002-CCV3	3d15002-030	04/15/13 10:17
Calibration Blank	3D15002-CCB3	3d15002-031	04/15/13 10:20
DASS207-0002	1304185-07	3d15002-032	04/15/13 10:24
DASB226-0507	1304185-10	3d15002-033	04/15/13 10:29
DASB227-0507	1304185-11	3d15002-034	04/15/13 10:32
DASB227-0507	3D15002-SRD1	3d15002-037	04/15/13 10:41
DASB227-0507	1303314-PS1	3d15002-038	04/15/13 10:43
DASB-FD-03	1304185-12	3d15002-039	04/15/13 10:46
DASS201-0002	1304185-01	3d15002-040	04/15/13 10:49

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D15002

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D15005
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
DASS202-0002	1304185-02	3d15002-041	04/15/13 10:52
Calibration Check	3D15002-CCV4	3d15002-042	04/15/13 10:55
Calibration Blank	3D15002-CCB4	3d15002-043	04/15/13 10:58
DASS203-0002	1304185-03	3d15002-044	04/15/13 11:01
DASS204-0002	1304185-04	3d15002-045	04/15/13 11:04
DASS205-0002	1304185-05	3d15002-046	04/15/13 11:07
DASS206-0002	1304185-06	3d15002-047	04/15/13 11:09
DASS207-0002	1304185-07	3d15002-048	04/15/13 11:12
DASB224-0507	1304185-08	3d15002-049	04/15/13 11:15
DASB225-0507	1304185-09	3d15002-050	04/15/13 11:18
DASB226-0507	1304185-10	3d15002-051	04/15/13 11:21
DASB227-0507	1304185-11	3d15002-052	04/15/13 11:24
Calibration Check	3D15002-CCV5	3d15002-054	04/15/13 11:30
Calibration Blank	3D15002-CCB5	3d15002-055	04/15/13 11:33
DASB227-0507	3D15002-SRD2	3d15002-057	04/15/13 11:38
DASB227-0507	1303314-PS2	3d15002-058	04/15/13 11:41
DASB227-0507	1303314-MS1	3d15002-059	04/15/13 11:44
DASB227-0507	1303314-MSD1	3d15002-060	04/15/13 11:47
DASB-FD-03	1304185-12	3d15002-061	04/15/13 11:50
Calibration Check	3D15002-CCV6	3d15002-062	04/15/13 11:53
Calibration Blank	3D15002-CCB6	3d15002-063	04/15/13 11:56

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D15002
Calibration: 3D15005
Control Limt: +/- 10.00%
Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D15002-CCV1	Arsenic	0.0400	0.0376	94	mg/L	04/15/13 09:31
	Lead	0.0400	0.0382	96	mg/L	04/15/13 09:31
3D15002-CCV2	Arsenic	0.0400	0.0377	94	mg/L	04/15/13 09:42
	Lead	0.0400	0.0387	97	mg/L	04/15/13 09:42
3D15002-CCV3	Arsenic	0.0400	0.0377	94	mg/L	04/15/13 10:17
	Lead	0.0400	0.0387	97	mg/L	04/15/13 10:17
3D15002-CCV4	Arsenic	0.0400	0.0371	93	mg/L	04/15/13 10:55
	Lead	0.0400	0.0390	98	mg/L	04/15/13 10:55
3D15002-CCV5	Arsenic	0.0400	0.0374	94	mg/L	04/15/13 11:30
	Lead	0.0400	0.0389	97	mg/L	04/15/13 11:30
3D15002-CCV6	Arsenic	0.0400	0.0372	93	mg/L	04/15/13 11:53
	Lead	0.0400	0.0392	98	mg/L	04/15/13 11:53

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Laboratory ID: 3D15002-SCV1
Instrument: 114
Sequence: 3D15002
Calibration: 3D15005

Analyte	Expected	Found	% R	QC Limit	Units
Arsenic	0.0400	0.0376	94	90-110	mg/L
Lead	0.0400	0.0382	96	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D15002
Calibration: 3D15005
Instrument ID: 114

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D15002-CCB1	Arsenic	-0.00012	mg/L	0.00016	0.00050	0.0010	U	04/15/13 09:34
	Lead	0.0000080	mg/L	0.000066	0.00020	0.0010	U	04/15/13 09:34
3D15002-CCB2	Arsenic	-0.00012	mg/L	0.00016	0.00050	0.0010	U	04/15/13 09:45
	Lead	0.0000090	mg/L	0.000066	0.00020	0.0010	U	04/15/13 09:45
3D15002-CCB3	Arsenic	-0.00018	mg/L	0.00016	0.00050	0.0010	J	04/15/13 10:20
	Lead	0.000015	mg/L	0.000066	0.00020	0.0010	U	04/15/13 10:20
3D15002-CCB4	Arsenic	-0.000070	mg/L	0.00016	0.00050	0.0010	U	04/15/13 10:58
	Lead	0.000013	mg/L	0.000066	0.00020	0.0010	U	04/15/13 10:58
3D15002-CCB5	Arsenic	-0.00014	mg/L	0.00016	0.00050	0.0010	U	04/15/13 11:33
	Lead	0.0000090	mg/L	0.000066	0.00020	0.0010	U	04/15/13 11:33
3D15002-CCB6	Arsenic	-0.00018	mg/L	0.00016	0.00050	0.0010	J	04/15/13 11:56
	Lead	0.000010	mg/L	0.000066	0.00020	0.0010	U	04/15/13 11:56

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Sequence: 3D15002

Calibration: 3D15005

Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units
3D15002-IFA1	Arsenic	0.00	-0.000152		mg/L
	Lead	0.00	-0.0000590		mg/L
3D15002-IFB1	Arsenic	0.0200	0.0186	93	mg/L
	Lead	0.0200	0.0191	95	mg/L

* Values outside of QC limits

: 01128

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304171
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D16007
Calibration: 3D16005
Instrument: 335

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D16007-CAL1	3d16007-001	04/16/13 10:03
Cal Standard	3D16007-CAL2	3d16007-002	04/16/13 10:03
Cal Standard	3D16007-CAL3	3d16007-003	04/16/13 10:04
Cal Standard	3D16007-CAL4	3d16007-004	04/16/13 10:05
Cal Standard	3D16007-CAL5	3d16007-005	04/16/13 10:06
Cal Standard	3D16007-CAL6	3d16007-006	04/16/13 10:07
Secondary Cal Check	3D16007-SCV1	3d16007-007	04/16/13 10:08
Calibration Check	3D16007-CCV1	3d16007-007	04/16/13 10:08
Calibration Blank	3D16007-CCB1	3d16007-008	04/16/13 10:08
Interference Check A	3D16007-IFA1	3d16007-009	04/16/13 10:09
Interference Check B	3D16007-IFB1	3d16007-010	04/16/13 10:10
Calibration Check	3D16007-CCV2	3d16007-011	04/16/13 10:11
Calibration Blank	3D16007-CCB2	3d16007-012	04/16/13 10:12
Blank	1303384-BLK1	3d16007-013	04/16/13 10:13
LCS	1303384-BS1	3d16007-014	04/16/13 10:14
Calibration Check	3D16007-CCV3	3d16007-023	04/16/13 10:21
Calibration Blank	3D16007-CCB3	3d16007-024	04/16/13 10:22
Serial Dilution	3D16007-SRD1	3d16007-029	04/16/13 10:27
Calibration Check	3D16007-CCV4	3d16007-035	04/16/13 10:32
Calibration Blank	3D16007-CCB4	3d16007-036	04/16/13 10:33
DASS220-0002	1304171-15RE1	3d16007-041	04/16/13 10:38
Calibration Check	3D16007-CCV5	3d16007-047	04/16/13 10:43
Calibration Blank	3D16007-CCB5	3d16007-048	04/16/13 10:44
Calibration Blank	3D16007-CCB6	3d16007-056	04/16/13 10:51
Calibration Check	3D16007-CCV6	3d16007-057	04/16/13 10:55

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007
Control Limt: +/- 10.00%

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument ID: 335

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D16007-CCV1	Lead	0.0400	0.0372	93	mg/L	04/16/13 10:08
3D16007-CCV2	Lead	0.0400	0.0368	92	mg/L	04/16/13 10:11
3D16007-CCV3	Lead	0.0400	0.0383	96	mg/L	04/16/13 10:21
3D16007-CCV4	Lead	0.0400	0.0378	94	mg/L	04/16/13 10:32
3D16007-CCV5	Lead	0.0400	0.0367	92	mg/L	04/16/13 10:43
3D16007-CCV6	Lead	0.0400	0.0369	92	mg/L	04/16/13 10:55

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Laboratory ID: 3D16007-SCV1
Sequence: 3D16007

SDG: 1304171
Project: USCG Atwater Facility
Instrument: 335
Calibration: 3D16005

Analyte	Expected	Found	% R	QC Limit	Units
Lead	0.0400	0.0372	93	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007

SDG: 1304171
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument ID: 335

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D16007-CCB1	Lead	0.0000070	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:08
3D16007-CCB2	Lead	0.0000060	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:12
3D16007-CCB3	Lead	0.000045	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:22
3D16007-CCB4	Lead	0.000014	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:33
3D16007-CCB5	Lead	0.000027	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:44
3D16007-CCB6	Lead	0.000021	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:51

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Sequence: 3D16007

Calibration: 3D16005

Instrument ID: 335

Lab Sample ID	Analyte	True	Found	%R	Units
3D16007-IFA1	Lead	0.00	0.0000200		mg/L
3D16007-IFB1	Lead	0.0200	0.0188	94	mg/L

* Values outside of QC limits

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304171

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303272-BLK1 File ID: 3d12014-013

Prepared: 04/11/13 06:30 Analyzed: 04/12/13 10:20

Preparation: 3050B Digestion Initial/Final: 0.5 g / 50 mL

QC Batch: 1303272 Sequence: 3D12014 Calibration: 3D12008 Instrument: 114

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7440-38-2	Arsenic, Total	0.050	mg/kg dry wt.	0.016	0.050	0.10	U
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASB238-0305

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303272

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303272-MS1

Preparation: 3050B Digestion

Initial/Final: 0.5058 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.95	4.51	8.59	103	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASB238-0305

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303272

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303272-MSD1

Preparation: 3050B Digestion

Initial/Final: 0.5055 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.96	8.35	97	3	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.45
Preparation: 3050B Digestion
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303272-PS1
Lab Source ID: 1304171-01
Initial/Final: 0.040064 g / 4 mL
Sequence: 3D12014

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0643	0.0452	mg/L	0.0200	95	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.45
Preparation: 3050B Digestion
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303272-PS3
Lab Source ID: 1304171-01
Initial/Final: 0.010016 g / 1 mL
Sequence: 3D12014

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	0.754	0.565	mg/L	0.200	95	75 - 125

* Values outside of QC limits

SERIAL DILUTION
USEPA-6020A

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.45
QC Batch: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 3D12014-SRD1
Lab Source ID: 1304171-01
Sequence: 3D12014

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0452		0.0437		3.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION
USEPA-6020A

DASB238-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.45
QC Batch: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 3D12014-SRD3
Lab Source ID: 1304171-01
Sequence: 3D12014

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0565		0.0570		1.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303272

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303272-MS2

Preparation: 3050B Digestion

Initial/Final: 0.5227 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.83	5.94	10.3	114	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASS222-0002

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303272

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 1303272-MSD2

Preparation: 3050B Digestion

Initial/Final: 0.5095 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.93	14.5	219 *	34 *	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.08
Preparation: 3050B Digestion
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303272-PS2
Lab Source ID: 1304171-17
Initial/Final: 0.04248 g / 4 mL
Sequence: 3D12014

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0819	0.0631	mg/L	0.0200	94	75 - 125

* Values outside of QC limits

: 01145

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.08
Preparation: 3050B Digestion
QC Batch: 1303272

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303272-PS4
Lab Source ID: 1304171-17
Initial/Final: 0.000531 g / 0.05 mL
Sequence: 3D12014

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	11.5	7.68	mg/L	4.00	96	75 - 125

* Values outside of QC limits

SERIAL DILUTION
USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 84.08
QC Batch: 3D12014

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 3D12014-SRD2
Lab Source ID: 1304171-17
Sequence: 3D12014

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0631		0.0635		1.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION

USEPA-6020A

DASS222-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 84.08

QC Batch: 3D12014

SDG: 1304171

Project: USCG Atwater Facility

Laboratory ID: 3D12014-SRD4

Lab Source ID: 1304171-17

Sequence: 3D12014

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0384		0.0418		9.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304171
Project: USCG Atwater Facility
Laboratory ID: 1303272-BS1
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
Sequence: 3D12014

QC Batch: 1303272

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	4.00	4.02	100	80 - 120	mg/kg dry wt.
Lead, Total	4.00	4.11	103	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**J. LOGAN**	**DATE:**	**MAY 13, 2013**
FROM:	**A. COGNETTI**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PAH**
USCG ATWATER FACILITY
SAMPLE DELIVERY GROUP (SDG) - 1304208

SAMPLES: 17/Solid/PAH

DASB228-0305	DASB229-0305	DASB230-0305	DASB231-0305
DASB232-0305	DASB233-0305	DASB234-0305	DASB235-0305
DASB236-0305	DASB237-0305	DASBFD-04	DASBFD-05
DASS208-0002	DASS209-0002	DASS210-0002	DASS211-0002
DASS212-0002			

OVERVIEW

The sample set for USCG Atwater Facility, SDG 1304208 consists of seventeen (17) soil environmental samples. The samples were analyzed for polynuclear aromatic hydrocarbons (PAHs). There are two (2) field duplicate pairs included within this SDG: DASBFD-04/DA-SB-229-0305 and DASBFD-05/DA-SB-231-0305.

The samples were collected by Tetra Tech on April 11 and 12, 2013 and analyzed by TriMatrix Laboratories. USEPA SW 846 Method 8270C for PAHs analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Initial and Continuing Calibrations
* • Laboratory Blank Analyses
* • Surrogate Recoveries
* • Laboratory Control Sample Results
* • Matrix Spike / Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • Field Duplicate Precision
* • Analyte Quantitation
* • Analyte Identification
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Additional Comments:

The nondetected results were reported to the laboratory reporting limit

Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

TO: J. Logan
FROM: A. Cognetti
SDG: 1304208
DATE: May 13, 2013
PAGE 2

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other factors affecting data quality: Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 02435	NSAMPLE	DASB228-0305			DASB229-0305			DASB230-0305			DASB231-0305		
SDG: 1304208	LAB_ID	1304208-01			1304208-02			1304208-03			1304208-04		
FRACTION: PAH	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			90.0			86.0			86.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.019	U		0.018	U		0.02	U		0.019	U	
ACENAPHTHENE		0.019	U		0.018	U		0.02	U		0.019	U	
ACENAPHTHYLENE		0.019	U		0.018	U		0.02	U		0.019	U	
ANTHRACENE		0.019	U		0.018	U		0.02	U		0.019	U	
BENZO(A)ANTHRACENE		0.0036	J	P	0.0038	J	P	0.02	U		0.019	U	
BENZO(A)PYRENE		0.019	U		0.0034	J	P	0.02	U		0.019	U	
BENZO(B)FLUORANTHENE		0.0032	J	P	0.0038	J	P	0.02	U		0.0023	J	P
BENZO(G,H,I)PERYLENE		0.0036	J	P	0.0042	J	P	0.0028	J	P	0.0034	J	P
BENZO(K)FLUORANTHENE		0.019	U		0.018	U		0.02	U		0.019	U	
CHRYSENE		0.0052	J	P	0.018	U		0.02	U		0.0045	J	P
DIBENZO(A,H)ANTHRACENE		0.019	U		0.018	U		0.02	U		0.019	U	
FLUORANTHENE		0.0068	J	P	0.0061	J	P	0.02	U		0.019	U	
FLUORENE		0.019	U		0.018	U		0.02	U		0.019	U	
INDENO(1,2,3-CD)PYRENE		0.019	U		0.018	U		0.02	U		0.019	U	
NAPHTHALENE		0.019	U		0.018	U		0.02	U		0.019	U	
PHENANTHRENE		0.0052	J	P	0.0053	J	P	0.02	U		0.019	U	
PYRENE		0.008	J	P	0.008	J	P	0.02	U		0.0057	J	P

PROJ_NO: 02435	NSAMPLE	DASB232-0305			DASB233-0305			DASB234-0305			DASB235-0305		
SDG: 1304208	LAB_ID	1304212-06			1304212-07			1304212-08			1304212-09		
FRACTION: PAH	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			85.0			52.0			72.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.019	U		0.02	U		0.12	J	P	0.23	U	
ACENAPHTHENE		0.019	U		0.02	U		0.26	J	P	0.11	J	P
ACENAPHTHYLENE		0.019	U		0.02	U		0.16	J	P	0.092	J	P
ANTHRACENE		0.019	U		0.02	U		0.81			0.46		
BENZO(A)ANTHRACENE		0.019	U		0.011	J	P	5.9			1.5		
BENZO(A)PYRENE		0.019	U		0.011	J	P	5.7			1.3		
BENZO(B)FLUORANTHENE		0.0024	J	P	0.0097	J	P	6.6			1.8		
BENZO(G,H,I)PERYLENE		0.0051	J	P	0.0081	J	P	2.8			0.87		
BENZO(K)FLUORANTHENE		0.019	U		0.0077	J	P	3.6			1		
CHRYSENE		0.019	U		0.014	J	P	5.8			1.4		
DIBENZO(A,H)ANTHRACENE		0.019	U		0.02	U		0.66			0.42		
FLUORANTHENE		0.019	U		0.015	J	P	5			2.7		
FLUORENE		0.019	U		0.02	U		0.35			0.12	J	P
INDENO(1,2,3-CD)PYRENE		0.019	U		0.0041	J	P	2.7			0.82		
NAPHTHALENE		0.019	U		0.02	U		0.24	J	P	0.23	U	
PHENANTHRENE		0.019	U		0.011	J	P	2.4			1.7		
PYRENE		0.019	U		0.018	J	P	9.2			2.5		

PROJ_NO: 02435	NSAMPLE	DASB236-0305			DASB237-0305			DASBFD-04			DASBFD-05		
SDG: 1304208	LAB_ID	1304212-10			1304212-11			1304208-05			1304208-06		
FRACTION: PAH	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			81.0			88.0			87.0		
	DUP_OF							DA-SB-229-0305			DA-SB-231-0305		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.02	U		0.021	U		0.019	U		0.019	U	
ACENAPHTHENE		0.015	J	P	0.021	U		0.019	U		0.019	U	
ACENAPHTHYLENE		0.02	U		0.021	U		0.019	U		0.019	U	
ANTHRACENE		0.037			0.021	U		0.019	U		0.019	U	
BENZO(A)ANTHRACENE		0.11			0.0058	J	P	0.019	U		0.004	J	P
BENZO(A)PYRENE		0.1			0.0037	J	P	0.019	U		0.0028	J	P
BENZO(B)FLUORANTHENE		0.11			0.0058	J	P	0.019	U		0.0024	J	P
BENZO(G,H,I)PERYLENE		0.057			0.0025	J	P	0.0044	J	P	0.0044	J	P
BENZO(K)FLUORANTHENE		0.081			0.0025	J	P	0.019	U		0.0028	J	P
CHRYSENE		0.11			0.0049	J	P	0.019	U		0.0052	J	P
DIBENZO(A,H)ANTHRACENE		0.019	J	P	0.021	U		0.019	U		0.019	U	
FLUORANTHENE		0.21			0.0099	J	P	0.019	U		0.006	J	P
FLUORENE		0.011	J	P	0.021	U		0.019	U		0.019	U	
INDENO(1,2,3-CD)PYRENE		0.049			0.021	U		0.019	U		0.019	U	
NAPHTHALENE		0.02	U		0.021	U		0.019	U		0.019	U	
PHENANTHRENE		0.12			0.0074	J	P	0.019	U		0.019	U	
PYRENE		0.22			0.01	J	P	0.019	U		0.0084	J	P

PROJ_NO: 02435	NSAMPLE	DASS208-0002			DASS209-0002			DASS210-0002			DASS211-0002		
SDG: 1304208	LAB_ID	1304212-01			1304212-02			1304212-03			1304212-04		
FRACTION: PAH	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			81.0			88.0			84.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.096	U		0.034	J	P	0.019	U		0.099	U	
ACENAPHTHENE		0.033	J	P	0.079			0.019	U		0.099	U	
ACENAPHTHYLENE		0.096	U		0.017	J	P	0.019	U		0.099	U	
ANTHRACENE		0.089	J	P	0.18			0.019	U		0.099	U	
BENZO(A)ANTHRACENE		0.32			0.63			0.019	U		0.052	J	P
BENZO(A)PYRENE		0.27			0.57			0.019	U		0.068	J	P
BENZO(B)FLUORANTHENE		0.32			0.65			0.019	U		0.049	J	P
BENZO(G,H,I)PERYLENE		0.16			0.34			0.019	U		0.039	J	P
BENZO(K)FLUORANTHENE		0.14			0.38			0.019	U		0.039	J	P
CHRYSENE		0.29			0.65			0.019	U		0.052	J	P
DIBENZO(A,H)ANTHRACENE		0.031	J	P	0.12			0.019	U		0.099	U	
FLUORANTHENE		0.43			0.99			0.019	U		0.07	J	P
FLUORENE		0.033	J	P	0.068			0.019	U		0.099	U	
INDENO(1,2,3-CD)PYRENE		0.12			0.31			0.019	U		0.039	J	P
NAPHTHALENE		0.096	U		0.03	J	P	0.019	U		0.099	U	
PHENANTHRENE		0.32			0.84			0.019	U		0.049	J	P
PYRENE		0.61			1.1			0.019	U		0.11		

PROJ_NO: 02435	NSAMPLE	DASS212-0002		
SDG: 1304208	LAB_ID	1304212-05		
FRACTION: PAH	SAMP_DATE	4/12/2013		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	80.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.013	J	P
ACENAPHTHENE		0.21		
ACENAPHTHYLENE		0.013	J	P
ANTHRACENE		0.1		
BENZO(A)ANTHRACENE		0.36		
BENZO(A)PYRENE		0.26		
BENZO(B)FLUORANTHENE		0.33		
BENZO(G,H,I)PERYLENE		0.091		
BENZO(K)FLUORANTHENE		0.17		
CHRYSENE		0.35		
DIBENZO(A,H)ANTHRACENE		0.027		
FLUORANTHENE		0.51		
FLUORENE		0.14		
INDENO(1,2,3-CD)PYRENE		0.11		
NAPHTHALENE		0.024		
PHENANTHRENE		0.45		
PYRENE		0.7		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB228-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-01 File ID: 1304208-01.D

Sampled: 04/11/13 15:10 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 12:16

Solids: 86.29 Preparation: 3550C Sonication Extract Initial/Final: 29 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0054	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0048	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0046	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0036	0.0032	0.0097	0.019	J
50-32-8	Benzo(a)pyrene	1	0.0097	0.0027	0.0097	0.019	U
205-99-2	Benzo(b)fluoranthene	1	0.0032	0.0022	0.0097	0.019	J
207-08-9	Benzo(k)fluoranthene	1	0.0097	0.0023	0.0097	0.019	U
191-24-2	Benzo(g,h,i)perylene	1	0.0036	0.0022	0.0097	0.019	J
218-01-9	Chrysene	1	0.0052	0.0045	0.019	0.019	J
53-70-3	Dibenz(a,h)anthracene	1	0.0097	0.0022	0.0097	0.019	U
206-44-0	Fluoranthene	1	0.0068	0.0052	0.019	0.019	J
86-73-7	Fluorene	1	0.019	0.0047	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0039	0.0031	0.0039	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0053	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0065	0.019	0.019	U
85-01-8	Phenanthrene	1	0.0052	0.0047	0.019	0.019	J
129-00-0	Pyrene	1	0.0080	0.0050	0.019	0.019	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.400	0.281	70	35 - 100	
2-Fluorobiphenyl	0.400	0.286	72	45 - 105	
o-Terphenyl	0.404	0.301	74	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	139460	7.786	97874	7.546	
Naphthalene-d8	591544	10.502	407297	10.262	
Acenaphthene-d10	242495	14.594	189519	14.365	
Phenanthrene-d10	425017	18.009	317445	17.798	
Chrysene-d12	390291	21.605	314770	21.453	
Perylene-d12	293602	23.337	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB229-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-02 File ID: 1304208-02.D

Sampled: 04/11/13 15:15 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 12:51

Solids: 90.28 Preparation: 3550C Sonication Extract Initial/Final: 29.1 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.018	0.0051	0.018	0.018	U
208-96-8	Acenaphthylene	1	0.018	0.0046	0.018	0.018	U
120-12-7	Anthracene	1	0.018	0.0044	0.018	0.018	U
56-55-3	Benzo(a)anthracene	1	0.0038	0.0030	0.0092	0.018	J
50-32-8	Benzo(a)pyrene	1	0.0034	0.0025	0.0092	0.018	J
205-99-2	Benzo(b)fluoranthene	1	0.0038	0.0021	0.0092	0.018	J
207-08-9	Benzo(k)fluoranthene	1	0.0092	0.0022	0.0092	0.018	U
191-24-2	Benzo(g,h,i)perylene	1	0.0042	0.0021	0.0092	0.018	J
218-01-9	Chrysene	1	0.018	0.0043	0.018	0.018	U
53-70-3	Dibenz(a,h)anthracene	1	0.0092	0.0021	0.0092	0.018	U
206-44-0	Fluoranthene	1	0.0061	0.0050	0.018	0.018	J
86-73-7	Fluorene	1	0.018	0.0045	0.018	0.018	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0037	0.0030	0.0037	0.018	U
91-57-6	2-Methylnaphthalene	1	0.018	0.0051	0.018	0.018	U
91-20-3	Naphthalene	1	0.018	0.0062	0.018	0.018	U
85-01-8	Phenanthrene	1	0.0053	0.0045	0.018	0.018	J
129-00-0	Pyrene	1	0.0080	0.0048	0.018	0.018	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.381	0.289	76	35 - 100	
2-Fluorobiphenyl	0.381	0.303	80	45 - 105	
o-Terphenyl	0.384	0.295	77	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	116069	7.78	97874	7.546	
Naphthalene-d8	490670	10.508	407297	10.262	
Acenaphthene-d10	200530	14.594	189519	14.365	
Phenanthrene-d10	367594	18.009	317445	17.798	
Chrysene-d12	336160	21.606	314770	21.453	
Perylene-d12	246734	23.337	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB230-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-03 File ID: 1304208-03.D

Sampled: 04/11/13 15:20 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 13:26

Solids: 85.52 Preparation: 3550C Sonication Extract Initial/Final: 29 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.020	0.0054	0.020	0.020	U
208-96-8	Acenaphthylene	1	0.020	0.0049	0.020	0.020	U
120-12-7	Anthracene	1	0.020	0.0047	0.020	0.020	U
56-55-3	Benzo(a)anthracene	1	0.0097	0.0032	0.0097	0.020	U
50-32-8	Benzo(a)pyrene	1	0.0097	0.0027	0.0097	0.020	U
205-99-2	Benzo(b)fluoranthene	1	0.0097	0.0022	0.0097	0.020	U
207-08-9	Benzo(k)fluoranthene	1	0.0097	0.0023	0.0097	0.020	U
191-24-2	Benzo(g,h,i)perylene	1	0.0028	0.0022	0.0097	0.020	J
218-01-9	Chrysene	1	0.020	0.0045	0.020	0.020	U
53-70-3	Dibenz(a,h)anthracene	1	0.0097	0.0022	0.0097	0.020	U
206-44-0	Fluoranthene	1	0.020	0.0052	0.020	0.020	U
86-73-7	Fluorene	1	0.020	0.0047	0.020	0.020	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0039	0.0031	0.0039	0.020	U
91-57-6	2-Methylnaphthalene	1	0.020	0.0053	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0065	0.020	0.020	U
85-01-8	Phenanthrene	1	0.020	0.0048	0.020	0.020	U
129-00-0	Pyrene	1	0.020	0.0050	0.020	0.020	U

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.403	0.292	72	35 - 100	
2-Fluorobiphenyl	0.403	0.300	74	45 - 105	
o-Terphenyl	0.407	0.299	73	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	129342	7.792	97874	7.546	
Naphthalene-d8	542800	10.508	407297	10.262	
Acenaphthene-d10	220842	14.594	189519	14.365	
Phenanthrene-d10	392085	18.009	317445	17.798	
Chrysene-d12	374045	21.605	314770	21.453	
Perylene-d12	274302	23.337	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB231-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-04 File ID: 1304208-04.D

Sampled: 04/11/13 15:25 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 14:01

Solids: 85.64 Preparation: 3550C Sonication Extract Initial/Final: 30.8 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0054	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0049	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0047	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0097	0.0032	0.0097	0.019	U
50-32-8	Benzo(a)pyrene	1	0.0097	0.0027	0.0097	0.019	U
205-99-2	Benzo(b)fluoranthene	1	0.0023	0.0022	0.0097	0.019	J
207-08-9	Benzo(k)fluoranthene	1	0.0097	0.0023	0.0097	0.019	U
191-24-2	Benzo(g,h,i)perylene	1	0.0034	0.0022	0.0097	0.019	J
218-01-9	Chrysene	1	0.0045	0.0045	0.019	0.019	J
53-70-3	Dibenz(a,h)anthracene	1	0.0097	0.0022	0.0097	0.019	U
206-44-0	Fluoranthene	1	0.019	0.0052	0.019	0.019	U
86-73-7	Fluorene	1	0.019	0.0047	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0039	0.0031	0.0039	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0053	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0065	0.019	0.019	U
85-01-8	Phenanthrene	1	0.019	0.0048	0.019	0.019	U
129-00-0	Pyrene	1	0.0057	0.0050	0.019	0.019	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.379	0.275	73	35 - 100	
2-Fluorobiphenyl	0.379	0.292	77	45 - 105	
o-Terphenyl	0.383	0.279	73	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	134029	7.786	97874	7.546	
Naphthalene-d8	554478	10.502	407297	10.262	
Acenaphthene-d10	225058	14.594	189519	14.365	
Phenanthrene-d10	401659	18.009	317445	17.798	
Chrysene-d12	383307	21.606	314770	21.453	
Perylene-d12	289913	23.337	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB232-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208
Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility
Matrix: Soil Laboratory ID: 1304212-06 File ID: 1304212-06.D
Sampled: 04/12/13 12:40 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 16:57
Solids: 85.93 Preparation: 3550C Sonication Extract Initial/Final: 29.5 g / 1 mL
QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0054	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0049	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0047	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0097	0.0032	0.0097	0.019	U
50-32-8	Benzo(a)pyrene	1	0.0097	0.0027	0.0097	0.019	U
205-99-2	Benzo(b)fluoranthene	1	0.0024	0.0022	0.0097	0.019	J
207-08-9	Benzo(k)fluoranthene	1	0.0097	0.0023	0.0097	0.019	U
191-24-2	Benzo(g,h,i)perylene	1	0.0051	0.0022	0.0097	0.019	J
218-01-9	Chrysene	1	0.019	0.0045	0.019	0.019	U
53-70-3	Dibenz(a,h)anthracene	1	0.0097	0.0022	0.0097	0.019	U
206-44-0	Fluoranthene	1	0.019	0.0052	0.019	0.019	U
86-73-7	Fluorene	1	0.019	0.0047	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0039	0.0031	0.0039	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0053	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0065	0.019	0.019	U
85-01-8	Phenanthrene	1	0.019	0.0047	0.019	0.019	U
129-00-0	Pyrene	1	0.019	0.0050	0.019	0.019	U

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.394	0.280	71	35 - 100	
2-Fluorobiphenyl	0.394	0.287	73	45 - 105	
o-Terphenyl	0.398	0.282	71	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	131713	7.792	97874	7.546	
Naphthalene-d8	569072	10.502	407297	10.262	
Acenaphthene-d10	237144	14.594	189519	14.365	
Phenanthrene-d10	410800	18.009	317445	17.798	
Chrysene-d12	347929	21.611	314770	21.453	
Perylene-d12	245184	23.342	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB233-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-07 File ID: 1304212-07.D

Sampled: 04/12/13 12:45 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 17:32

Solids: 85.11 Preparation: 3550C Sonication Extract Initial/Final: 29 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.020	0.0054	0.020	0.020	U
208-96-8	Acenaphthylene	1	0.020	0.0049	0.020	0.020	U
120-12-7	Anthracene	1	0.020	0.0047	0.020	0.020	U
56-55-3	Benzo(a)anthracene	1	0.011	0.0032	0.0098	0.020	J
50-32-8	Benzo(a)pyrene	1	0.011	0.0027	0.0098	0.020	J
205-99-2	Benzo(b)fluoranthene	1	0.0097	0.0022	0.0098	0.020	J
207-08-9	Benzo(k)fluoranthene	1	0.0077	0.0023	0.0098	0.020	J
191-24-2	Benzo(g,h,i)perylene	1	0.0081	0.0022	0.0098	0.020	J
218-01-9	Chrysene	1	0.014	0.0046	0.020	0.020	J
53-70-3	Dibenz(a,h)anthracene	1	0.0098	0.0022	0.0098	0.020	U
206-44-0	Fluoranthene	1	0.015	0.0053	0.020	0.020	J
86-73-7	Fluorene	1	0.020	0.0047	0.020	0.020	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0041	0.0031	0.0039	0.020	J
91-57-6	2-Methylnaphthalene	1	0.020	0.0054	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0066	0.020	0.020	U
85-01-8	Phenanthrene	1	0.011	0.0048	0.020	0.020	J
129-00-0	Pyrene	1	0.018	0.0051	0.020	0.020	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.405	0.278	69	35 - 100	
2-Fluorobiphenyl	0.405	0.279	69	45 - 105	
o-Terphenyl	0.409	0.276	67	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	137708	7.797	97874	7.546	
Naphthalene-d8	577494	10.502	407297	10.262	
Acenaphthene-d10	234495	14.599	189519	14.365	
Phenanthrene-d10	418638	18.015	317445	17.798	
Chrysene-d12	374253	21.611	314770	21.453	
Perylene-d12	275371	23.342	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB234-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208
Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility
Matrix: Soil Laboratory ID: 1304212-08 File ID: 1304212-08 x10.D
Sampled: 04/12/13 12:55 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 02:42
Solids: 51.90 Preparation: 3550C Sonication Extract Initial/Final: 29.4 g / 1 mL
QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.26	0.089	0.32	0.32	J
208-96-8	Acenaphthylene	10	0.16	0.080	0.32	0.32	J
120-12-7	Anthracene	10	0.81	0.077	0.32	0.32	
56-55-3	Benzo(a)anthracene	10	5.9	0.053	0.16	0.32	
50-32-8	Benzo(a)pyrene	10	5.7	0.044	0.16	0.32	
205-99-2	Benzo(b)fluoranthene	10	6.6	0.037	0.16	0.32	
207-08-9	Benzo(k)fluoranthene	10	3.6	0.038	0.16	0.32	
191-24-2	Benzo(g,h,i)perylene	10	2.8	0.036	0.16	0.32	
218-01-9	Chrysene	10	5.8	0.075	0.32	0.32	
53-70-3	Dibenz(a,h)anthracene	10	0.66	0.037	0.16	0.32	
206-44-0	Fluoranthene	10	5.0	0.086	0.32	0.32	
86-73-7	Fluorene	10	0.35	0.078	0.32	0.32	
193-39-5	Indeno(1,2,3-cd)pyrene	10	2.7	0.052	0.064	0.32	
91-57-6	2-Methylnaphthalene	10	0.12	0.088	0.32	0.32	J
91-20-3	Naphthalene	10	0.24	0.11	0.32	0.32	J
85-01-8	Phenanthrene	10	2.4	0.079	0.32	0.32	
129-00-0	Pyrene	10	9.2	0.083	0.32	0.32	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.655	0.413	63	35 - 100	D
2-Fluorobiphenyl	0.655	0.433	66	45 - 105	D
o-Terphenyl	0.662	0.406	61	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	117309	7.663	97874	7.546	
Naphthalene-d8	538203	10.379	407297	10.262	
Acenaphthene-d10	229973	14.477	189519	14.365	
Phenanthrene-d10	373398	17.91	317445	17.798	
Chrysene-d12	201226	21.535	314770	21.453	
Perylene-d12	144838	23.232	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB235-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-09 File ID: 1304212-09 x10.D

Sampled: 04/12/13 13:00 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 02:06

Solids: 71.80 Preparation: 3550C Sonication Extract Initial/Final: 30.2 g / 1 mL

QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.11	0.064	0.23	0.23	J
208-96-8	Acenaphthylene	10	0.092	0.058	0.23	0.23	J
120-12-7	Anthracene	10	0.46	0.056	0.23	0.23	
56-55-3	Benzo(a)anthracene	10	1.5	0.038	0.12	0.23	
50-32-8	Benzo(a)pyrene	10	1.3	0.032	0.12	0.23	
205-99-2	Benzo(b)fluoranthene	10	1.8	0.027	0.12	0.23	
207-08-9	Benzo(k)fluoranthene	10	1.0	0.027	0.12	0.23	
191-24-2	Benzo(g,h,i)perylene	10	0.87	0.026	0.12	0.23	
218-01-9	Chrysene	10	1.4	0.054	0.23	0.23	
53-70-3	Dibenz(a,h)anthracene	10	0.42	0.027	0.12	0.23	
206-44-0	Fluoranthene	10	2.7	0.062	0.23	0.23	
86-73-7	Fluorene	10	0.12	0.056	0.23	0.23	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.82	0.037	0.046	0.23	
91-57-6	2-Methylnaphthalene	10	0.23	0.064	0.23	0.23	U
91-20-3	Naphthalene	10	0.23	0.078	0.23	0.23	U
85-01-8	Phenanthrene	10	1.7	0.057	0.23	0.23	
129-00-0	Pyrene	10	2.5	0.060	0.23	0.23	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.461	0.341	74	35 - 100	D
2-Fluorobiphenyl	0.461	0.314	68	45 - 105	D
o-Terphenyl	0.466	0.434	93	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	131291	7.681	97874	7.546	
Naphthalene-d8	579816	10.379	407297	10.262	
Acenaphthene-d10	245766	14.471	189519	14.365	
Phenanthrene-d10	356757	17.91	317445	17.798	
Chrysene-d12	350403	21.535	314770	21.453	
Perylene-d12	223936	23.232	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB236-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-10 File ID: 1304212-10.D

Sampled: 04/12/13 13:10 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 18:07

Solids: 85.62 Preparation: 3550C Sonication Extract Initial/Final: 28.7 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.015	0.0054	0.020	0.020	J
208-96-8	Acenaphthylene	1	0.020	0.0049	0.020	0.020	U
120-12-7	Anthracene	1	0.037	0.0047	0.020	0.020	
56-55-3	Benzo(a)anthracene	1	0.11	0.0032	0.0097	0.020	
50-32-8	Benzo(a)pyrene	1	0.10	0.0027	0.0097	0.020	
205-99-2	Benzo(b)fluoranthene	1	0.11	0.0022	0.0097	0.020	
207-08-9	Benzo(k)fluoranthene	1	0.081	0.0023	0.0097	0.020	
191-24-2	Benzo(g,h,i)perylene	1	0.057	0.0022	0.0097	0.020	
218-01-9	Chrysene	1	0.11	0.0045	0.020	0.020	
53-70-3	Dibenz(a,h)anthracene	1	0.019	0.0022	0.0097	0.020	J
206-44-0	Fluoranthene	1	0.21	0.0052	0.020	0.020	
86-73-7	Fluorene	1	0.011	0.0047	0.020	0.020	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.049	0.0031	0.0039	0.020	
91-57-6	2-Methylnaphthalene	1	0.020	0.0053	0.020	0.020	U
91-20-3	Naphthalene	1	0.020	0.0065	0.020	0.020	U
85-01-8	Phenanthrene	1	0.12	0.0048	0.020	0.020	
129-00-0	Pyrene	1	0.22	0.0050	0.020	0.020	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.407	0.310	76	35 - 100	
2-Fluorobiphenyl	0.407	0.330	81	45 - 105	
o-Terphenyl	0.411	0.327	80	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	122769	7.792	97874	7.546	
Naphthalene-d8	516213	10.508	407297	10.262	
Acenaphthene-d10	213338	14.594	189519	14.365	
Phenanthrene-d10	379044	18.015	317445	17.798	
Chrysene-d12	339210	21.605	314770	21.453	
Perylene-d12	257369	23.342	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB237-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-11 File ID: 1304212-11.D

Sampled: 04/12/13 13:05 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 18:42

Solids: 80.57 Preparation: 3550C Sonication Extract Initial/Final: 30.1 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.021	0.0057	0.021	0.021	U
208-96-8	Acenaphthylene	1	0.021	0.0052	0.021	0.021	U
120-12-7	Anthracene	1	0.021	0.0050	0.021	0.021	U
56-55-3	Benzo(a)anthracene	1	0.0058	0.0034	0.010	0.021	J
50-32-8	Benzo(a)pyrene	1	0.0037	0.0029	0.010	0.021	J
205-99-2	Benzo(b)fluoranthene	1	0.0058	0.0024	0.010	0.021	J
207-08-9	Benzo(k)fluoranthene	1	0.0025	0.0024	0.010	0.021	J
191-24-2	Benzo(g,h,i)perylene	1	0.0025	0.0023	0.010	0.021	J
218-01-9	Chrysene	1	0.0049	0.0048	0.021	0.021	J
53-70-3	Dibenz(a,h)anthracene	1	0.010	0.0024	0.010	0.021	U
206-44-0	Fluoranthene	1	0.0099	0.0055	0.021	0.021	J
86-73-7	Fluorene	1	0.021	0.0050	0.021	0.021	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0041	0.0033	0.0041	0.021	U
91-57-6	2-Methylnaphthalene	1	0.021	0.0057	0.021	0.021	U
91-20-3	Naphthalene	1	0.021	0.0070	0.021	0.021	U
85-01-8	Phenanthrene	1	0.0074	0.0051	0.021	0.021	J
129-00-0	Pyrene	1	0.010	0.0053	0.021	0.021	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.412	0.281	68	35 - 100	
2-Fluorobiphenyl	0.412	0.310	75	45 - 105	
o-Terphenyl	0.416	0.324	78	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	128958	7.798	97874	7.546	
Naphthalene-d8	554766	10.508	407297	10.262	
Acenaphthene-d10	224777	14.6	189519	14.365	
Phenanthrene-d10	400050	18.015	317445	17.798	
Chrysene-d12	351294	21.611	314770	21.453	
Perylene-d12	242750	23.342	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASBFD-04

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-05 File ID: 1304208-05.D

Sampled: 04/11/13 00:00 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 14:36

Solids: 88.08 Preparation: 3550C Sonication Extract Initial/Final: 28.7 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0053	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0047	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0046	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0095	0.0031	0.0095	0.019	U
50-32-8	Benzo(a)pyrene	1	0.0095	0.0026	0.0095	0.019	U
205-99-2	Benzo(b)fluoranthene	1	0.0095	0.0022	0.0095	0.019	U
207-08-9	Benzo(k)fluoranthene	1	0.0095	0.0022	0.0095	0.019	U
191-24-2	Benzo(g,h,i)perylene	1	0.0044	0.0021	0.0095	0.019	J
218-01-9	Chrysene	1	0.019	0.0044	0.019	0.019	U
53-70-3	Dibenz(a,h)anthracene	1	0.0095	0.0022	0.0095	0.019	U
206-44-0	Fluoranthene	1	0.019	0.0051	0.019	0.019	U
86-73-7	Fluorene	1	0.019	0.0046	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0038	0.0030	0.0038	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0052	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0064	0.019	0.019	U
85-01-8	Phenanthrene	1	0.019	0.0046	0.019	0.019	U
129-00-0	Pyrene	1	0.019	0.0049	0.019	0.019	U

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.396	0.297	75	35 - 100	
2-Fluorobiphenyl	0.396	0.301	76	45 - 105	
o-Terphenyl	0.400	0.310	78	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	133087	7.792	97874	7.546	
Naphthalene-d8	554010	10.508	407297	10.262	
Acenaphthene-d10	232331	14.599	189519	14.365	
Phenanthrene-d10	413624	18.009	317445	17.798	
Chrysene-d12	378849	21.605	314770	21.453	
Perylene-d12	279107	23.337	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASBFD-05

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304208-06 File ID: 1304208-06.D

Sampled: 04/11/13 00:00 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 15:11

Solids: 86.74 Preparation: 3550C Sonication Extract Initial/Final: 28.9 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0053	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0048	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0046	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0040	0.0032	0.0096	0.019	J
50-32-8	Benzo(a)pyrene	1	0.0028	0.0027	0.0096	0.019	J
205-99-2	Benzo(b)fluoranthene	1	0.0024	0.0022	0.0096	0.019	J
207-08-9	Benzo(k)fluoranthene	1	0.0028	0.0022	0.0096	0.019	J
191-24-2	Benzo(g,h,i)perylene	1	0.0044	0.0022	0.0096	0.019	J
218-01-9	Chrysene	1	0.0052	0.0045	0.019	0.019	J
53-70-3	Dibenz(a,h)anthracene	1	0.0096	0.0022	0.0096	0.019	U
206-44-0	Fluoranthene	1	0.0060	0.0052	0.019	0.019	J
86-73-7	Fluorene	1	0.019	0.0046	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0038	0.0031	0.0038	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0053	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0065	0.019	0.019	U
85-01-8	Phenanthrene	1	0.019	0.0047	0.019	0.019	U
129-00-0	Pyrene	1	0.0084	0.0050	0.019	0.019	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.399	0.284	71	35 - 100	
2-Fluorobiphenyl	0.399	0.300	75	45 - 105	
o-Terphenyl	0.403	0.295	73	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	128826	7.792	97874	7.546	
Naphthalene-d8	553537	10.502	407297	10.262	
Acenaphthene-d10	225834	14.594	189519	14.365	
Phenanthrene-d10	401337	18.009	317445	17.798	
Chrysene-d12	368364	21.605	314770	21.453	
Perylene-d12	275348	23.336	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS208-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-01 File ID: 1304212-01 x5.D

Sampled: 04/12/13 12:10 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 01:30

Solids: 86.63 Preparation: 3550C Sonication Extract Initial/Final: 29.9 g / 1 mL

QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.033	0.027	0.096	0.096	J
208-96-8	Acenaphthylene	5	0.096	0.024	0.096	0.096	U
120-12-7	Anthracene	5	0.089	0.023	0.096	0.096	J
56-55-3	Benzo(a)anthracene	5	0.32	0.016	0.048	0.096	
50-32-8	Benzo(a)pyrene	5	0.27	0.013	0.048	0.096	
205-99-2	Benzo(b)fluoranthene	5	0.32	0.011	0.048	0.096	
207-08-9	Benzo(k)fluoranthene	5	0.14	0.011	0.048	0.096	
191-24-2	Benzo(g,h,i)perylene	5	0.16	0.011	0.048	0.096	
218-01-9	Chrysene	5	0.29	0.022	0.096	0.096	
53-70-3	Dibenz(a,h)anthracene	5	0.031	0.011	0.048	0.096	J
206-44-0	Fluoranthene	5	0.43	0.026	0.096	0.096	
86-73-7	Fluorene	5	0.033	0.023	0.096	0.096	J
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.12	0.015	0.019	0.096	
91-57-6	2-Methylnaphthalene	5	0.096	0.026	0.096	0.096	U
91-20-3	Naphthalene	5	0.096	0.032	0.096	0.096	U
85-01-8	Phenanthrene	5	0.32	0.024	0.096	0.096	
129-00-0	Pyrene	5	0.61	0.025	0.096	0.096	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.386	0.199	52	35 - 100	D
2-Fluorobiphenyl	0.386	0.255	66	45 - 105	D
o-Terphenyl	0.390	0.236	60	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	127609	7.669	97874	7.546	
Naphthalene-d8	566417	10.385	407297	10.262	
Acenaphthene-d10	223147	14.477	189519	14.365	
Phenanthrene-d10	381564	17.91	317445	17.798	
Chrysene-d12	238191	21.53	314770	21.453	
Perylene-d12	155143	23.226	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS209-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-02 File ID: 1304212-02 x2.D

Sampled: 04/12/13 12:15 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 00:21

Solids: 81.03 Preparation: 3550C Sonication Extract Initial/Final: 29.9 g / 1 mL

QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	2	0.079	0.011	0.041	0.041	
208-96-8	Acenaphthylene	2	0.017	0.010	0.041	0.041	J
120-12-7	Anthracene	2	0.18	0.0099	0.041	0.041	
56-55-3	Benzo(a)anthracene	2	0.63	0.0068	0.021	0.041	
50-32-8	Benzo(a)pyrene	2	0.57	0.0057	0.021	0.041	
205-99-2	Benzo(b)fluoranthene	2	0.65	0.0047	0.021	0.041	
207-08-9	Benzo(k)fluoranthene	2	0.38	0.0048	0.021	0.041	
191-24-2	Benzo(g,h,i)perylene	2	0.34	0.0047	0.021	0.041	
218-01-9	Chrysene	2	0.65	0.0096	0.041	0.041	
53-70-3	Dibenz(a,h)anthracene	2	0.12	0.0047	0.021	0.041	
206-44-0	Fluoranthene	2	0.99	0.011	0.041	0.041	
86-73-7	Fluorene	2	0.068	0.0099	0.041	0.041	
193-39-5	Indeno(1,2,3-cd)pyrene	2	0.31	0.0066	0.0082	0.041	
91-57-6	2-Methylnaphthalene	2	0.034	0.011	0.041	0.041	J
91-20-3	Naphthalene	2	0.030	0.014	0.041	0.041	J
85-01-8	Phenanthrene	2	0.84	0.010	0.041	0.041	
129-00-0	Pyrene	2	1.1	0.011	0.041	0.041	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.413	0.277	67	35 - 100	
2-Fluorobiphenyl	0.413	0.284	69	45 - 105	
o-Terphenyl	0.417	0.159	38	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	130148	7.658	97874	7.546	
Naphthalene-d8	558737	10.368	407297	10.262	
Acenaphthene-d10	239117	14.471	189519	14.365	
Phenanthrene-d10	368717	17.904	317445	17.798	
Chrysene-d12	263257	21.53	314770	21.453	
Perylene-d12	190161	23.226	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS210-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-03 File ID: 1304212-03.D

Sampled: 04/12/13 12:20 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 15:47

Solids: 88.31 Preparation: 3550C Sonication Extract Initial/Final: 29.9 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.019	0.0052	0.019	0.019	U
208-96-8	Acenaphthylene	1	0.019	0.0047	0.019	0.019	U
120-12-7	Anthracene	1	0.019	0.0045	0.019	0.019	U
56-55-3	Benzo(a)anthracene	1	0.0094	0.0031	0.0094	0.019	U
50-32-8	Benzo(a)pyrene	1	0.0094	0.0026	0.0094	0.019	U
205-99-2	Benzo(b)fluoranthene	1	0.0094	0.0022	0.0094	0.019	U
207-08-9	Benzo(k)fluoranthene	1	0.0094	0.0022	0.0094	0.019	U
191-24-2	Benzo(g,h,i)perylene	1	0.0094	0.0021	0.0094	0.019	U
218-01-9	Chrysene	1	0.019	0.0044	0.019	0.019	U
53-70-3	Dibenz(a,h)anthracene	1	0.0094	0.0022	0.0094	0.019	U
206-44-0	Fluoranthene	1	0.019	0.0051	0.019	0.019	U
86-73-7	Fluorene	1	0.019	0.0046	0.019	0.019	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0038	0.0030	0.0038	0.019	U
91-57-6	2-Methylnaphthalene	1	0.019	0.0052	0.019	0.019	U
91-20-3	Naphthalene	1	0.019	0.0063	0.019	0.019	U
85-01-8	Phenanthrene	1	0.019	0.0046	0.019	0.019	U
129-00-0	Pyrene	1	0.019	0.0049	0.019	0.019	U

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.379	0.265	70	35 - 100	
2-Fluorobiphenyl	0.379	0.308	81	45 - 105	
o-Terphenyl	0.383	0.293	77	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	143397	7.786	97874	7.546	
Naphthalene-d8	612648	10.502	407297	10.262	
Acenaphthene-d10	245420	14.593	189519	14.365	
Phenanthrene-d10	435951	18.009	317445	17.798	
Chrysene-d12	386208	21.605	314770	21.453	
Perylene-d12	271341	23.336	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS211-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-04 File ID: 1304212-04 x5.D

Sampled: 04/12/13 12:25 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 00:55

Solids: 83.97 Preparation: 3550C Sonication Extract Initial/Final: 28.9 g / 1 mL

QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	5	0.099	0.028	0.099	0.099	U
208-96-8	Acenaphthylene	5	0.099	0.025	0.099	0.099	U
120-12-7	Anthracene	5	0.099	0.024	0.099	0.099	U
56-55-3	Benzo(a)anthracene	5	0.052	0.016	0.050	0.099	J
50-32-8	Benzo(a)pyrene	5	0.068	0.014	0.050	0.099	J
205-99-2	Benzo(b)fluoranthene	5	0.049	0.011	0.050	0.099	J
207-08-9	Benzo(k)fluoranthene	5	0.039	0.012	0.050	0.099	J
191-24-2	Benzo(g,h,i)perylene	5	0.039	0.011	0.050	0.099	J
218-01-9	Chrysene	5	0.052	0.023	0.099	0.099	J
53-70-3	Dibenz(a,h)anthracene	5	0.050	0.011	0.050	0.099	U
206-44-0	Fluoranthene	5	0.070	0.027	0.099	0.099	J
86-73-7	Fluorene	5	0.099	0.024	0.099	0.099	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	0.039	0.016	0.020	0.099	J
91-57-6	2-Methylnaphthalene	5	0.099	0.027	0.099	0.099	U
91-20-3	Naphthalene	5	0.099	0.033	0.099	0.099	U
85-01-8	Phenanthrene	5	0.049	0.024	0.099	0.099	J
129-00-0	Pyrene	5	0.11	0.026	0.099	0.099	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.412	0.229	56	35 - 100	D
2-Fluorobiphenyl	0.412	0.233	56	45 - 105	D
o-Terphenyl	0.416	0.233	56	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	125581	7.663	97874	7.546	
Naphthalene-d8	553894	10.38	407297	10.262	
Acenaphthene-d10	224257	14.471	189519	14.365	
Phenanthrene-d10	397517	17.91	317445	17.798	
Chrysene-d12	254917	21.53	314770	21.453	
Perylene-d12	175016	23.22	230613	23.102	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS212-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-05 File ID: 1304212-05.D

Sampled: 04/12/13 12:30 Prepared: 04/15/13 08:21 Analyzed: 04/15/13 16:22

Solids: 79.89 Preparation: 3550C Sonication Extract Initial/Final: 29 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	1	0.21	0.0058	0.021	0.021	
208-96-8	Acenaphthylene	1	0.013	0.0052	0.021	0.021	J
120-12-7	Anthracene	1	0.10	0.0050	0.021	0.021	
56-55-3	Benzo(a)anthracene	1	0.36	0.0034	0.010	0.021	
50-32-8	Benzo(a)pyrene	1	0.26	0.0029	0.010	0.021	
205-99-2	Benzo(b)fluoranthene	1	0.33	0.0024	0.010	0.021	
207-08-9	Benzo(k)fluoranthene	1	0.17	0.0024	0.010	0.021	
191-24-2	Benzo(g,h,i)perylene	1	0.091	0.0024	0.010	0.021	
218-01-9	Chrysene	1	0.35	0.0049	0.021	0.021	
53-70-3	Dibenz(a,h)anthracene	1	0.027	0.0024	0.010	0.021	
206-44-0	Fluoranthene	1	0.51	0.0056	0.021	0.021	
86-73-7	Fluorene	1	0.14	0.0050	0.021	0.021	
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.11	0.0034	0.0042	0.021	
91-57-6	2-Methylnaphthalene	1	0.013	0.0057	0.021	0.021	J
91-20-3	Naphthalene	1	0.024	0.0070	0.021	0.021	
85-01-8	Phenanthrene	1	0.45	0.0051	0.021	0.021	
129-00-0	Pyrene	1	0.70	0.0054	0.021	0.021	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.432	0.326	76	35 - 100	
2-Fluorobiphenyl	0.432	0.310	72	45 - 105	
o-Terphenyl	0.436	0.296	68	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	122436	7.78	97874	7.546	
Naphthalene-d8	525885	10.49	407297	10.262	
Acenaphthene-d10	225671	14.594	189519	14.365	
Phenanthrene-d10	361017	18.009	317445	17.798	
Chrysene-d12	230473	21.611	314770	21.453	
Perylene-d12	180005	23.342	230613	23.102	

* Values outside of QC limits

APPENDIX C

SUPPORT DOCUMENTATION

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304212

TriMatrix Laboratories received the cooler(s) for this work order on April 13, 2013, at 08:45am. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and FedEx shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASS208-0002	1304212-01	Soil	4/12/2013
DASS209-0002	1304212-02	Soil	4/12/2013
DASS210-0002	1304212-03	Soil	4/12/2013
DASS211-0002	1304212-04	Soil	4/12/2013
DASS212-0002	1304212-05	Soil	4/12/2013
DASB232-0305	1304212-06	Soil	4/12/2013
DASB233-0305	1304212-07	Soil	4/12/2013
DASB234-0305	1304212-08	Soil	4/12/2013
DASB235-0305	1304212-09	Soil	4/12/2013
DASB236-0305	1304212-10	Soil	4/12/2013
DASB237-0305	1304212-11	Soil	4/12/2013

No administrative issues were encountered during the receipt and analysis of this work order.

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:	
1304212-01 DASS208-0002	Acenaphthene
1304212-01 DASS208-0002	Benzo(b)fluoranthene
1304212-01 DASS208-0002	Benzo(k)fluoranthene
1304212-01 DASS208-0002	Fluorene
1304212-02 DASS209-0002	2-Methylnaphthalene
1304212-02 DASS209-0002	Benzo(b)fluoranthene
1304212-02 DASS209-0002	Benzo(k)fluoranthene
1304212-03 DASS210-0002	Benzo(b)fluoranthene
1304212-03 DASS210-0002	Benzo(k)fluoranthene
1304212-04 DASS211-0002	Benzo(b)fluoranthene
1304212-04 DASS211-0002	Benzo(k)fluoranthene
1304212-05 DASS212-0002	Benzo(b)fluoranthene
1304212-05 DASS212-0002	Benzo(k)fluoranthene
1304212-05 DASS212-0002	Dibenz(a,h)anthracene
1304212-06 DASB232-0305	Anthracene
1304212-06 DASB232-0305	Benzo(a)anthracene
1304212-06 DASB232-0305	Benzo(b)fluoranthene
1304212-06 DASB232-0305	Benzo(k)fluoranthene
1304212-06 DASB232-0305	Chrysene
1304212-07 DASB233-0305	Benzo(b)fluoranthene
1304212-07 DASB233-0305	Benzo(k)fluoranthene
1304212-07 DASB233-0305	Dibenz(a,h)anthracene
1304212-07 DASB233-0305	Indeno(1,2,3-cd)pyrene
1304212-08 DASB234-0305	2-Methylnaphthalene
1304212-08 DASB234-0305	Benzo(b)fluoranthene
1304212-08 DASB234-0305	Benzo(k)fluoranthene
1304212-08 DASB234-0305	Dibenz(a,h)anthracene
1304212-09 DASB235-0305	2-Methylnaphthalene
1304212-09 DASB235-0305	Benzo(b)fluoranthene
1304212-09 DASB235-0305	Benzo(k)fluoranthene
1304212-09 DASB235-0305	Dibenz(a,h)anthracene
1304212-09 DASB235-0305	Fluorene

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Sample/Analyte:	1304212-10 DASB236-0305	Acenaphthylene
	1304212-10 DASB236-0305	Benzo(b)fluoranthene
	1304212-10 DASB236-0305	Benzo(k)fluoranthene
	1304212-10 DASB236-0305	Naphthalene
	1304212-11 DASB237-0305	Anthracene
	1304212-11 DASB237-0305	Benzo(a)pyrene
	1304212-11 DASB237-0305	Benzo(b)fluoranthene
	1304212-11 DASB237-0305	Benzo(k)fluoranthene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample/Analyte: 1304212-01 DASS208-0002
1304212-04 DASS211-0002

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Individual sample results relate only to the sample tested.

TETRA TECH NUS, INC. CART 2 (5-17) CHAIN OF CUSTODY | NUMBER № 2286 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	412 921 7231	TriMatrix / Gary Wood

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]	Jim Goerdt	412 443 0244	5560 Corp Exchange Ct

CARRIER/WAYBILL NUMBER	CITY, STATE
TriMatrix Pickup	Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: Pb, As, PAHs								COMMENTS
4/11	1510	DASB 228-0305	228	3	5	SO	G	1	1								01 E1304208
↓	1515	DASB 229-0305	229	↓	↓	↓	↓	1	1								02
↓	1520	DASB 230-0305	230	↓	↓	↓	↓	1	1								03
↓	1525	DASB 231-0305	231	↓	↓	↓	↓	1	1								04
4/11	0000	DASB FD-04	QC	–	–	QC	–	1	1								05
4/11	0000	DASB FD-05	QC	–	–	QC	–	1	1								06

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4/12/13	901	1. RECEIVED BY [signature]	4/12/13	0901
2. RELINQUISHED BY [signature]	4/13/13	1330	2. RECEIVED BY [signature]	4/12/13	1330
3. RELINQUISHED BY Lay Johnson	4/12/13	1730	3. RECEIVED BY D. Nardin	4-12-13	1730

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #:
Receipt Record Page/Line #: 5-17	New / Add To Project: Chemist: BLW Sample #s: 1304208

Recorded by (initials/date): JN 4-12-13	☑ Cooler ☐ Box ☐ Other	Qty Received: 1	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # TM2553 — Time 1750

Custody Seals:
- ☑ None
- ☐ Present / Intact
- ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☑ Temperature Blank (TB)
- ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0	3.8
TB location: Representative / Not Representative		
1 3.7	0	3.7
2 3.8	0	3.8
3 4.2	0	4.2
Average °C		3.9

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler # — Time

Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2286

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-12-13	4-12-13	Yes / No

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2287 | PAGE 1 OF 1 7-1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412 921 7231	Tri Matrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412 443 0244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8020 3157 7719		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: PO, AS, QA72	COMMENTS
01	4/12	1210	DASS208-0002	208	0	2	SO	G	1	1	1304212
02		1215	DASS209-0002	209					1	1	
03		1220	DASS210-0002	210					1	1	
04		1225	DASS211-0002	211					1	1	
05		1230	DASS212-0002	212					1	1	
06		1240	DASB232-0305	232	3	5			1	1	
07		1245	DASB233-0305	233					1	1	
08		1255	DASB234-0305	234					1	1	
09		1300	DASB235-0305	235					1	1	
10		1310	DASB236-0305	236					1	1	
11		1305	DASB237-0305	237					1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/12/13	1525	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	4/13/13	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client	Work Order #:
Tetra Tech Nus, Inc	New / Add To 1304212
Receipt Record Page/Line #	Project Chemist / Sample #s

Recorded by (initials/date)		Qty Received	Thermometer Used	
Ln 4/13/13	☑ Cooler ☐ Box ☐ Other_____	1	☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)	☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
3125	0908	☐ None ☑ Present / Intact ☐ Present / Not Intact	(Dispersed) / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
3125	Temp Blank:	–	3.9
	TB location: (Representative) / Not Representative		
	1 5.0	–	5.0
	2 5.1	–	5.1
	3 4.1	–	4.1
		Average °C	4.7
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 2287

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials:_____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils?
		☐ MeOH	☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
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Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
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AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
4/13/13 0845	4/13/13 0914	(Yes) / No

SAMPLE ID SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

SDG: 1304208

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASB228-0305	1304208-01
DASB229-0305	1304208-02
DASB230-0305	1304208-03
DASB231-0305	1304208-04
DASBFD-04	1304208-05
DASBFD-05	1304208-06
DASS208-0002	1304212-01
DASS209-0002	1304212-02
DASS210-0002	1304212-03
DASS211-0002	1304212-04
DASS212-0002	1304212-05
DASB232-0305	1304212-06
DASB233-0305	1304212-07
DASB234-0305	1304212-08
DASB235-0305	1304212-09
DASB236-0305	1304212-10
DASB237-0305	1304212-11

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB-CF-04	1304363-02	NM	4/23/2013	4/25/2013	4/25/2013	2	0	2
PCS	%	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/24/2013	1	0	1
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/12/2013	4/12/2013	4/12/2013	0	0	0
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS219-0002	1304171-14	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/L	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/L	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/L	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

HOLDING TIME SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Method: Semivolatile Organic Compounds by EPA Method 8270C

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASB228-0305	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASB229-0305	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASB230-0305	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASB231-0305	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASBFD-04	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASBFD-05	04/11/13	04/12/13		04/15/13	4	14	04/15/13	0	40	
DASS208-0002	04/12/13	04/13/13		04/15/13	3	14	04/16/13	1	40	
DASS209-0002	04/12/13	04/13/13		04/15/13	3	14	04/16/13	1	40	
DASS210-0002	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	
DASS211-0002	04/12/13	04/13/13		04/15/13	3	14	04/16/13	1	40	
DASS212-0002	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	
DASB232-0305	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	
DASB233-0305	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	
DASB234-0305	04/12/13	04/13/13		04/15/13	3	14	04/16/13	1	40	
DASB235-0305	04/12/13	04/13/13		04/15/13	3	14	04/16/13	1	40	
DASB236-0305	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	
DASB237-0305	04/12/13	04/13/13		04/15/13	3	14	04/15/13	0	40	

Field Duplicate Precision

ANALYTE	DASBFD-04	DASB229-0305	RPD	DIFFERENCE
BENZO(A)ANTHRACENE	ND	0.0038	200.00	0.0152
BENZO(A)PYRENE	ND	0.0034	200.00	0.0156
BENZO(B)FLUORANTHENE	ND	0.0038	200.00	0.0152
BENZO(G,H,I)PERYLENE	0.0044	0.0042	4.65	0.0002
FLUORANTHENE	ND	0.0061	200.00	0.0129
PHENANTHRENE	ND	0.0053	200.00	0.0137
PYRENE	ND	0.008	200.00	0.011

Field Duplicate Precision

ANALYTE	DASBFD-05	DASB231-0305	RPD	DIFFERENCE
BENZO(A)ANTHRACENE	0.004	ND	200.00	0.015
BENZO(A)PYRENE	0.0028	ND	200.00	0.0162
BENZO(B)FLUORANTHENE	0.0024	0.0023	4.26	1E-04
BENZO(G,H,I)PERYLENE	0.0044	0.0034	25.64	0.001
BENZO(K)FLUORANTHENE	0.0028	ND	200.00	0.0162
CHRYSENE	0.0052	0.0045	14.43	0.0007
FLUORANTHENE	0.006	ND	200.00	0.013
PYRENE	0.0084	0.0057	38.30	0.0027

INITIAL CALIBRATION STANDARDS
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D12010

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
3030363	dftpp tune	3D12010-TUN1	DFT0401d.D	04/01/13 23:29
3040059	10ppm BNA	3D12010-CAL5	10ic0402.D	04/02/13 00:25
3040050	0.5ppm BNA	3D12010-CAL1	05ic0402.D	04/02/13 01:01
3040053	1ppm BNA	3D12010-CAL2	1ic0402.D	04/02/13 01:36
3040055	2ppm BNA	3D12010-CAL3	2ic0402.D	04/02/13 02:11
3040057	5ppm BNA	3D12010-CAL4	5ic0402.D	04/02/13 02:46
3040061	15ppm BNA	3D12010-CAL6	15ic0402.D	04/02/13 03:21
3040063	20ppm BNA	3D12010-CAL7	20ic0402.D	04/02/13 03:56
3040064	25ppm BNA	3D12010-CAL8	25ic0402.D	04/02/13 04:30
3030696	10ppm BNA scv	3D12010-SCV1	scvbna0402.D	04/02/13 05:05

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D12010-TUN1
Injection Date: 04/01/13
Sequence: 3D12010

SDG: 1304208
Project: USCG Atwater Facility
Lab File ID: DFT0401d.D
Injection Time: 23:29
Calibration: 3D12002
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	43.4	PASS
68	Less than 2% of 69	1.46	PASS
69	Less than 200% of 198	43.9	PASS
70	Less than 2% of 69	0.458	PASS
127	40 - 60% of 198	50.2	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.77	PASS
275	10 - 30% of 198	21.8	PASS
365	1.0001 - 200% of 198	2.27	PASS
441	0.0001 - 99.9999% of 443	73.5	PASS
442	40.0001 - 200% of 198	67.8	PASS
443	17 - 23% of 442	19.8	PASS

INITIAL CALIBRATION DATA (Continued)
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Calibration: 3D12002

SDG: 1304208
Project: USCG Atwater Facility
Calibration Date: 04/01/13 09:31
Instrument: 308

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.121526	5.510634	14.43875	6.629395E-02			CCC (30)	
Acenaphthylene	1.806377	5.095022	14.01337	6.701715E-02			15	
Anthracene	1.082515	5.290174	17.94025	4.451184E-02			15	
Benzo(a)anthracene	0.9236851	5.027148	21.44025	2.284323E-02			15	
Benzo(a)pyrene	1.01751	7.033967	23.03188	1.928734E-02			CCC (30)	
Benzo(b)fluoranthene	1.082959	6.639685	22.62537	3.057797E-02			15	
Benzo(k)fluoranthene	1.084051	5.132336	22.65962	2.856803E-02			15	
Benzo(g,h,i)perylene	0.9110282	6.802208	25.184	6.306055E-02			15	
Chrysene	0.8637943	5.408299	21.47975	0.0230674			15	
Dibenz(a,h)anthracene	0.8591882	8.406009	24.73888	3.870046E-02			15	
Fluoranthene	1.0734	6.530408	19.73688	2.703257E-02			CCC (30)	
Fluorene	1.268453	4.34792	15.67312	6.048684E-02			15	
Indeno(1,2,3-cd)pyrene	1.04548	8.380097	24.7075	4.572643E-02			15	
2-Methylnaphthalene	0.581211	5.54386	11.9215	4.326375E-02			15	
Naphthalene	0.8792217	5.309528	10.308	4.557878E-02			15	
Phenanthrene	1.078067	5.687268	17.842	4.193031E-02			15	
Pyrene	1.088552	5.094553	20.025	2.588928E-02			15	
2-Fluorophenol	1.223348	7.000902	5.1945	0.3626669			15	
Phenol-d6	1.642988	4.966526	6.8645	0.2762328			15	
Nitrobenzene-d5	0.3293635	4.669151	8.6925	0.1210947			15	
2-Fluorobiphenyl	1.229164	6.738257	12.83875	6.409869E-02			15	
2,4,6-Tribromophenol	7.371287E-02	11.08117	16.242	6.657071E-02			15	
o-Terphenyl	0.5082389	8.11283	18.57937	0.0348139			15	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D15025-TUN1	dft0415.D	04/15/13 07:47
Calibration Check	3D15025-CCV1	10bna0415.D	04/15/13 08:07
LCS	1303365-BS1	1303365-bs1.D	04/15/13 11:06
Blank	1303365-BLK1	1303365-blk1.D	04/15/13 11:41
DASB228-0305	1304208-01	1304208-01.D	04/15/13 12:16
DASB229-0305	1304208-02	1304208-02.D	04/15/13 12:51
DASB230-0305	1304208-03	1304208-03.D	04/15/13 13:26
DASB231-0305	1304208-04	1304208-04.D	04/15/13 14:01
DASBFD-04	1304208-05	1304208-05.D	04/15/13 14:36
DASBFD-05	1304208-06	1304208-06.D	04/15/13 15:11
DASS210-0002	1304212-03	1304212-03.D	04/15/13 15:47
DASS212-0002	1304212-05	1304212-05.D	04/15/13 16:22
DASB232-0305	1304212-06	1304212-06.D	04/15/13 16:57
DASB233-0305	1304212-07	1304212-07.D	04/15/13 17:32
DASB236-0305	1304212-10	1304212-10.D	04/15/13 18:07
DASB237-0305	1304212-11	1304212-11.D	04/15/13 18:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Lab Sample ID: 3D15025-TUN1

Lab File ID: dft0415.D

Injection Date: 04/15/13

Injection Time: 07:47

Sequence: 3D15025

Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	36.7	PASS
68	Less than 2% of 69	1.66	PASS
69	Less than 200% of 198	38.9	PASS
70	Less than 2% of 69	0.519	PASS
127	40 - 60% of 198	46.9	PASS
197	Less than 1% of 198	0.369	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.54	PASS
275	10 - 30% of 198	23.3	PASS
365	1.0001 - 200% of 198	2.54	PASS
441	0.0001 - 99.9999% of 443	78.8	PASS
442	40.0001 - 200% of 198	90.8	PASS
443	17 - 23% of 442	19	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D15025-CCV1
Injection Date: 04/15/13
Calibration Date: 04/01/13 09:31
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Lab File ID: 10bna0415.D
Injection Time: 08:07
Calibration: 3D12002
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.84	1.121526	1.10411		-1.6	20
Acenaphthylene	A	10.0	9.86	1.806377	1.780365		-1.4	20
Anthracene	A	10.0	9.98	1.082515	1.080201		-0.2	20
Benzo(a)anthracene	A	10.0	9.57	0.9236851	0.8841859		-4.3	20
Benzo(a)pyrene	A	10.0	10.1	1.01751	1.03114		1.3	20
Benzo(b)fluoranthene	A	10.0	9.36	1.082959	1.013276		-6.4	20
Benzo(k)fluoranthene	A	10.0	10.4	1.084051	1.125763		3.8	20
Benzo(g,h,i)perylene	A	10.0	9.56	0.9110282	0.8705588		-4.4	20
Chrysene	A	10.0	9.97	0.8637943	0.8613032		-0.3	20
Dibenz(a,h)anthracene	A	10.0	9.96	0.8591882	0.856096		-0.4	20
Fluoranthene	A	10.0	9.26	1.0734	0.9943338		-7.4	20
Fluorene	A	10.0	9.85	1.268453	1.249959		-1.5	20
Indeno(1,2,3-cd)pyrene	A	10.0	9.83	1.04548	1.027504		-1.7	20
2-Methylnaphthalene	A	10.0	9.13	0.581211	0.530815		-8.7	20
Naphthalene	A	10.0	9.40	0.8792217	0.8264541		-6.0	20
Phenanthrene	A	10.0	9.04	1.078067	0.9746742		-9.6	20
Pyrene	A	10.0	10.4	1.088552	1.128214		3.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

QC BATCH SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303365 QC Batch Matrix: Soil

Preparation: 3550C Sonication Extraction

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303365-BLK1	04/15/13 08:21	
LCS	1303365-BS1	04/15/13 08:21	
DASB228-0305	1304208-01	04/15/13 08:21	DOD PAHs
DASB229-0305	1304208-02	04/15/13 08:21	DOD PAHs
DASB230-0305	1304208-03	04/15/13 08:21	DOD PAHs
DASB231-0305	1304208-04	04/15/13 08:21	DOD PAHs
DASBFD-04	1304208-05	04/15/13 08:21	DOD PAHs
DASBFD-05	1304208-06	04/15/13 08:21	DOD PAHs
DASS208-0002	1304212-01	04/15/13 08:21	DOD PAHs
DASS209-0002	1304212-02	04/15/13 08:21	DOD PAHs
DASS210-0002	1304212-03	04/15/13 08:21	DOD PAHs
DASS211-0002	1304212-04	04/15/13 08:21	DOD PAHs
DASS212-0002	1304212-05	04/15/13 08:21	DOD PAHs
DASB232-0305	1304212-06	04/15/13 08:21	DOD PAHs
DASB233-0305	1304212-07	04/15/13 08:21	DOD PAHs
DASB234-0305	1304212-08	04/15/13 08:21	DOD PAHs
DASB235-0305	1304212-09	04/15/13 08:21	DOD PAHs
DASB236-0305	1304212-10	04/15/13 08:21	DOD PAHs
DASB237-0305	1304212-11	04/15/13 08:21	DOD PAHs

METHOD BLANK DATA SHEET
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303365-BLK1 File ID: 1303365-blk1.D

Prepared: 04/15/13 08:21 Analyzed: 04/15/13 11:41

Preparation: 3550C Sonication Extract Initial/Final: 29.1 g / 1 mL

QC Batch: 1303365 Sequence: 3D15025 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.017	mg/kg wet	0.0046	0.017	0.017	U
208-96-8	Acenaphthylene	0.017	mg/kg wet	0.0042	0.017	0.017	U
120-12-7	Anthracene	0.017	mg/kg wet	0.0040	0.017	0.017	U
56-55-3	Benzo(a)anthracene	0.0083	mg/kg wet	0.0028	0.0083	0.017	U
50-32-8	Benzo(a)pyrene	0.0083	mg/kg wet	0.0023	0.0083	0.017	U
205-99-2	Benzo(b)fluoranthene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
207-08-9	Benzo(k)fluoranthene	0.0083	mg/kg wet	0.0020	0.0083	0.017	U
191-24-2	Benzo(g,h,i)perylene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
218-01-9	Chrysene	0.017	mg/kg wet	0.0039	0.017	0.017	U
53-70-3	Dibenz(a,h)anthracene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
206-44-0	Fluoranthene	0.017	mg/kg wet	0.0045	0.017	0.017	U
86-73-7	Fluorene	0.017	mg/kg wet	0.0040	0.017	0.017	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	mg/kg wet	0.0027	0.0033	0.017	U
91-57-6	2-Methylnaphthalene	0.017	mg/kg wet	0.0046	0.017	0.017	U
91-20-3	Naphthalene	0.017	mg/kg wet	0.0056	0.017	0.017	U
85-01-8	Phenanthrene	0.017	mg/kg wet	0.0041	0.017	0.017	U
129-00-0	Pyrene	0.017	mg/kg wet	0.0043	0.017	0.017	U

System Monitoring Compound	Added (mg/kg wet)	Conc. (mg/kg wet)	% REC	QC Limits	Q
Nitrobenzene-d5	0.344	0.254	74	35 - 100	
2-Fluorobiphenyl	0.344	0.296	86	45 - 105	
o-Terphenyl	0.347	0.297	86	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	138571	7.792	97874	7.546	
Naphthalene-d8	594310	10.508	407297	10.262	
Acenaphthene-d10	242645	14.594	189519	14.365	
Phenanthrene-d10	423242	18.009	317445	17.798	
Chrysene-d12	439982	21.605	314770	21.453	
Perylene-d12	333072	23.337	230613	23.102	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16006

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D16006-TUN1	dft0415g.D	04/15/13 22:50
Calibration Check	3D16006-CCV1	10c0415.D	04/15/13 23:10
DASS209-0002	1304212-02	1304212-02 x2.D	04/16/13 00:21
DASS211-0002	1304212-04	1304212-04 x5.D	04/16/13 00:55
DASS208-0002	1304212-01	1304212-01 x5.D	04/16/13 01:30
DASB235-0305	1304212-09	1304212-09 x10.D	04/16/13 02:06
DASB234-0305	1304212-08	1304212-08 x10.D	04/16/13 02:42

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304208
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D16006-TUN1
Lab File ID: dft0415g.D
Injection Date: 04/15/13
Injection Time: 22:50
Sequence: 3D16006
Instrument ID: 308

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	39.7	PASS
68	Less than 2% of 69	1.79	PASS
69	Less than 200% of 198	41.4	PASS
70	Less than 2% of 69	0.617	PASS
127	40 - 60% of 198	49.4	PASS
197	Less than 1% of 198	0.439	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.69	PASS
275	10 - 30% of 198	22.4	PASS
365	1.0001 - 200% of 198	2.29	PASS
441	0.0001 - 99.9999% of 443	78.1	PASS
442	40.0001 - 200% of 198	78.1	PASS
443	17 - 23% of 442	18.9	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D16006-CCV1
Injection Date: 04/15/13
Calibration Date: 04/01/13 09:31
Sequence: 3D16006

SDG: 1304208
Project: USCG Atwater Facility
Lab File ID: 10c0415.D
Injection Time: 23:10
Calibration: 3D12002
Instrument ID: 308

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.89	1.121526	1.109268		-1.1	20
Acenaphthylene	A	10.0	10.1	1.806377	1.817515		0.6	20
Anthracene	A	10.0	9.83	1.082515	1.063756		-1.7	20
Benzo(a)anthracene	A	10.0	9.38	0.9236851	0.8666486		-6.2	20
Benzo(a)pyrene	A	10.0	9.98	1.01751	1.015899		-0.2	20
Benzo(b)fluoranthene	A	10.0	9.28	1.082959	1.004496		-7.2	20
Benzo(k)fluoranthene	A	10.0	9.96	1.084051	1.079824		-0.4	20
Benzo(g,h,i)perylene	A	10.0	9.85	0.9110282	0.8973694		-1.5	20
Chrysene	A	10.0	9.79	0.8637943	0.8452657		-2.1	20
Dibenz(a,h)anthracene	A	10.0	10.2	0.8591882	0.8786372		2.3	20
Fluoranthene	A	10.0	9.40	1.0734	1.00871		-6.0	20
Fluorene	A	10.0	9.79	1.268453	1.241935		-2.1	20
Indeno(1,2,3-cd)pyrene	A	10.0	10.0	1.04548	1.049732		0.4	20
2-Methylnaphthalene	A	10.0	9.18	0.581211	0.5333227		-8.2	20
Naphthalene	A	10.0	9.52	0.8792217	0.8370014		-4.8	20
Phenanthrene	A	10.0	9.23	1.078067	0.9951422		-7.7	20
Pyrene	A	10.0	10.2	1.088552	1.113826		2.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D15025-CCV1)		**Lab File ID: 10bna0415.D**		**Analyzed: 04/15/13 08:07**			
Nitrobenzene-d5	8.94	8.69	0.25	+/-1.0	96	80 - 120	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	97	80 - 120	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	92	80 - 120	
LCS (1303365-BS1)		**Lab File ID: 1303365-bs1.D**		**Analyzed: 04/15/13 11:06**			
Nitrobenzene-d5	8.95	8.69	0.26	+/-1.0	75	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	79	45 - 105	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	80	30 - 125	
Blank (1303365-BLK1)		**Lab File ID: 1303365-blk1.I**		**Analyzed: 04/15/13 11:41**			
Nitrobenzene-d5	8.98	8.69	0.28	+/-1.0	74	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	86	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	86	30 - 125	
DASB228-0305 (1304208-01)		**Lab File ID: 1304208-01.D**		**Analyzed: 04/15/13 12:16**			
Nitrobenzene-d5	8.98	8.69	0.29	+/-1.0	70	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	72	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	74	30 - 125	
DASB229-0305 (1304208-02)		**Lab File ID: 1304208-02.D**		**Analyzed: 04/15/13 12:51**			
Nitrobenzene-d5	8.98	8.69	0.28	+/-1.0	76	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	80	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	77	30 - 125	
DASB230-0305 (1304208-03)		**Lab File ID: 1304208-03.D**		**Analyzed: 04/15/13 13:26**			
Nitrobenzene-d5	8.99	8.69	0.30	+/-1.0	72	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	74	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	73	30 - 125	
DASB231-0305 (1304208-04)		**Lab File ID: 1304208-04.D**		**Analyzed: 04/15/13 14:01**			
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	73	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	77	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	73	30 - 125	
DASBFD-04 (1304208-05)		**Lab File ID: 1304208-05.D**		**Analyzed: 04/15/13 14:36**			
Nitrobenzene-d5	8.98	8.69	0.29	+/-1.0	75	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	76	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	78	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
DASBFD-05 (1304208-06)		**Lab File ID: 1304208-06.D Analyzed: 04/15/13 15:11**					
Nitrobenzene-d5	8.98	8.69	0.29	+/-1.0	71	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	73	30 - 125	
DASS210-0002 (1304212-03)		**Lab File ID: 1304212-03.D Analyzed: 04/15/13 15:47**					
Nitrobenzene-d5	8.98	8.69	0.29	+/-1.0	70	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	81	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	77	30 - 125	
DASS212-0002 (1304212-05)		**Lab File ID: 1304212-05.D Analyzed: 04/15/13 16:22**					
Nitrobenzene-d5	8.95	8.69	0.26	+/-1.0	76	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	72	45 - 105	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	68	30 - 125	
DASB232-0305 (1304212-06)		**Lab File ID: 1304212-06.D Analyzed: 04/15/13 16:57**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	71	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	73	45 - 105	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	71	30 - 125	
DASB233-0305 (1304212-07)		**Lab File ID: 1304212-07.D Analyzed: 04/15/13 17:32**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	69	35 - 100	
2-Fluorobiphenyl	13.06	12.84	0.22	+/-1.0	69	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	67	30 - 125	
DASB236-0305 (1304212-10)		**Lab File ID: 1304212-10.D Analyzed: 04/15/13 18:07**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	76	35 - 100	
2-Fluorobiphenyl	13.07	12.84	0.23	+/-1.0	81	45 - 105	
o-Terphenyl	18.74	18.58	0.16	+/-1.0	80	30 - 125	
DASB237-0305 (1304212-11)		**Lab File ID: 1304212-11.D Analyzed: 04/15/13 18:42**					
Nitrobenzene-d5	8.99	8.69	0.29	+/-1.0	68	35 - 100	
2-Fluorobiphenyl	13.07	12.84	0.23	+/-1.0	75	45 - 105	
o-Terphenyl	18.73	18.58	0.15	+/-1.0	78	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D16006

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D16006-CCV1)		**Lab File ID: 10c0415.D**		**Analyzed: 04/15/13 23:10**			
Nitrobenzene-d5	8.82	8.69	0.13	+/-1.0	95	80 - 120	
2-Fluorobiphenyl	12.94	12.84	0.10	+/-1.0	99	80 - 120	
o-Terphenyl	18.65	18.58	0.07	+/-1.0	92	80 - 120	
DASS209-0002 (1304212-02)		**Lab File ID: 1304212-02 x2.Analyzed: 04/16/13 00:21**					
Nitrobenzene-d5	8.86	8.69	0.17	+/-1.0	67	35 - 100	
2-Fluorobiphenyl	12.94	12.84	0.10	+/-1.0	69	45 - 105	
o-Terphenyl	18.65	18.58	0.07	+/-1.0	38	30 - 125	
DASS211-0002 (1304212-04)		**Lab File ID: 1304212-04 x5.Analyzed: 04/16/13 00:55**					
Nitrobenzene-d5	9.00	8.69	0.31	+/-1.0	56	35 - 100	
2-Fluorobiphenyl	12.96	12.84	0.12	+/-1.0	56	45 - 105	
o-Terphenyl	18.65	18.58	0.07	+/-1.0	56	30 - 125	
DASS208-0002 (1304212-01)		**Lab File ID: 1304212-01 x5.Analyzed: 04/16/13 01:30**					
Nitrobenzene-d5	9.04	8.69	0.35	+/-1.0	52	35 - 100	
2-Fluorobiphenyl	12.95	12.84	0.11	+/-1.0	66	45 - 105	
o-Terphenyl	18.64	18.58	0.06	+/-1.0	60	30 - 125	
DASB235-0305 (1304212-09)		**Lab File ID: 1304212-09 x1(Analyzed: 04/16/13 02:06**					
Nitrobenzene-d5	8.97	8.69	0.28	+/-1.0	74	35 - 100	
2-Fluorobiphenyl	12.95	12.84	0.11	+/-1.0	68	45 - 105	
o-Terphenyl	18.64	18.58	0.06	+/-1.0	93	30 - 125	
DASB234-0305 (1304212-08)		**Lab File ID: 1304212-08 x1(Analyzed: 04/16/13 02:42**					
Nitrobenzene-d5	8.93	8.69	0.24	+/-1.0	63	35 - 100	
2-Fluorobiphenyl	12.95	12.84	0.11	+/-1.0	66	45 - 105	
o-Terphenyl	18.65	18.58	0.07	+/-1.0	61	30 - 125	

LCS / LCS DUPLICATE RECOVERY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1303365-BS1
Preparation: 3550C Sonication Extraction
Initial/Final: 30.1 g / 1 mL
Sequence: 3D15025

QC Batch: 1303365

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.332	0.273	82	45 - 110	mg/kg wet
Acenaphthylene	0.332	0.264	79	45 - 105	mg/kg wet
Anthracene	0.332	0.284	86	55 - 105	mg/kg wet
Benzo(a)anthracene	0.332	0.260	78	50 - 110	mg/kg wet
Benzo(a)pyrene	0.332	0.281	85	50 - 110	mg/kg wet
Benzo(b)fluoranthene	0.332	0.276	83	45 - 115	mg/kg wet
Benzo(k)fluoranthene	0.332	0.272	82	45 - 125	mg/kg wet
Benzo(g,h,i)perylene	0.332	0.274	83	40 - 125	mg/kg wet
Chrysene	0.332	0.307	93	55 - 110	mg/kg wet
Dibenz(a,h)anthracene	0.332	0.284	86	40 - 125	mg/kg wet
Fluoranthene	0.332	0.268	81	55 - 115	mg/kg wet
Fluorene	0.332	0.266	80	50 - 110	mg/kg wet
Indeno(1,2,3-cd)pyrene	0.332	0.279	84	40 - 120	mg/kg wet
2-Methylnaphthalene	0.332	0.235	71	45 - 105	mg/kg wet
Naphthalene	0.332	0.259	78	40 - 105	mg/kg wet
Phenanthrene	0.332	0.259	78	50 - 110	mg/kg wet
Pyrene	0.332	0.292	88	45 - 125	mg/kg wet

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D15025-CCV1)			Lab File ID: 10bna0415.D			Analyzed: 04/15/13 08:07			
1,4-Dichlorobenzene-d4	129241	7.768	97874	7.546	132	50 - 200	0.2220	+/-0.50	
Naphthalene-d8	534723	10.496	407297	10.262	131	50 - 200	0.2340	+/-0.50	
Acenaphthene-d10	233456	14.599	189519	14.365	123	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	411122	18.009	317445	17.798	130	50 - 200	0.2110	+/-0.50	
Chrysene-d12	375481	21.605	314770	21.453	119	50 - 200	0.1520	+/-0.50	
Perylene-d12	271212	23.337	230613	23.102	118	50 - 200	0.2350	+/-0.50	
LCS (1303365-BS1)			Lab File ID: 1303365-bs1.D			Analyzed: 04/15/13 11:06			
1,4-Dichlorobenzene-d4	132356	7.786	97874	7.546	135	50 - 200	0.2400	+/-0.50	
Naphthalene-d8	570798	10.496	407297	10.262	140	50 - 200	0.2340	+/-0.50	
Acenaphthene-d10	252294	14.599	189519	14.365	133	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	423695	18.015	317445	17.798	133	50 - 200	0.2170	+/-0.50	
Chrysene-d12	404628	21.611	314770	21.453	129	50 - 200	0.1580	+/-0.50	
Perylene-d12	312018	23.342	230613	23.102	135	50 - 200	0.2400	+/-0.50	
Blank (1303365-BLK1)			Lab File ID: 1303365-blk1.D			Analyzed: 04/15/13 11:41			
1,4-Dichlorobenzene-d4	138571	7.792	97874	7.546	142	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	594310	10.508	407297	10.262	146	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	242645	14.594	189519	14.365	128	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	423242	18.009	317445	17.798	133	50 - 200	0.2110	+/-0.50	
Chrysene-d12	439982	21.605	314770	21.453	140	50 - 200	0.1520	+/-0.50	
Perylene-d12	333072	23.337	230613	23.102	144	50 - 200	0.2350	+/-0.50	
DASB228-0305 (1304208-01)			Lab File ID: 1304208-01.D			Analyzed: 04/15/13 12:16			
1,4-Dichlorobenzene-d4	139460	7.786	97874	7.546	142	50 - 200	0.2400	+/-0.50	
Naphthalene-d8	591544	10.502	407297	10.262	145	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	242495	14.594	189519	14.365	128	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	425017	18.009	317445	17.798	134	50 - 200	0.2110	+/-0.50	
Chrysene-d12	390291	21.605	314770	21.453	124	50 - 200	0.1520	+/-0.50	
Perylene-d12	293602	23.337	230613	23.102	127	50 - 200	0.2350	+/-0.50	
DASB229-0305 (1304208-02)			Lab File ID: 1304208-02.D			Analyzed: 04/15/13 12:51			
1,4-Dichlorobenzene-d4	116069	7.78	97874	7.546	119	50 - 200	0.2340	+/-0.50	
Naphthalene-d8	490670	10.508	407297	10.262	120	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	200530	14.594	189519	14.365	106	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	367594	18.009	317445	17.798	116	50 - 200	0.2110	+/-0.50	
Chrysene-d12	336160	21.606	314770	21.453	107	50 - 200	0.1530	+/-0.50	
Perylene-d12	246734	23.337	230613	23.102	107	50 - 200	0.2350	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASB230-0305 (1304208-03)			Lab File ID: 1304208-03.D			Analyzed: 04/15/13 13:26			
1,4-Dichlorobenzene-d4	129342	7.792	97874	7.546	132	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	542800	10.508	407297	10.262	133	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	220842	14.594	189519	14.365	117	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	392085	18.009	317445	17.798	124	50 - 200	0.2110	+/-0.50	
Chrysene-d12	374045	21.605	314770	21.453	119	50 - 200	0.1520	+/-0.50	
Perylene-d12	274302	23.337	230613	23.102	119	50 - 200	0.2350	+/-0.50	
DASB231-0305 (1304208-04)			Lab File ID: 1304208-04.D			Analyzed: 04/15/13 14:01			
1,4-Dichlorobenzene-d4	134029	7.786	97874	7.546	137	50 - 200	0.2400	+/-0.50	
Naphthalene-d8	554478	10.502	407297	10.262	136	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	225058	14.594	189519	14.365	119	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	401659	18.009	317445	17.798	127	50 - 200	0.2110	+/-0.50	
Chrysene-d12	383307	21.606	314770	21.453	122	50 - 200	0.1530	+/-0.50	
Perylene-d12	289913	23.337	230613	23.102	126	50 - 200	0.2350	+/-0.50	
DASBFD-04 (1304208-05)			Lab File ID: 1304208-05.D			Analyzed: 04/15/13 14:36			
1,4-Dichlorobenzene-d4	133087	7.792	97874	7.546	136	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	554010	10.508	407297	10.262	136	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	232331	14.599	189519	14.365	123	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	413624	18.009	317445	17.798	130	50 - 200	0.2110	+/-0.50	
Chrysene-d12	378849	21.605	314770	21.453	120	50 - 200	0.1520	+/-0.50	
Perylene-d12	279107	23.337	230613	23.102	121	50 - 200	0.2350	+/-0.50	
DASBFD-05 (1304208-06)			Lab File ID: 1304208-06.D			Analyzed: 04/15/13 15:11			
1,4-Dichlorobenzene-d4	128826	7.792	97874	7.546	132	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	553537	10.502	407297	10.262	136	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	225834	14.594	189519	14.365	119	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	401337	18.009	317445	17.798	126	50 - 200	0.2110	+/-0.50	
Chrysene-d12	368364	21.605	314770	21.453	117	50 - 200	0.1520	+/-0.50	
Perylene-d12	275348	23.336	230613	23.102	119	50 - 200	0.2340	+/-0.50	
DASS210-0002 (1304212-03)			Lab File ID: 1304212-03.D			Analyzed: 04/15/13 15:47			
1,4-Dichlorobenzene-d4	143397	7.786	97874	7.546	147	50 - 200	0.2400	+/-0.50	
Naphthalene-d8	612648	10.502	407297	10.262	150	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	245420	14.593	189519	14.365	129	50 - 200	0.2280	+/-0.50	
Phenanthrene-d10	435951	18.009	317445	17.798	137	50 - 200	0.2110	+/-0.50	
Chrysene-d12	386208	21.605	314770	21.453	123	50 - 200	0.1520	+/-0.50	
Perylene-d12	271341	23.336	230613	23.102	118	50 - 200	0.2340	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D15025

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASS212-0002 (1304212-05)			Lab File ID: 1304212-05.D			Analyzed: 04/15/13 16:22			
1,4-Dichlorobenzene-d4	122436	7.78	97874	7.546	125	50 - 200	0.2340	+/-0.50	
Naphthalene-d8	525885	10.49	407297	10.262	129	50 - 200	0.2280	+/-0.50	
Acenaphthene-d10	225671	14.594	189519	14.365	119	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	361017	18.009	317445	17.798	114	50 - 200	0.2110	+/-0.50	
Chrysene-d12	230473	21.611	314770	21.453	73	50 - 200	0.1580	+/-0.50	
Perylene-d12	180005	23.342	230613	23.102	78	50 - 200	0.2400	+/-0.50	
DASB232-0305 (1304212-06)			Lab File ID: 1304212-06.D			Analyzed: 04/15/13 16:57			
1,4-Dichlorobenzene-d4	131713	7.792	97874	7.546	135	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	569072	10.502	407297	10.262	140	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	237144	14.594	189519	14.365	125	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	410800	18.009	317445	17.798	129	50 - 200	0.2110	+/-0.50	
Chrysene-d12	347929	21.611	314770	21.453	111	50 - 200	0.1580	+/-0.50	
Perylene-d12	245184	23.342	230613	23.102	106	50 - 200	0.2400	+/-0.50	
DASB233-0305 (1304212-07)			Lab File ID: 1304212-07.D			Analyzed: 04/15/13 17:32			
1,4-Dichlorobenzene-d4	137708	7.797	97874	7.546	141	50 - 200	0.2510	+/-0.50	
Naphthalene-d8	577494	10.502	407297	10.262	142	50 - 200	0.2400	+/-0.50	
Acenaphthene-d10	234495	14.599	189519	14.365	124	50 - 200	0.2340	+/-0.50	
Phenanthrene-d10	418638	18.015	317445	17.798	132	50 - 200	0.2170	+/-0.50	
Chrysene-d12	374253	21.611	314770	21.453	119	50 - 200	0.1580	+/-0.50	
Perylene-d12	275371	23.342	230613	23.102	119	50 - 200	0.2400	+/-0.50	
DASB236-0305 (1304212-10)			Lab File ID: 1304212-10.D			Analyzed: 04/15/13 18:07			
1,4-Dichlorobenzene-d4	122769	7.792	97874	7.546	125	50 - 200	0.2460	+/-0.50	
Naphthalene-d8	516213	10.508	407297	10.262	127	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	213338	14.594	189519	14.365	113	50 - 200	0.2290	+/-0.50	
Phenanthrene-d10	379044	18.015	317445	17.798	119	50 - 200	0.2170	+/-0.50	
Chrysene-d12	339210	21.605	314770	21.453	108	50 - 200	0.1520	+/-0.50	
Perylene-d12	257369	23.342	230613	23.102	112	50 - 200	0.2400	+/-0.50	
DASB237-0305 (1304212-11)			Lab File ID: 1304212-11.D			Analyzed: 04/15/13 18:42			
1,4-Dichlorobenzene-d4	128958	7.798	97874	7.546	132	50 - 200	0.2520	+/-0.50	
Naphthalene-d8	554766	10.508	407297	10.262	136	50 - 200	0.2460	+/-0.50	
Acenaphthene-d10	224777	14.6	189519	14.365	119	50 - 200	0.2350	+/-0.50	
Phenanthrene-d10	400050	18.015	317445	17.798	126	50 - 200	0.2170	+/-0.50	
Chrysene-d12	351294	21.611	314770	21.453	112	50 - 200	0.1580	+/-0.50	
Perylene-d12	242750	23.342	230613	23.102	105	50 - 200	0.2400	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D16006

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D16006-CCV1)			Lab File ID: 10c0415.D			Analyzed: 04/15/13 23:10			
1,4-Dichlorobenzene-d4	130107	7.64	97874	7.546	133	50 - 200	0.0940	+/-0.50	
Naphthalene-d8	552566	10.374	407297	10.262	136	50 - 200	0.1120	+/-0.50	
Acenaphthene-d10	241590	14.477	189519	14.365	127	50 - 200	0.1120	+/-0.50	
Phenanthrene-d10	407077	17.904	317445	17.798	128	50 - 200	0.1060	+/-0.50	
Chrysene-d12	380116	21.53	314770	21.453	121	50 - 200	0.0770	+/-0.50	
Perylene-d12	288033	23.22	230613	23.102	125	50 - 200	0.1180	+/-0.50	
DASS209-0002 (1304212-02)			Lab File ID: 1304212-02 x2.D			Analyzed: 04/16/13 00:21			
1,4-Dichlorobenzene-d4	130148	7.658	97874	7.546	133	50 - 200	0.1120	+/-0.50	
Naphthalene-d8	558737	10.368	407297	10.262	137	50 - 200	0.1060	+/-0.50	
Acenaphthene-d10	239117	14.471	189519	14.365	126	50 - 200	0.1060	+/-0.50	
Phenanthrene-d10	368717	17.904	317445	17.798	116	50 - 200	0.1060	+/-0.50	
Chrysene-d12	263257	21.53	314770	21.453	84	50 - 200	0.0770	+/-0.50	
Perylene-d12	190161	23.226	230613	23.102	82	50 - 200	0.1240	+/-0.50	
DASS211-0002 (1304212-04)			Lab File ID: 1304212-04 x5.D			Analyzed: 04/16/13 00:55			
1,4-Dichlorobenzene-d4	125581	7.663	97874	7.546	128	50 - 200	0.1170	+/-0.50	
Naphthalene-d8	553894	10.38	407297	10.262	136	50 - 200	0.1180	+/-0.50	
Acenaphthene-d10	224257	14.471	189519	14.365	118	50 - 200	0.1060	+/-0.50	
Phenanthrene-d10	397517	17.91	317445	17.798	125	50 - 200	0.1120	+/-0.50	
Chrysene-d12	254917	21.53	314770	21.453	81	50 - 200	0.0770	+/-0.50	
Perylene-d12	175016	23.22	230613	23.102	76	50 - 200	0.1180	+/-0.50	
DASS208-0002 (1304212-01)			Lab File ID: 1304212-01 x5.D			Analyzed: 04/16/13 01:30			
1,4-Dichlorobenzene-d4	127609	7.669	97874	7.546	130	50 - 200	0.1230	+/-0.50	
Naphthalene-d8	566417	10.385	407297	10.262	139	50 - 200	0.1230	+/-0.50	
Acenaphthene-d10	223147	14.477	189519	14.365	118	50 - 200	0.1120	+/-0.50	
Phenanthrene-d10	381564	17.91	317445	17.798	120	50 - 200	0.1120	+/-0.50	
Chrysene-d12	238191	21.53	314770	21.453	76	50 - 200	0.0770	+/-0.50	
Perylene-d12	155143	23.226	230613	23.102	67	50 - 200	0.1240	+/-0.50	
DASB235-0305 (1304212-09)			Lab File ID: 1304212-09 x10.D			Analyzed: 04/16/13 02:06			
1,4-Dichlorobenzene-d4	131291	7.681	97874	7.546	134	50 - 200	0.1350	+/-0.50	
Naphthalene-d8	579816	10.379	407297	10.262	142	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	245766	14.471	189519	14.365	130	50 - 200	0.1060	+/-0.50	
Phenanthrene-d10	356757	17.91	317445	17.798	112	50 - 200	0.1120	+/-0.50	
Chrysene-d12	350403	21.535	314770	21.453	111	50 - 200	0.0820	+/-0.50	
Perylene-d12	223936	23.232	230613	23.102	97	50 - 200	0.1300	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D16006

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D12002
Instrument: 308

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
DASB234-0305 (1304212-08)			Lab File ID: 1304212-08 x10.D			Analyzed: 04/16/13 02:42			
1,4-Dichlorobenzene-d4	117309	7.663	97874	7.546	120	50 - 200	0.1170	+/-0.50	
Naphthalene-d8	538203	10.379	407297	10.262	132	50 - 200	0.1170	+/-0.50	
Acenaphthene-d10	229973	14.477	189519	14.365	121	50 - 200	0.1120	+/-0.50	
Phenanthrene-d10	373398	17.91	317445	17.798	118	50 - 200	0.1120	+/-0.50	
Chrysene-d12	201226	21.535	314770	21.453	64	50 - 200	0.0820	+/-0.50	
Perylene-d12	144838	23.232	230613	23.102	63	50 - 200	0.1300	+/-0.50	

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT USCG Ottawa Facility		JOB NUMBER SDG 130820 8	
SUBJECT Sample Calculation			
BASED ON		DRAWING NUMBER	
BY Ann Cognetti	CHECKED BY	APPROVED BY	DATE May 13, 2013

Sample DASBZ35-030S, fluoranthene

$$\frac{447737}{356757} * \frac{5\ ng/uL}{1.0734} * 10 * \frac{1\ mL}{30.2g} * \frac{1}{0.7180} = 2.7\ mg/kg$$

Sample Calculation

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB235-0305

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304212-09 File ID: 1304212-09 x10.D

Sampled: 04/12/13 13:00 Prepared: 04/15/13 08:21 Analyzed: 04/16/13 02:06

Solids: 71.80 Preparation: 3550C Sonication Extract Initial/Final: 30.2 g / 1 mL

QC Batch: 1303365 Sequence: 3D16006 Calibration: 3D12002 Instrument: 308

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.11	0.064	0.23	0.23	J
208-96-8	Acenaphthylene	10	0.092	0.058	0.23	0.23	J
120-12-7	Anthracene	10	0.46	0.056	0.23	0.23	
56-55-3	Benzo(a)anthracene	10	1.5	0.038	0.12	0.23	
50-32-8	Benzo(a)pyrene	10	1.3	0.032	0.12	0.23	
205-99-2	Benzo(b)fluoranthene	10	1.8	0.027	0.12	0.23	
207-08-9	Benzo(k)fluoranthene	10	1.0	0.027	0.12	0.23	
191-24-2	Benzo(g,h,i)perylene	10	0.87	0.026	0.12	0.23	
218-01-9	Chrysene	10	1.4	0.054	0.23	0.23	
53-70-3	Dibenz(a,h)anthracene	10	0.42	0.027	0.12	0.23	
206-44-0	Fluoranthene	10	2.7	0.062	0.23	0.23	
86-73-7	~~Fluorene~~	10	0.12	0.056	0.23	0.23	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.82	0.037	0.046	0.23	
91-57-6	2-Methylnaphthalene	10	0.23	0.064	0.23	0.23	U
91-20-3	Naphthalene	10	0.23	0.078	0.23	0.23	U
85-01-8	Phenanthrene	10	1.7	0.057	0.23	0.23	
129-00-0	Pyrene	10	2.5	0.060	0.23	0.23	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.461	0.341	74	35 - 100	D
2-Fluorobiphenyl	0.461	0.314	68	45 - 105	D
o-Terphenyl	0.466	0.434	93	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	131291	7.681	97874	7.546	
Naphthalene-d8	579816	10.379	407297	10.262	
Acenaphthene-d10	245766	14.471	189519	14.365	
Phenanthrene-d10	356757	17.91	317445	17.798	
Chrysene-d12	350403	21.535	314770	21.453	
Perylene-d12	223936	23.232	230613	23.102	

* Values outside of QC limits

Quantitation Report (QT Reviewed) Sample Calculation

Data Path : C:\msdchem\1\DATA\041513b_308\
Data File : 1304212-09 x10.D
Acq On : 16 Apr 2013 2:06
Operator : DWJ
Sample : 1304212-09 x10 DASB235-0305 Inst : 308
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 07:55:45 2013
Quant Method : C:\msdchem\1\METHODS\040213bna.M
Quant Title : 8270/625 BNA
QLast Update : Tue Apr 16 07:39:10 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.681	152	131291	5.00 ng/uL	# 0.04
21) Naphthalene-d8	10.379	136	579816	5.00 ng/uL	# 0.00
43) Acenaphthene-d10	14.471	164	245766	5.00 ng/uL	0.00
67) Phenanthrene-d10	17.910	188	356757	5.00 ng/uL	0.00
82) Chrysene-d12	21.535	240	350403	5.00 ng/uL	# 0.00
93) Perylene-d12	23.232	264	223936	5.00 ng/uL	# 0.01
System Monitoring Compounds					
4) 2-Fluorophenol	5.378	112	43453	1.35 ng/uL	0.10
7) Phenol-d6	7.180	99	56783	1.32 ng/uL	0.15
22) Nitrobenzene-d5	8.969	82	28195	0.74 ng/uL	0.15
24) Decafluorobiphenyl	9.039	334	9712	0.43 ng/uL	0.00
48) 2-Fluorobiphenyl	12.950	172	41250	0.68 ng/uL	0.01
71) 2,4,6-Tribromophenol	16.395	330	7744	1.47 ng/uL	0.01
79) o-Terphenyl	18.644	230	34471	0.94 ng/uL	0.00
Target Compounds					Qvalue
2) N-Nitroso-dimethylamine	0.000		0	N.D.	
3) Pyridine	0.000		0	N.D.	
5) Aniline	7.086	93	1131	0.70 ng/uL#	33
6) Benzaldehyde	6.946	105	12670	8.54 ng/uL#	72
8) Phenol	0.000		0	N.D.	
9) Bis(2-chloroethyl)ether	7.086	93	1131	0.03 ng/uL	100
10) 2-Chlorophenol	0.000		0	N.D.	
11) 1,3-Dichlorobenzene	0.000		0	N.D.	
12) 1,4-Dichlorobenzene	0.000		0	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) Bis(2-chloroisipropyl)...	8.223	45	621	0.01 ng/uL#	51
15) Benzyl Alcohol	0.000		0	N.D.	
16) 2-Methylphenol	0.000		0	N.D.	
17) Acetophenone	8.584	105	514	0.01 ng/uL#	36
18) Hexachloroethane	0.000		0	N.D.	
19) 4-Methylphenol	0.000		0	N.D.	
20) N-Nitroso-di-n-propyla...	8.170	70	138	0.01 ng/uL#	1
23) Nitrobenzene	8.858	77	150	0.00 ng/uL#	30
25) Isophorone	9.429	82	64	0.00 ng/uL#	58
26) 2-Chloroaniline	9.039	127	71	0.00 ng/uL#	53
27) 2-Nitrophenol	0.000		0	N.D.	
28) 2,4-Dimethylphenol	0.000		0	N.D.	
29) Bis(2-chlorethoxy)methane	10.205	93	251	0.01 ng/uL#	16
30) 2,4-Dichlorophenol	0.000		0	N.D.	
31) Benzoic Acid	10.391	105	495	1.03 ng/uL#	1
32) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
33) Naphthalene	10.432	128	6812	0.07 ng/uL#	76
34) 4-Chloroaniline	0.000		0	N.D.	
35) 2,6-Dichlorophenol	0.000		0	N.D.	
36) Hexachlorobutadiene	0.000		0	N.D.	
37) Caprolactam	11.569	55	6101	0.36 ng/uL#	23
38) 1,2-Bis(2-chloroethoxy...	0.000		0	N.D.	
39) 4-Chloro-3-methylphenol	11.912	107	370	0.01 ng/uL#	1
40) 2-Methylnaphthalene	12.064	142	4148m	0.06 ng/uL	
41) 1-Methylnaphthalene	12.256	142	3093	0.05 ng/uL#	79

Quantitation Report (QT Reviewed)

Sample Calculation

Data Path : C:\msdchem\1\DATA\041513b_308\
Data File : 1304212-09 x10.D
Acq On : 16 Apr 2013 2:06
Operator : DWJ
Sample : 1304212-09 x10 Inst : 308
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 16 07:55:45 2013
Quant Method : C:\msdchem\1\METHODS\040213bna.M
Quant Title : 8270/625 BNA
QLast Update : Tue Apr 16 07:39:10 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,3 Dinitrobenzene	0.000		0	N.D.	
44) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.	
45) Hexachlorocyclopentadiene	0.000		0	N.D.	
46) 2,4,6-Trichlorophenol	0.000		0	N.D.	
47) 2,4,5-Trichlorophenol	0.000		0	N.D.	
49) 2-Chloronaphthalene	0.000		0	N.D.	
50) 1,1'-Biphenyl	13.183	154	963	0.01 ng/uL#	51
51) 2-Nitroaniline	13.632	138	128	0.01 ng/uL#	1
52) Acenaphthylene	14.133	152	17790	0.20 ng/uL	95
53) 2,6-Dinitrotoluene	14.098	165	306	0.02 ng/uL#	1
54) Dimethyl Phthalate	13.964	163	4785	0.08 ng/uL#	86
55) 3-Nitroaniline	14.302	138	183	0.01 ng/uL#	15
56) Acenaphthene	14.547	153	12579	0.23 ng/uL	87
57) 2,4-Dinitrophenol	0.000		0	N.D.	
58) Dibenzofuran	14.920	168	326	0.00 ng/uL	96
59) 4-Nitrophenol	15.153	65	5446	0.40 ng/uL#	8
60) 2,4-Dinitrotoluene	15.037	165	123	0.01 ng/uL#	1
61) 2,3,5,6-Tetrachlorophenol	15.258	232	425	0.03 ng/uL#	37
62) 2,3,4,6-Tetrachlorophenol	15.375	232	2476	0.19 ng/uL#	33
63) Fluorene	15.794	166	15508m	0.25 ng/uL	
64) Diethyl Phthalate	15.666	149	12516	0.20 ng/uL	91
65) 4-Chlorophenyl Phenyl ...	15.864	204	648	0.02 ng/uL#	93
66) 4-Nitroaniline	16.109	138	135	0.01 ng/uL#	1
68) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
69) N-Nitroso-diphenylamine	16.167	169	4947	0.11 ng/uL#	71
70) 1,2-Diphenylhydrazine	15.923	182	325	0.02 ng/uL	87
72) 4-Bromophenyl Phenyl E...	17.007	248	1419	0.11 ng/uL	97
73) Hexachlorobenzene	17.112	284	643	0.05 ng/uL#	72
74) Atrazine	17.496	200	7963	0.57 ng/uL	95
75) Pentachlorophenol	17.613	266	4272	0.49 ng/uL#	84
76) Phenanthrene	17.951	178	280132	3.64 ng/uL	96
77) Anthracene	18.050	178	76570	0.99 ng/uL	97
78) Carbazole	18.406	167	76470	1.12 ng/uL	100
80) Di-n-butyl Phthalate	19.029	149	85934	1.00 ng/uL	100
81) Fluoroanthene	19.834	202	447737	5.85 ng/uL	94
83) Benzidine	19.641	184	4267	1.32 ng/uL#	71
84) Pyrene	20.119	202	409848	5.37 ng/uL	95
85) Butyl Benzyl Phthalate	20.923	149	37015	1.03 ng/uL	93
86) Bis(2-ethylhexyl) adipate	21.023	129	33571	1.07 ng/uL#	100
87) Benzo(a)anthracene	21.524	228	206362	3.19 ng/uL#	93
88) 3,3'-Dichlorobenzidine	21.495	252	205	0.41 ng/uL	99
89) Chrysene	21.559	228	184890	3.05 ng/uL	97
90) Bis(2-ethylhexyl)phtha...	21.547	149	52479	0.49 ng/uL	95
91) Dicyclohexyl Phthalate	21.547	149	52479	0.49 ng/uL#	100
92) Di-n-octyl Phthalate	22.223	149	65136	0.83 ng/uL#	94
94) Benzo(b)fluoroanthene	22.736	252	188032m	3.88 ng/uL	
95) Benzo(k)fluoranthene	22.754	252	105380m	2.17 ng/uL	
96) Benzo(a)pyrene	23.162	252	132403	2.91 ng/uL	98
97) Indeno(1,2,3-cd)pyrene	24.916	276	82652	1.77 ng/uL#	89
98) Dibenz(a,h)anthracene	24.934	278	34539m	0.90 ng/uL	
99) Benzo(g,h,i)Perylene	25.417	276	76813	1.88 ng/uL	98

INITIAL CALIBRATION DATA (Continued)

USEPA-8270C

Sample Calculations

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Calibration: 3D12002

SDG: 1304208

Project: USCG Atwater Facility

Calibration Date: 04/01/13 09:31

Instrument: 308

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.121526	5.510634	14.43875	6.629395E-02			CCC (30)	
Acenaphthylene	1.806377	5.095022	14.01337	6.701715E-02			15	
Anthracene	1.082515	5.290174	17.94025	4.451184E-02			15	
Benzo(a)anthracene	0.9236851	5.027148	21.44025	2.284323E-02			15	
Benzo(a)pyrene	1.01751	7.033967	23.03188	1.928734E-02			CCC (30)	
Benzo(b)fluoranthene	1.082959	6.639685	22.62537	3.057797E-02			15	
Benzo(k)fluoranthene	1.084051	5.132336	22.65962	2.856803E-02			15	
Benzo(g,h,i)perylene	0.9110282	6.802208	25.184	6.306055E-02			15	
Chrysene	0.8637943	5.408299	21.47975	0.0230674			15	
Dibenz(a,h)anthracene	0.8591882	8.406009	24.73888	3.870046E-02			15	
Fluoranthene	1.0734	6.530408	19.73688	2.703257E-02			CCC (30)	
Fluorene	1.268453	4.34792	15.67312	6.048684E-02			15	
Indeno(1,2,3-cd)pyrene	1.04548	8.380097	24.7075	4.572643E-02			15	
2-Methylnaphthalene	0.581211	5.54386	11.9215	4.326375E-02			15	
Naphthalene	0.8792217	5.309528	10.308	4.557878E-02			15	
Phenanthrene	1.078067	5.687268	17.842	4.193031E-02			15	
Pyrene	1.088552	5.094553	20.025	2.588928E-02			15	
2-Fluorophenol	1.223348	7.000902	5.1945	0.3626669			15	
Phenol-d6	1.642988	4.966526	6.8645	0.2762328			15	
Nitrobenzene-d5	0.3293635	4.669151	8.6925	0.1210947			15	
2-Fluorobiphenyl	1.229164	6.738257	12.83875	6.409869E-02			15	
2,4,6-Tribromophenol	7.371287E-02	11.08117	16.242	6.657071E-02			15	
o-Terphenyl	0.5082389	8.11283	18.57937	0.0348139			15	

Semivolatiles MS, Soil, 3550C Sonication Extraction

Surrogate #1 = 2110965 (Pre-Prep)

Batch Comments: (none)

Balance ID: _____ **pH Meter:** _____

Lab Number	Contain	Prepared	By	Initial (g)	Final (mL)	Surrogate	Source #1	Spike #1	Spike	Client QC Type	Extraction Comments
1304212-01	A	Apr-15-13 08:21	ALK	29.9	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-02	A	Apr-15-13 08:21	ALK	29.9	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-03	A	Apr-15-13 08:21	ALK	29.9	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-04	A	Apr-15-13 08:21	ALK	28.9	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-05	A	Apr-15-13 08:21	ALK	29	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-06	A	Apr-15-13 08:21	ALK	29.5	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-07	A	Apr-15-13 08:21	ALK	29	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-08	A	Apr-15-13 08:21	ALK	29.4	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-09	A	Apr-15-13 08:21	ALK	30.2	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-10	A	Apr-15-13 08:21	ALK	28.7	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs
1304212-11	A	Apr-15-13 08:21	ALK	30.1	1	100				TETRA TECH NUS - Pittsburgh	DOD PAHs

Comments:	Analyst Initials:

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**J. LOGAN**	**DATE:**	**May 17, 2013**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION –ARSENIC AND LEAD**
USCG ATWATER FACILITY
SAMPLE DELIVERY GROUP (SDG) – 1304208

SAMPLES: 17/Soil/

DASB228-0305	DASB229-0305	DASB230-0305
DASB231-0305	DASB232-0305	DASB233-0305
DASB234-0305	DASB235-0305	DASB236-0305
DASB237-0305	DASBFD-04	DASBFD-05
DASS208-0002	DASS209-0002	DASS210-0002
DASS211-0002	DASS212-0002	

Overview

The sample set for USCG Atwater Facility, SDG 1304208 consists of seventeen (17) soil environmental samples. This SDG contained two field duplicate pairs: DASBFD-04/DASB229-0305 and DASBFD-05/ DASB231-0305.

All samples were analyzed for arsenic and lead. The samples were collected by TetraTech on April 11th and 12th, 2013 and analyzed by TriMatrix Laboratories Inc. Metals analyses were conducted using method 6020A. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Instrument performance and tuning
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Internal Standard Recoveries
* • Field Duplicate Precision
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Detection Limits
* • Analyte Quantitation

* - Quality control criteria were met for this parameter.

Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

METALS:

All sample results were considered acceptable as all quality control criteria were met.

Notes:

Internal standard recoveries were not listed on a summary form. The validator verified that all recoveries met acceptance criteria (70-120%) in the raw data.

Sample results were reported on a dry weight basis.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for "National Functional Guidelines for Inorganic Data Validation", October 2004, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories", October 2010.

The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 02435	NSAMPLE	DASB228-0305			DASB229-0305			DASB230-0305			DASB231-0305		
SDG: 1304208	LAB_ID	1304208-01			1304208-02			1304208-03			1304208-04		
FRACTION: M	SAMP_DATE	4/11/2013			4/11/2013			4/11/2013			4/11/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			90.0			86.0			86.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		5.1			6.1			4.3			5.1		
LEAD		6.9			6.5			6.9			7.5		

PROJ_NO: 02435	NSAMPLE	DASB232-0305			DASB233-0305			DASB234-0305			DASB235-0305		
SDG: 1304208	LAB_ID	1304212-06			1304212-07			1304212-08			1304212-09		
FRACTION: M	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			85.0			52.0			72.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		6.1			5.8			6.6			38		
LEAD		7			16			220			1800		

PROJ_NO: 02435	NSAMPLE	DASB236-0305			DASB237-0305			DASBFD-04			DASBFD-05		
SDG: 1304208	LAB_ID	1304212-10			1304212-11			1304208-05			1304208-06		
FRACTION: M	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	86.0			81.0			88.0			87.0		
	DUP_OF							DASB229-0305			DASB231-0305		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		4.9			2.5			5.6			5		
LEAD		26			31			7.1			9.2		

PROJ_NO: 02435	NSAMPLE	DASS208-0002			DASS209-0002			DASS210-0002			DASS211-0002		
SDG: 1304208	LAB_ID	1304212-01			1304212-02			1304212-03			1304212-04		
FRACTION: M	SAMP_DATE	4/12/2013			4/12/2013			4/12/2013			4/12/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	87.0			81.0			88.0			84.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		7.7			11			2.3			5.8		
LEAD		340			510			2.7			43		

PROJ_NO: 02435	NSAMPLE	DASS212-0002		
SDG: 1304208	LAB_ID	1304212-05		
FRACTION: M	SAMP_DATE	4/12/2013		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	80.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ARSENIC		5.4		
LEAD		220		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB228-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 15:10
Solids: 86.29
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-01
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5142 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.1	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:15
7439-92-1	Lead, Total	1	6.9	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:15

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB229-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 15:15
Solids: 90.28
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-02
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5172 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.1	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:16
7439-92-1	Lead, Total	1	6.5	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:16

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB230-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 15:20
Solids: 85.52
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-03
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5301 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.3	mg/kg dry wt.	0.015	0.047	0.094		04/16/13 10:17
7439-92-1	Lead, Total	1	6.9	mg/kg dry wt.	0.0062	0.019	0.094		04/16/13 10:17

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB231-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 15:25
Solids: 85.64
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-04
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5059 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.1	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:18
7439-92-1	Lead, Total	1	7.5	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:18

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB232-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:40
Solids: 85.93
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-06
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5083 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.1	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:30
7439-92-1	Lead, Total	1	7.0	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:30

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB233-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:45
Solids: 85.11
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-07
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5033 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.8	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:31
7439-92-1	Lead, Total	5	16	mg/kg dry wt.	0.033	0.10	0.50		04/16/13 10:45

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB234-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:55
Solids: 51.90
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-08
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5049 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.6	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:34
7439-92-1	Lead, Total	50	220	mg/kg dry wt.	0.33	1.0	5.0		04/16/13 10:46

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB235-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 13:00
Solids: 71.80
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-09
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5047 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	10	38	mg/kg dry wt.	0.16	0.50	1.0		04/16/13 10:48
7439-92-1	Lead, Total	200	1800	mg/kg dry wt.	1.3	4.0	20		04/16/13 10:47

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB236-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 13:10
Solids: 85.62
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-10
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5068 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	4.9	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:36
7439-92-1	Lead, Total	5	26	mg/kg dry wt.	0.033	0.10	0.50		04/16/13 10:49

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB237-0305

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 13:05
Solids: 80.57
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-11
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5492 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	2.5	mg/kg dry wt.	0.015	0.046	0.091		04/16/13 10:37
7439-92-1	Lead, Total	5	31	mg/kg dry wt.	0.030	0.091	0.46		04/16/13 10:49

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASBFD-04

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 00:00
Solids: 88.08
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-05
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5318 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.6	mg/kg dry wt.	0.015	0.047	0.094		04/16/13 10:19
7439-92-1	Lead, Total	1	7.1	mg/kg dry wt.	0.0062	0.019	0.094		04/16/13 10:19

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASBFD-05

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/11/13 00:00
Solids: 86.74
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304208-06
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5009 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.0	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:20
7439-92-1	Lead, Total	1	9.2	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:20

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS208-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:10
Solids: 86.63
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-01
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.545 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	7.7	mg/kg dry wt.	0.015	0.046	0.092		04/16/13 10:20
7439-92-1	Lead, Total	50	340	mg/kg dry wt.	0.30	0.92	4.6		04/16/13 10:38

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS209-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:15
Solids: 81.03
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-02
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5003 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	5	11	mg/kg dry wt.	0.082	0.25	0.50		04/16/13 10:40
7439-92-1	Lead, Total	100	510	mg/kg dry wt.	0.66	2.0	10		04/16/13 10:39

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS210-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:20
Solids: 88.31
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-03
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5032 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	2.3	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:24
7439-92-1	Lead, Total	1	2.7	mg/kg dry wt.	0.0066	0.020	0.10		04/16/13 10:24

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS211-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:25
Solids: 83.97
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-04
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.5145 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.8	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:28
7439-92-1	Lead, Total	10	43	mg/kg dry wt.	0.066	0.20	1.0		04/16/13 10:41

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS212-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/12/13 12:30
Solids: 79.89
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1304212-05
Prepared: 04/15/13 06:30
Preparation: 3050B Digestion
Initial/Final: 0.501 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.4	mg/kg dry wt.	0.016	0.050	0.10		04/16/13 10:29
7439-92-1	Lead, Total	50	220	mg/kg dry wt.	0.33	1.0	5.0		04/16/13 10:42

APPENDIX C

SUPPORT DOCUMENTATION

TETRA TECH NUS, INC. (LCRT 2 (5-17)) CHAIN OF CUSTODY | NUMBER № 2286 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Ahwatukee	Joe Logan	412921 7231	TriMatrix / Gary Wood

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]	Jim Goerdt	412443 0244	5560 Corp Exchange Ct

CARRIER/WAYBILL NUMBER	CITY, STATE
TriMatrix Pickup	Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: Pb, As, PAHs	COMMENTS
4/11	1510	DASB 228-0305	228	3	5	SO	G	1	1	01 E1304208
	1515	DASB 229-0305	229					1	1	02
	1520	DASB 230-0305	230					1	1	03
	1525	DASB 231-0305	231					1	1	04
4/11	0000	DASB FD-04	QC	–	–	QC	–	1	1	05
4/11	0000	DASB FD-05	QC	–	–	QC	–	1	1	06

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	4/12/13	0901	1. RECEIVED BY [signature]	4/12/13	0901
2. RELINQUISHED BY [signature]	4/13/13	1330	2. RECEIVED BY [signature]	4/12/13	1330
3. RELINQUISHED BY Ray Wilson	4/12/13	1730	3. RECEIVED BY D. Mardin	4-12-13	1730

COMMENTS:

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2287 | PAGE 1 OF 1 7-1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412 921 7231	Tri Matrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412 443 0244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8020 3157 7719		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: 4°C

	DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: PO, AS, QA23	COMMENTS
01	4/12	1210	DASS208-0002	208	0	2	SO	G	1	1	13046212
02		1215	DASS209-0002	209					1	1	
03		1220	DASS210-0002	210					1	1	
04		1225	DASS211-0002	211					1	1	
05		1230	DASS212-0002	212					1	1	
06		1240	DASB232-0305	232	3	5			1	1	
07		1245	DASB233-0305	233					1	1	
08		1255	DASB234-0305	234					1	1	
09		1300	DASB235-0305	235					1	1	
10		1310	DASB236-0305	236					1	1	
11		1305	DASB237-0305	237					1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/12/13	1525	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	4/13/13	0845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304212

TriMatrix Laboratories received the cooler(s) for this work order on April 13, 2013, at 08:45am. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and FedEx shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASS208-0002	1304212-01	Soil	4/12/2013
DASS209-0002	1304212-02	Soil	4/12/2013
DASS210-0002	1304212-03	Soil	4/12/2013
DASS211-0002	1304212-04	Soil	4/12/2013
DASS212-0002	1304212-05	Soil	4/12/2013
DASB232-0305	1304212-06	Soil	4/12/2013
DASB233-0305	1304212-07	Soil	4/12/2013
DASB234-0305	1304212-08	Soil	4/12/2013
DASB235-0305	1304212-09	Soil	4/12/2013
DASB236-0305	1304212-10	Soil	4/12/2013
DASB237-0305	1304212-11	Soil	4/12/2013

No administrative issues were encountered during the receipt and analysis of this work order.

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Individual sample results relate only to the sample tested.

Field Duplicate

	DASB229-0305	DASBFD-04	units	RPD	%D	CRDL	LOD	MDL
Arsenic	6.1	5.6	mg/kg	8.55	0.5	0.1	0.05	0.016
Lead	6.5	7.1	mg/kg	-8.82	-0.6	0.1	0.02	0.0066

	DASB231-0305	DASBFD-05	units	RPD	%D	CRDL	LOD	MDL
Arsenic	5.1	5	mg/kg	1.98	0.1	0.1	0.05	0.016
Lead	7.5	9.2	mg/kg	-20.36	-1.7	0.1	0.02	0.0066

Sample Information

Sample ID: 1304212-09
Autosampler Position: 135
Sample Date/Time: Tuesday, April 16, 2013 10:47:19
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):
Number of Replicates: 3
Sample File: C:\NexION Data\Sample\3D16007.sam
Method File: C:\NexION Data\Method\2_TriMatrix_DOD4.2_Solid_335.mth
Dataset File: C:\NexION Data\DataSet\3D16007\1304212-09.051
Tuning File: c:\nexiondata\masscal\16april2013_6020a_a.tun
Optimization File: c:\nexiondata\conditions\16april2013_6020a.dac

DA 5B235-05

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Report Unit
[>	Ge	72	357435.833	357435.833				mg/L
[	As	75	320.004	0.001	0.001961	0.000	7.052	mg/L
[	Pb	208	1014367.722	1.531	0.091198	0.001	1.314	mg/L
[>	Bi	209	662252.546	662252.546				mg/L

QC Calculated Values

	Analyte	Mass	Int Std % Recovery
[>	Ge	71.922	104.058
[	As	74.922	
[	Pb	207.977	
[>	Bi	208.980	103.169

$0.091198 \frac{mg}{L} \times \frac{0.05L}{0.5047g} \times \frac{1000g}{1 Kg} \times 200 = 1806 \frac{mg}{Kg}$

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

reported as 1800 mg/Kg

Replicates

Repeat 1

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	354754.762	354754.762		mg/L
As	75	320.004	0.001	0.001976	mg/L
Pb	208	1006214.164	1.540	0.091712	mg/L
Bi	209	653214.313	653214.313		mg/L

Repeat 2

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	357953.075	357953.075		mg/L
As	75	340.004	0.001	0.002090	mg/L
Pb	208	1028818.081	1.545	0.092054	mg/L
Bi	209	665410.279	665410.279		mg/L

Repeat 3

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	359589.682	359589.682		mg/L
As	75	300.003	0.001	0.001815	mg/L
Pb	208	1008070.921	1.508	0.089829	mg/L
Bi	209	668133.047	668133.047		mg/L

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #:
Receipt Record Page/Line #: 5-17	New / Add To: Project Chemist: BLW Sample #s: 1304208

Recorded by (initials/date): JN 4-12-13	☑ Cooler ☐ Box ☐ Other	Qty Received: 1	Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TM2553	1750	☑ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	0	3.8
TB location: Representative / Not Representative		
1 3.7	0	3.7
2 3.8	0	3.8
3 4.2	0	4.2
Average °C		3.9

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		

☐ Cooler ID on COC?
☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2286

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-12-13	4-12-13	Yes / No

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Tetra Tech Nus, Inc	Work Order #: New / Add To 1304212
Receipt Record Page/Line #	Project Chemist / Sample #s

Recorded by (initials/date)		Qty Received	Thermometer Used	
Ln 4/13/13	☑ Cooler ☐ Box ☐ Other_____	1	☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____)	☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
3125	0908	☐ None ☑ Present / Intact ☐ Present / Not Intact	(Dispersed) / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
3125	Temp Blank:	–	3.9
	TB location: (Representative) / Not Representative		
	1 5.0	–	5.0
	2 5.1	–	5.1
	3 4.1	–	4.1
		Average °C	4.7
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

Cooler #	Recorded °C	Correction Factor °C	Actual °C
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 2287

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials:_____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils?
		☐ MeOH	☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
4/13/13 0845	4/13/13 0914	(Yes) / No

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 1
Project Technical Narrative

Sample Result Reporting Convention

Sample results are reported as LOD "U" (e.g. 0.001 U) if the target analyte was not detected at or above the detection limit (DL). The LOD is the Limit of Detection as defined in the DoD QSM and numerically determined by TriMatrix.

If a sample for an organic analyte is reanalyzed and also reported, the second analysis includes the suffix "RE*n*" where *n* = the first, second, etc. reanalysis. If a sample is reanalyzed for confirmation purposes but that confirmation was not performed simultaneously, the second set of sample results is reported on a second Form 1 since the confirmation analysis did not occur at the same time and/or date.

Percent Solids and Metals Data Reporting

Unless otherwise noted, all soil samples requiring metals analysis are dried at 50° to 60° C to a constant weight prior to acid digestion. In order to report results on a dry weight basis, correction for percent solids is not applicable.

Data Qualifier Designation

If applicable, sample results are qualified with:

- a "U" flag as defined above;
- a "J" flag if the analyte was detected, but the concentration is greater than the DL and less than the LOQ (the Limit of Quantitation as defined in the DoD QSM);
- a "B" flag if the analyte was detected above one-half the LOQ (above the LOQ for a common laboratory contaminant) in the associated method blank, and the sample concentration was less than or equal to ten times the method blank result;
- a "E" flag if the analyte exceeded the instrument calibration range;
- a "N" flag for a non-target analyte identified as a tentatively identified compound using mass spectrometry;
- a LIMS-generated statement of qualification that will be reported in Attachment 2 to this narrative.

Batch and Analytical Batch Designation

A Quality Control (QC) Batch is a seven-digit number that associates all samples that have been prepared together (or analyzed together if there is no preparation). Quality Control batches are limited to no more than twenty samples, excluding batch QC (method blanks, control spikes, etc.). Some batches may contain multiple sets of method blanks (BLK) and laboratory control samples (BS), where a set of method quality control analyses were prepared in concert with each set of samples on a given day.

An Analytical Batch (or Sequence) is a seven-digit number that associates all samples analyzed as a set under one analytical run.

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

TETRA TECH NUS - Pittsburgh
USCG Atwater Facility

SDG Executive Summary

This case narrative applies to samples received on April 13, 2013. All samples were scheduled for analysis in accordance with parameters outlined on the field chain of custody record, the TriMatrix bid form, and/or oral and written correspondence between TETRA TECH NUS - Pittsburgh and TriMatrix Laboratories, Inc.

Each sample receipt event was assigned a unique TriMatrix work order number. Sample receipt documentation is included in section A of this data package.

Project Technical Issues/Problems

Project-related data qualification designations and reporting conventions are included in Attachment 1 - *Project Technical Narrative.*

QA/QC Data Qualifications/Narrations

Quality assurance issues and/or quality control data qualifications and narrations related to the analysis and reporting of this SDG are presented in Attachment 2 - *Statement of Data Qualifications.* The absence of a statement page for a particular analyte group (*e.g.* Percent Solids) implies that no qualifying statements were generated for that analyte.

Data Review and Approval

All data was peer-reviewed by a second analyst, and then by appropriate data management staff against laboratory quality control requirements and project specifications. It was then reviewed and approved by the group supervisor/manager prior to further review by the project chemist.

Data Deliverables

This report relates only to the sample(s) as received. Estimates of analytical uncertainties for the test results contained within this report are available upon request. Test results are in compliance with the requirements of the DoD Quality Systems Manual for Environmental Laboratories Version 4.2, the National Environmental Laboratory Accreditation Conference (NELAC), and one or more of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

The data deliverables, both hardcopy and/or electronic (EDD), that comprise this data package are intended to comply with the documents referenced in the introductory section of this narrative. If requested, the EDD will be issued separately from this hardcopy report. Hold time reports for each test procedure are presented following the CLP-like forms section of this report.

Gary L. Wood, Project Chemist

4/30/13
Date

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Individual sample results relate only to the sample tested.

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/15/13 6:30AM-3:00PM
INST#218@92.7C- 93.9C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments	
1303384-BLK1		Apr-15-13 06:30	MAS	0.5	50					
1303384-BS1		Apr-15-13 06:30	MAS	0.5	50		2041319	20		
1303384-MS1		Apr-15-13 06:30	MAS	0.5186	50	1304212-03	2041319	20		
1303384-MSD1		Apr-15-13 06:30	MAS	0.5061	50	1304212-03	2041319	20		
1303384-PS1		Apr-16-13 10:00	MSM	).04025(	4	1304212-03	2050765	20	[Spk] 0.5032g->50mL; 4mL->4mL; Spiked	
1304171-15RE1	A	Apr-15-13 06:30	MAS	0.5046	50	TETRA TECH NUS - Pittsburgh			From 1303272 by MAS on Apr-15-13	From 1303272 by MAS on Apr-15-13
Pb Total 6020 (DoD)										
1304208-01	A	Apr-15-13 06:30	MAS	0.5142	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304208-02	A	Apr-15-13 06:30	MAS	0.5172	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304208-03	A	Apr-15-13 06:30	MAS	0.5301	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304208-04	A	Apr-15-13 06:30	MAS	0.5059	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304208-05	A	Apr-15-13 06:30	MAS	0.5318	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304208-06	A	Apr-15-13 06:30	MAS	0.5009	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304212-01	A	Apr-15-13 06:30	MAS	0.545	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								
1304212-02	A	Apr-15-13 06:30	MAS	0.5003	50	TETRA TECH NUS - Pittsburgh				
As Total 6020 (DoD)		*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

Metals, Soil, 3050B Digestion

Batch comments:

MAS 04/15/13 6:30AM-3:00PM
INST#218@92.7C- 93.9C #270
HOTBLOCK VESSEL LOT#MH27KK03

Lab Number	Container	Prepared	By	Initial (g)	Final (mL)	Client Source ID	Client Spike ID	Client uL Spike	Comments
1304212-03	A	Apr-15-13 06:30	MAS	0.5032	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-04	A	Apr-15-13 06:30	MAS	0.5145	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-05	A	Apr-15-13 06:30	MAS	0.501	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-06	A	Apr-15-13 06:30	MAS	0.5083	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-07	A	Apr-15-13 06:30	MAS	0.5033	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-08	A	Apr-15-13 06:30	MAS	0.5049	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-09	A	Apr-15-13 06:30	MAS	0.5047	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-10	A	Apr-15-13 06:30	MAS	0.5068	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								
1304212-11	A	Apr-15-13 06:30	MAS	0.5492	50	TETRA TECH NUS - Pittsburgh			
As Total 6020 (DoD)	*Pb Total 6020 (DoD)*								

Comments:	Analyst Initials:

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304208
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
QC Batch: 1303384
QC Batch Matrix: Soil
Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303384-BLK1	04/15/13 06:30	
LCS	1303384-BS1	04/15/13 06:30	
DASS210-0002	1303384-MS1	04/15/13 06:30	
DASS210-0002	1303384-MSD1	04/15/13 06:30	
DASB228-0305	1304208-01	04/15/13 06:30	
DASB229-0305	1304208-02	04/15/13 06:30	
DASB230-0305	1304208-03	04/15/13 06:30	
DASB231-0305	1304208-04	04/15/13 06:30	
DASBFD-04	1304208-05	04/15/13 06:30	
DASBFD-05	1304208-06	04/15/13 06:30	
DASS208-0002	1304212-01	04/15/13 06:30	
DASS209-0002	1304212-02	04/15/13 06:30	
DASS210-0002	1304212-03	04/15/13 06:30	
DASS211-0002	1304212-04	04/15/13 06:30	
DASS212-0002	1304212-05	04/15/13 06:30	
DASB232-0305	1304212-06	04/15/13 06:30	
DASB233-0305	1304212-07	04/15/13 06:30	
DASB234-0305	1304212-08	04/15/13 06:30	
DASB235-0305	1304212-09	04/15/13 06:30	
DASB236-0305	1304212-10	04/15/13 06:30	
DASB237-0305	1304212-11	04/15/13 06:30	

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304208

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303384-BLK1 File ID: 3d16007-013

Prepared: 04/15/13 06:30 Analyzed: 04/16/13 10:13

Preparation: 3050B Digestion Initial/Final: 0.5 g / 50 mL

QC Batch: 1303384 Sequence: 3D16007 Calibration: 3D16005 Instrument: 335

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7440-38-2	Arsenic, Total	0.050	mg/kg dry wt.	0.016	0.050	0.10	U
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASS210-0002

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303384

SDG: 1304208

Project: USCG Atwater Facility

Laboratory ID: 1303384-MS1

Preparation: 3050B Digestion

Initial/Final: 0.5186 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.86	2.32	6.40	106	80 - 120	mg/kg dry wt.
Lead, Total	3.86	2.72	6.35	94	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS210-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303384

SDG: 1304208

Project: USCG Atwater Facility

Laboratory ID: 1303384-MSD1

Preparation: 3050B Digestion

Initial/Final: 0.5061 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.95	6.51	106	2	20	80 - 120	mg/kg dry wt.
Lead, Total	3.95	6.64	99	4	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS210-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 88.31
Preparation: 3050B Digestion
QC Batch: 1303384

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1303384-PS1
Lab Source ID: 1304212-03
Initial/Final: 0.040256 g / 4 mL
Sequence: 3D16007

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0425	0.0234	mg/L	0.0200	95	75 - 125
Lead, Total	0.0452	0.0273	mg/L	0.0200	90	75 - 125

* Values outside of QC limits

SERIAL DILUTION

USEPA-6020A

DASS210-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 88.31

QC Batch: 3D16007

SDG: 1304208

Project: USCG Atwater Facility

Laboratory ID: 3D16007-SRD1

Lab Source ID: 1304212-03

Sequence: 3D16007

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0234		0.0242		3.0		mg/L	10
Lead, Total	0.0273		0.0285		4.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304208
Project: USCG Atwater Facility
Laboratory ID: 1303384-BS1
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
Sequence: 3D16007

QC Batch: 1303384

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	4.00	4.00	100	80 - 120	mg/kg dry wt.
Lead, Total	4.00	4.12	103	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument: 335

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D16007-CAL1	3d16007-001	04/16/13 10:03
Cal Standard	3D16007-CAL2	3d16007-002	04/16/13 10:03
Cal Standard	3D16007-CAL3	3d16007-003	04/16/13 10:04
Cal Standard	3D16007-CAL4	3d16007-004	04/16/13 10:05
Cal Standard	3D16007-CAL5	3d16007-005	04/16/13 10:06
Cal Standard	3D16007-CAL6	3d16007-006	04/16/13 10:07
Secondary Cal Check	3D16007-SCV1	3d16007-007	04/16/13 10:08
Calibration Check	3D16007-CCV1	3d16007-007	04/16/13 10:08
Calibration Blank	3D16007-CCB1	3d16007-008	04/16/13 10:08
Interference Check A	3D16007-IFA1	3d16007-009	04/16/13 10:09
Interference Check B	3D16007-IFB1	3d16007-010	04/16/13 10:10
Calibration Check	3D16007-CCV2	3d16007-011	04/16/13 10:11
Calibration Blank	3D16007-CCB2	3d16007-012	04/16/13 10:12
Blank	1303384-BLK1	3d16007-013	04/16/13 10:13
LCS	1303384-BS1	3d16007-014	04/16/13 10:14
DASB228-0305	1304208-01	3d16007-016	04/16/13 10:15
DASB228-0305	1304208-01	3d16007-016	04/16/13 10:15
DASB229-0305	1304208-02	3d16007-017	04/16/13 10:16
DASB229-0305	1304208-02	3d16007-017	04/16/13 10:16
DASB230-0305	1304208-03	3d16007-018	04/16/13 10:17
DASB230-0305	1304208-03	3d16007-018	04/16/13 10:17
DASB231-0305	1304208-04	3d16007-019	04/16/13 10:18
DASB231-0305	1304208-04	3d16007-019	04/16/13 10:18
DASBFD-04	1304208-05	3d16007-020	04/16/13 10:19
DASBFD-04	1304208-05	3d16007-020	04/16/13 10:19
DASBFD-05	1304208-06	3d16007-021	04/16/13 10:20
DASBFD-05	1304208-06	3d16007-021	04/16/13 10:20
DASS208-0002	1304212-01	3d16007-022	04/16/13 10:20
Calibration Check	3D16007-CCV3	3d16007-023	04/16/13 10:21
Calibration Blank	3D16007-CCB3	3d16007-024	04/16/13 10:22
DASS210-0002	1304212-03	3d16007-026	04/16/13 10:24
DASS210-0002	1304212-03	3d16007-026	04/16/13 10:24

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument: 335

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
DASS210-0002	1303384-MS1	3d16007-027	04/16/13 10:25
DASS210-0002	1303384-MSD1	3d16007-028	04/16/13 10:26
DASS210-0002	3D16007-SRD1	3d16007-029	04/16/13 10:27
DASS210-0002	1303384-PS1	3d16007-030	04/16/13 10:28
DASS211-0002	1304212-04	3d16007-031	04/16/13 10:28
DASS212-0002	1304212-05	3d16007-032	04/16/13 10:29
DASB232-0305	1304212-06	3d16007-033	04/16/13 10:30
DASB232-0305	1304212-06	3d16007-033	04/16/13 10:30
DASB233-0305	1304212-07	3d16007-034	04/16/13 10:31
Calibration Check	3D16007-CCV4	3d16007-035	04/16/13 10:32
Calibration Blank	3D16007-CCB4	3d16007-036	04/16/13 10:33
DASB234-0305	1304212-08	3d16007-037	04/16/13 10:34
DASB236-0305	1304212-10	3d16007-039	04/16/13 10:36
DASB237-0305	1304212-11	3d16007-040	04/16/13 10:37
DASS208-0002	1304212-01	3d16007-042	04/16/13 10:38
DASS209-0002	1304212-02	3d16007-043	04/16/13 10:39
DASS209-0002	1304212-02	3d16007-044	04/16/13 10:40
DASS211-0002	1304212-04	3d16007-045	04/16/13 10:41
DASS212-0002	1304212-05	3d16007-046	04/16/13 10:42
Calibration Check	3D16007-CCV5	3d16007-047	04/16/13 10:43
Calibration Blank	3D16007-CCB5	3d16007-048	04/16/13 10:44
DASB233-0305	1304212-07	3d16007-049	04/16/13 10:45
DASB234-0305	1304212-08	3d16007-050	04/16/13 10:46
DASB235-0305	1304212-09	3d16007-051	04/16/13 10:47
DASB235-0305	1304212-09	3d16007-052	04/16/13 10:48
DASB236-0305	1304212-10	3d16007-053	04/16/13 10:49
DASB237-0305	1304212-11	3d16007-054	04/16/13 10:49
Calibration Blank	3D16007-CCB6	3d16007-056	04/16/13 10:51
Calibration Check	3D16007-CCV6	3d16007-057	04/16/13 10:55

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007
Control Limt: +/- 10.00%

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument ID: 335

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D16007-CCV1	Arsenic	0.0400	0.0375	94	mg/L	04/16/13 10:08
	Lead	0.0400	0.0372	93	mg/L	04/16/13 10:08
3D16007-CCV2	Arsenic	0.0400	0.0380	95	mg/L	04/16/13 10:11
	Lead	0.0400	0.0368	92	mg/L	04/16/13 10:11
3D16007-CCV3	Arsenic	0.0400	0.0381	95	mg/L	04/16/13 10:21
	Lead	0.0400	0.0383	96	mg/L	04/16/13 10:21
3D16007-CCV4	Arsenic	0.0400	0.0378	95	mg/L	04/16/13 10:32
	Lead	0.0400	0.0378	94	mg/L	04/16/13 10:32
3D16007-CCV5	Arsenic	0.0400	0.0368	92	mg/L	04/16/13 10:43
	Lead	0.0400	0.0367	92	mg/L	04/16/13 10:43
3D16007-CCV6	Arsenic	0.0400	0.0365	91	mg/L	04/16/13 10:55
	Lead	0.0400	0.0369	92	mg/L	04/16/13 10:55

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Laboratory ID: 3D16007-SCV1

Sequence: 3D16007

SDG: 1304208

Project: USCG Atwater Facility

Instrument: 335

Calibration: 3D16005

Analyte	Expected	Found	% R	QC Limit	Units
Arsenic	0.0400	0.0375	94	90-110	mg/L
Lead	0.0400	0.0372	93	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D16007

SDG: 1304208
Project: USCG Atwater Facility
Calibration: 3D16005
Instrument ID: 335

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D16007-CCB1	Arsenic	0.000020	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:08
	Lead	0.0000070	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:08
3D16007-CCB2	Arsenic	0.000044	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:12
	Lead	0.0000060	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:12
3D16007-CCB3	Arsenic	0.000062	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:22
	Lead	0.000045	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:22
3D16007-CCB4	Arsenic	0.000042	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:33
	Lead	0.000014	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:33
3D16007-CCB5	Arsenic	0.000097	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:44
	Lead	0.000027	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:44
3D16007-CCB6	Arsenic	0.000046	mg/L	0.00016	0.00050	0.0010	U	04/16/13 10:51
	Lead	0.000021	mg/L	0.000066	0.00020	0.0010	U	04/16/13 10:51

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Sequence: 3D16007

SDG: 1304208

Project: USCG Atwater Facility

Calibration: 3D16005

Instrument ID: 335

Lab Sample ID	Analyte	True	Found	%R	Units
3D16007-IFA1	Arsenic	0.00	0.0000720		mg/L
	Lead	0.00	0.0000200		mg/L
3D16007-IFB1	Arsenic	0.0200	0.0193	96	mg/L
	Lead	0.0200	0.0188	94	mg/L

* Values outside of QC limits

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**J. LOGAN**	**DATE:**	**MAY 14, 2013**
FROM:	**A. COGNETTI**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – PAH / METALS / PERCENT SOLIDS**
USCG ATWATER FACILITY
SAMPLE DELIVERY GROUP (SDG) - 1304314

SAMPLES: 3/Soil/PAH/ Percent Solids

DASS244-0002 DASS245-0002 DASS246-0002

5/Soil/Metals

DASB-CF-1 DASB-CF-2 DASS244-0002 DASS245-0002
DASS246-0002

OVERVIEW

The sample set for USCG Atwater Facility, SDG 1304314 consists of three (3) soil environmental samples analyzed for polynuclear aromatic hydrocarbons (PAHs) and percent solids. Five (5) soil environmental samples were also analyzed for the select total metals arsenic and lead. No field duplicate pair is included within this SDG.

The samples were collected by Tetra Tech on April 17, 2013 and analyzed by TriMatrix Laboratories. USEPA SW 846 Method 8270C for PAHs and 6020A for metals analytical and reporting protocols were used. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Initial and Continuing Calibrations
* • Laboratory Blank Analyses
* • Surrogate Recoveries
* • Laboratory Control Sample Results
• Matrix Spike / Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • ICP Interference Analysis
* • ICP Serial Dilution Results
* • Analyte Quantitation
* • Analyte Identification
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

PAHs

The matrix spike (MS) percent recovery (%R) of fluoranthene was less than the lower quality control limit in sample DASS244-0002. The detected result for fluoranthene was qualified as estimated (J).

The matrix spike duplicate (MSD) %Rs were low in sample DASS245-0002 for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene. In addition, the relative percent differences (RPDs) for benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene were greater than the 30% quality control limit. All of the compounds referenced above were detected in the unspiked sample. Additionally, all compounds except for anthracene and indeno(1,2,3-cd)pyrene were detected at concentrations in the unspiked sample greater than the spiked concentration. Detected results for anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene were qualified as estimated (J) in sample DASS245-0002.

The MSD %Rs of benzo(a)pyrene and benzo(b)fluoranthene were greater than the upper quality control limit in sample DASS246-0002. Detected results for benzo(a)pyrene and benzo(b)fluoranthene were qualified as estimated (J) in sample DASS246-0002.

Additional Comments:

The following contaminants were detected in the continuing calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration (mg/L)	Action Level (mg/kg)
Lead (1)	0.000081	0.0405
Arsenic (2)	0.00039	0.195

(1) Maximum concentration detected in the continuing calibration blank (CCB 3) analyzed on April 22, 2013 @ 9:19.
(2) Maximum concentration detected in continuing calibration blank analyzed on April 22, 2013 @ 12:43.

An action level of 5X the maximum concentration has been established in order to evaluate sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No action was taken because the sample results were greater than the action level.

The MSD %R of arsenic was greater than the upper quality control limit in sample DASS244-0002. The MS %R and RPD were within quality control limits. The arsenic MS/MSD %Rs and RPDs were within quality control limits in samples DASS245-0002 and DASS246-0002. No action was taken.

Samples were analyzed at a dilution in the PAH fraction resulting in elevated nondetected reporting limits.

Sample	Dilution Factor
DASS244-0002	20X
DASS245-0002	10X
DASS246-0002	10X

The nondetected results were reported to the laboratory reporting limit

Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

TO: J. Logan
FROM: A. Cognetti
SDG: 1304314
DATE: May 14, 2013
PAGE 3

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other factors affecting data quality: MS/MSD recovery noncompliances resulted in the qualification several PAH results. Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999), EPA Functional Guidelines for Inorganic Data Review (October 2004), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02435	NSAMPLE	DASB-CF-01			DASB-CF-02			DASS244-0002			DASS245-0002		
SDG: 1304314	LAB_ID	1304314-04			1304314-05			1304314-01			1304314-02		
FRACTION: M	SAMP_DATE	4/17/2013			4/17/2013			4/17/2013			4/17/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	100.0			100.0			88.0			83.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		3.3			3.6			6.3			9.4		
LEAD		3.4			3.6			430			620		

PROJ_NO: 02435	NSAMPLE	DASS246-0002		
SDG: 1304314	LAB_ID	1304314-03		
FRACTION: M	SAMP_DATE	4/17/2013		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	83.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ARSENIC		5.6		
LEAD		52		

PROJ_NO: 02435	NSAMPLE	DASS244-0002			DASS245-0002			DASS246-0002		
SDG: 1304314	LAB_ID	1304314-01			1304314-02			1304314-03		
FRACTION: MISC	SAMP_DATE	4/17/2013			4/17/2013			4/17/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	%			%			%		
	PCT_SOLIDS	88.0			83.0			83.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCENT SOLIDS		88			83			83		

PROJ_NO: 02435	NSAMPLE	DASS244-0002			DASS245-0002			DASS246-0002		
SDG: 1304314	LAB_ID	1304314-01			1304314-02			1304314-03		
FRACTION: PAH	SAMP_DATE	4/17/2013			4/17/2013			4/17/2013		
MEDIA: SOIL	QC_TYPE	NM			NM			NM		
	UNITS	MG/KG			MG/KG			MG/KG		
	PCT_SOLIDS	88.0			83.0			83.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.38	U		0.2	U		0.2	U	
ACENAPHTHENE		0.38	U		0.084	J	P	0.2	U	
ACENAPHTHYLENE		0.38	U		0.2	U		0.2	U	
ANTHRACENE		0.38	U		0.2	J	DP	0.2	U	
BENZO(A)ANTHRACENE		0.15	J	P	0.51	J	D	0.13	J	P
BENZO(A)PYRENE		0.14	J	P	0.47	J	D	0.095	J	DP
BENZO(B)FLUORANTHENE		0.17	J	P	0.59	J	D	0.14	J	DP
BENZO(G,H,I)PERYLENE		0.083	J	P	0.14	J	P	0.046	J	P
BENZO(K)FLUORANTHENE		0.11	J	P	0.29			0.079	J	P
CHRYSENE		0.15	J	P	0.39			0.099	J	P
DIBENZO(A,H)ANTHRACENE		0.38	U		0.2	U		0.2	U	
FLUORANTHENE		0.26	J	DP	1	J	D	0.18	J	P
FLUORENE		0.38	U		0.1	J	P	0.2	U	
INDENO(1,2,3-CD)PYRENE		0.38	U		0.22	J	D	0.13	J	P
NAPHTHALENE		0.38	U		0.2	U		0.2	U	
PHENANTHRENE		0.11	J	P	0.83	J	D	0.12	J	P
PYRENE		0.22	J	P	0.78	J	D	0.15	J	P

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304314-01 File ID: 1304314-01 20x.D

Sampled: 04/17/13 17:30 Prepared: 04/19/13 13:10 Analyzed: 04/22/13 18:14

Solids: 88.11 Preparation: 3550C Sonication Extract Initial/Final: 30.2 g / 1 mL

QC Batch: 1303525 Sequence: 3D22051 Calibration: 3D22015 Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	20	0.38	0.11	0.38	0.38	U
208-96-8	Acenaphthylene	20	0.38	0.095	0.38	0.38	U
120-12-7	Anthracene	20	0.38	0.091	0.38	0.38	U
56-55-3	Benzo(a)anthracene	20	0.15	0.062	0.19	0.38	J
50-32-8	Benzo(a)pyrene	20	0.14	0.052	0.19	0.38	J
205-99-2	Benzo(b)fluoranthene	20	0.17	0.043	0.19	0.38	J
207-08-9	Benzo(k)fluoranthene	20	0.11	0.044	0.19	0.38	J
191-24-2	Benzo(g,h,i)perylene	20	0.083	0.043	0.19	0.38	J
218-01-9	Chrysene	20	0.15	0.088	0.38	0.38	J
53-70-3	Dibenz(a,h)anthracene	20	0.19	0.043	0.19	0.38	U
206-44-0	Fluoranthene	20	0.26	0.10	0.38	0.38	J
86-73-7	Fluorene	20	0.38	0.091	0.38	0.38	U
193-39-5	Indeno(1,2,3-cd)pyrene	20	0.076	0.061	0.076	0.38	U
91-57-6	2-Methylnaphthalene	20	0.38	0.10	0.38	0.38	U
91-20-3	Naphthalene	20	0.38	0.13	0.38	0.38	U
85-01-8	Phenanthrene	20	0.11	0.093	0.38	0.38	J
129-00-0	Pyrene	20	0.22	0.098	0.38	0.38	J

Internal Standard	Area	RT	% REC.	Ref. RT	Q
1,4-Dichlorobenzene-d4	165334	7.492	102	7.492	
Naphthalene-d8	648604	10.243	88	10.249	
Acenaphthene-d10	300196	14.358	83	14.364	
Phenanthrene-d10	504581	17.809	84	17.809	
Chrysene-d12	590602	21.463	98	21.469	
Perylene-d12	386535	23.113	82	23.118	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Laboratory ID: 1304314-02
File ID: 1304314-02 x10.D
Sampled: 04/17/13 15:00
Prepared: 04/19/13 13:10
Analyzed: 04/19/13 20:42
Solids: 83.29
Preparation: 3550C Sonication Extract
Initial/Final: 29.9 g / 1 mL
QC Batch: 1303525
Sequence: 3D22010
Calibration: 3D22002
Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.084	0.056	0.20	0.20	J
208-96-8	Acenaphthylene	10	0.20	0.050	0.20	0.20	U
120-12-7	Anthracene	10	0.20	0.048	0.20	0.20	J
56-55-3	Benzo(a)anthracene	10	0.51	0.033	0.10	0.20	
50-32-8	Benzo(a)pyrene	10	0.47	0.028	0.10	0.20	
205-99-2	Benzo(b)fluoranthene	10	0.59	0.023	0.10	0.20	
207-08-9	Benzo(k)fluoranthene	10	0.29	0.023	0.10	0.20	
191-24-2	Benzo(g,h,i)perylene	10	0.14	0.023	0.10	0.20	J
218-01-9	Chrysene	10	0.39	0.047	0.20	0.20	
53-70-3	Dibenz(a,h)anthracene	10	0.10	0.023	0.10	0.20	U
206-44-0	Fluoranthene	10	1.0	0.054	0.20	0.20	
86-73-7	Fluorene	10	0.10	0.048	0.20	0.20	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.22	0.032	0.040	0.20	
91-57-6	2-Methylnaphthalene	10	0.20	0.055	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.067	0.20	0.20	U
85-01-8	Phenanthrene	10	0.83	0.049	0.20	0.20	
129-00-0	Pyrene	10	0.78	0.052	0.20	0.20	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.402	0.229	57	35 - 100	D
2-Fluorobiphenyl	0.402	0.257	64	45 - 105	D
o-Terphenyl	0.406	0.345	85	30 - 125	D

Internal Standard	Area	RT	% REC.	Ref. RT	Q
1,4-Dichlorobenzene-d4	136869	7.609	86	7.556	
Naphthalene-d8	591688	10.36	96	10.307	
Acenaphthene-d10	302451	14.475	91	14.422	
Phenanthrene-d10	528023	17.908	92	17.861	
Chrysene-d12	527115	21.545	84	21.515	
Perylene-d12	297765	23.229	63	23.194	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304314-03 File ID: 1304314-03 x10.D

Sampled: 04/17/13 15:10 Prepared: 04/19/13 13:10 Analyzed: 04/19/13 19:37

Solids: 82.91 Preparation: 3550C Sonication Extract Initial/Final: 29.1 g / 1 mL

QC Batch: 1303525 Sequence: 3D22010 Calibration: 3D22002 Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	10	0.20	0.056	0.20	0.20	U
208-96-8	Acenaphthylene	10	0.20	0.050	0.20	0.20	U
120-12-7	Anthracene	10	0.20	0.048	0.20	0.20	U
56-55-3	Benzo(a)anthracene	10	0.13	0.033	0.10	0.20	J
50-32-8	Benzo(a)pyrene	10	0.095	0.028	0.10	0.20	J
205-99-2	Benzo(b)fluoranthene	10	0.14	0.023	0.10	0.20	J
207-08-9	Benzo(k)fluoranthene	10	0.079	0.024	0.10	0.20	J
191-24-2	Benzo(g,h,i)perylene	10	0.046	0.023	0.10	0.20	J
218-01-9	Chrysene	10	0.099	0.047	0.20	0.20	J
53-70-3	Dibenz(a,h)anthracene	10	0.10	0.023	0.10	0.20	U
206-44-0	Fluoranthene	10	0.18	0.054	0.20	0.20	J
86-73-7	Fluorene	10	0.20	0.049	0.20	0.20	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	0.13	0.032	0.040	0.20	J
91-57-6	2-Methylnaphthalene	10	0.20	0.055	0.20	0.20	U
91-20-3	Naphthalene	10	0.20	0.068	0.20	0.20	U
85-01-8	Phenanthrene	10	0.12	0.049	0.20	0.20	J
129-00-0	Pyrene	10	0.15	0.052	0.20	0.20	J

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
Nitrobenzene-d5	0.414	0.269	65	35 - 100	D
2-Fluorobiphenyl	0.414	0.352	85	45 - 105	D
o-Terphenyl	0.419	0.439	105	30 - 125	D

Internal Standard	Area	RT	% REC.	Ref. RT	Q
1,4-Dichlorobenzene-d4	135114	7.614	85	7.556	
Naphthalene-d8	569214	10.365	92	10.307	
Acenaphthene-d10	273866	14.48	82	14.422	
Phenanthrene-d10	448263	17.908	78	17.861	
Chrysene-d12	497913	21.539	79	21.515	
Perylene-d12	369950	23.229	78	23.194	

* Values outside of QC limits

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-CF-01

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 07:40
Solids: 0.00
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-04
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5433 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	3.3	mg/kg dry wt.	0.015	0.046	0.092		04/22/13 12:36
7439-92-1	Lead, Total	1	3.4	mg/kg dry wt.	0.0061	0.018	0.092		04/22/13 09:28

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-CF-02

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 15:20
Solids: 0.00
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-05
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5145 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	3.6	mg/kg dry wt.	0.016	0.050	0.10		04/22/13 12:38
7439-92-1	Lead, Total	1	3.6	mg/kg dry wt.	0.0066	0.020	0.10		04/22/13 09:31

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 17:30
Solids: 88.11
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-01
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5074 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.3	mg/kg dry wt.	0.016	0.050	0.10		04/22/13 11:52
7439-92-1	Lead, Total	100	430	mg/kg dry wt.	0.66	2.0	10		04/22/13 09:41

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 15:00
Solids: 83.29
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-02
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5016 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	2	9.4	mg/kg dry wt.	0.033	0.10	0.20		04/22/13 12:49
7439-92-1	Lead, Total	100	620	mg/kg dry wt.	0.66	2.0	10		04/22/13 09:50

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 15:10
Solids: 82.91
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-03
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5077 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	5.6	mg/kg dry wt.	0.016	0.050	0.10		04/22/13 12:23
7439-92-1	Lead, Total	10	52	mg/kg dry wt.	0.066	0.20	1.0		04/22/13 09:58

INORGANIC ANALYSIS DATA SHEET
USEPA-3550C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 17:30
Solids: 88.11
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-01
Prepared: 04/19/13 17:22
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
	Percent Solids	1	88	%	0.1	0.1	0.1		04/19/13 19:15

INORGANIC ANALYSIS DATA SHEET
USEPA-3550C

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 15:00
Solids: 83.29
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-02
Prepared: 04/19/13 17:22
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
	Percent Solids	1	83	%	0.1	0.1	0.1		04/19/13 19:15

INORGANIC ANALYSIS DATA SHEET
USEPA-3550C

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 15:10
Solids: 82.91
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-03
Prepared: 04/19/13 17:22
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
	Percent Solids	1	83	%	0.1	0.1	0.1		04/19/13 19:15

APPENDIX C

SUPPORT DOCUMENTATION

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304314

TriMatrix Laboratories received the cooler(s) for this work order on April 18, 2013, at 17:30pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASS244-0002	1304314-01	Soil	4/17/2013
DASS245-0002	1304314-02	Soil	4/17/2013
DASS246-0002	1304314-03	Soil	4/17/2013
DASB-CF-01	1304314-04	Soil	4/17/2013
DASB-CF-02	1304314-05	Soil	4/17/2013

No administrative issues were encountered during the receipt and analysis of this work order.

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Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS and/or MSD recovery was outside the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	1304314-01 DASS244-0002	Fluoranthene
	1304314-02 DASS245-0002	Benzo(a)anthracene
	1304314-02 DASS245-0002	Benzo(b)fluoranthene
	1304314-02 DASS245-0002	Fluoranthene
	1304314-02 DASS245-0002	Indeno(1,2,3-cd)pyrene
	1304314-02 DASS245-0002	Phenanthrene
	1304314-02 DASS245-0002	Pyrene

Qualification: The RPD between the MS and MSD results exceeded the control limit. The non-spiked sample concentration for the same analyte was less than 4 times the spiked amount; the non-spiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	1304314-02 DASS245-0002	Benzo(a)anthracene
	1304314-02 DASS245-0002	Benzo(b)fluoranthene
	1304314-02 DASS245-0002	Benzo(g,h,i)perylene
	1304314-02 DASS245-0002	Fluoranthene
	1304314-02 DASS245-0002	Indeno(1,2,3-cd)pyrene
	1304314-02 DASS245-0002	Phenanthrene
	1304314-02 DASS245-0002	Pyrene

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	1304314-02 DASS245-0002	Anthracene
	1304314-02 DASS245-0002	Benzo(a)pyrene
	1304314-03 DASS246-0002	Benzo(a)pyrene
	1304314-03 DASS246-0002	Benzo(b)fluoranthene

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Analysis: USEPA-8270C

Sample/Analyte:		
	1303525-BS1	Naphthalene
	1303525-MS1	Benzo(b)fluoranthene
	1303525-MS1	Indeno(1,2,3-cd)pyrene
	1303525-MS2	Naphthalene
	1303525-MS2	Nitrobenzene-d5
	1303525-MSD1	Benzo(b)fluoranthene
	1303525-MSD2	Benzo(b)fluoranthene
	1303525-MSD2	Dibenz(a,h)anthracene
	1303525-MSD2	Indeno(1,2,3-cd)pyrene
	1303525-MSD2	Nitrobenzene-d5
	1304314-01 DASS244-0002	Benzo(a)pyrene
	1304314-01 DASS244-0002	Benzo(b)fluoranthene
	1304314-01 DASS244-0002	Benzo(g,h,i)perylene
	1304314-01 DASS244-0002	Benzo(k)fluoranthene
	1304314-02 DASS245-0002	Benzo(b)fluoranthene
	1304314-02 DASS245-0002	Benzo(k)fluoranthene
	1304314-02 DASS245-0002	Indeno(1,2,3-cd)pyrene
	1304314-02 DASS245-0002	Naphthalene
	1304314-03 DASS246-0002	Benzo(b)fluoranthene
	1304314-03 DASS246-0002	Benzo(k)fluoranthene
	3D22051-CAL1	Benzo(g,h,i)perylene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample/Analyte:
1303525-MS1
1303525-MS2
1303525-MS3
1303525-MSD1
1303525-MSD2
1303525-MSD3
1304314-01 DASS244-0002
1304314-02 DASS245-0002
1304314-03 DASS246-0002

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Surrogate results are unavailable due to sample matrix interference(s), resulting in a dilution. Surrogate concentrations were diluted below the calibration range.

Analysis: USEPA-8270C

Sample/Analyte: 1303525-MS1
1304314-01 DASS244-0002

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TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Total Metals by EPA 6000/7000 Series Methods

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control limit. The unspiked sample result is considered estimated.

Analysis: USEPA-6020A

Sample/Analyte:		
	1304314-01 DASS244-0002	Arsenic

Qualification: Matrix QC results are not available due to sample dilution.

Analysis: USEPA-6020A

Sample/Analyte:		
	1304314-01 DASS244-0002	Lead
	1304314-02 DASS245-0002	Lead
	1304314-03 DASS246-0002	Lead

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1304314 (15-14) CART 9

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2288 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG-Atwater	Joe Logan	412-921-7231	Trimatrix/Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Jim Goerdt	412-443-0244	5560 Corp Exchange Ct
		CARRIER/WAYBILL NUMBER		CITY, STATE
		Trimatrix Pickup		Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: 4°C 4°C

TYPE OF ANALYSIS: Pb, As, PAHs; Pb, As

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	Pb, As, PAHs	Pb, As							COMMENTS
1204/17	1445	DASS244-0002	244	0	2	SO	G	2	2	-					-		MS/MSD
02	1500	DASS245-0002	245	0	2			2	2	-							MS/MSD
03	1510	DASS246-0002	246	0	2			2	2	-							MS/MSD
1304	740	DASB-CF-01	-	-	-			1	-	1							
05	1520	DASB-CF-02	-	-	-			1	-	1							

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4/18/13	1326	1. RECEIVED BY	4/18/13	1326
2. RELINQUISHED BY	4/18/13	1415	2. RECEIVED BY	4-18-13	1415
3. RELINQUISHED BY	4-18-13	1730	3. RECEIVED BY J. Nardin	4-18-13	1730

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TINUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH	Work Order #: 1304314 (New / Add To)
Receipt Record Page/Line #: 15-14	Project Chemist / Sample #s

Recorded by (initials/date)		Qty Received	Thermometer Used
JN 4-18-13	☑ Cooler ☐ Box ☐ Other	1	☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
TM1090 / 1930			
Custody Seals: ☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Custody Seals: ☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Custody Seals: ☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Custody Seals: ☐ None; ☐ Present / Intact; ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☑ Temperature Blank (TB); ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB); ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB); ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB); ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank: 0		4.9
TB location: (Representative) / Not Representative		
1: 5.3	0	5.3
2: 4.7	0	4.7
3: 5.9	0	5.9
Average °C		5.3
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:		
TB location: Representative / Not Representative		
1		
2		
3		
Average °C		
☐ Cooler ID on COC?		
☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2288

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	☐	■	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-18-13	4-18-13	Yes / No

SAMPLE ID SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

SDG: 1304314

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASS244-0002	1304314-01
DASS245-0002	1304314-02
DASS246-0002	1304314-03

HOLDING TIME SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Method: Semivolatile Organic Compounds by EPA Method 8270C

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASS244-0002	04/17/13	04/18/13		04/19/13	2	14	04/22/13	3	40	
DASS245-0002	04/17/13	04/18/13		04/19/13	2	14	04/19/13	0	40	
DASS246-0002	04/17/13	04/18/13		04/19/13	2	14	04/19/13	0	40	

SAMPLE ID SUMMARY

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASS244-0002	1304314-01
DASS245-0002	1304314-02
DASS246-0002	1304314-03
DASB-CF-01	1304314-04
DASB-CF-02	1304314-05

HOLDING TIME SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Total Metals

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASS244-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASS244-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASS245-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASS245-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASS246-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASS246-0002	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASB-CF-01	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASB-CF-01	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASB-CF-02	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	
DASB-CF-02	04/17/13	04/18/13		04/19/13	2	NA	04/22/13	5	180	

SAMPLE ID SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASS244-0002	1304314-01
DASS245-0002	1304314-02
DASS246-0002	1304314-03

HOLDING TIME SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Analyte: Percent Solids

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASS244-0002	04/17/13	04/18/13		04/19/13	2	NA	04/19/13	2	14	
DASS245-0002	04/17/13	04/18/13		04/19/13	2	NA	04/19/13	2	14	
DASS246-0002	04/17/13	04/18/13		04/19/13	2	NA	04/19/13	2	14	

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB-CF-04	1304363-02	NM	4/23/2013	4/25/2013	4/25/2013	2	0	2
PCS	%	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/24/2013	1	0	1
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/12/2013	4/12/2013	4/12/2013	0	0	0
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS219-0002	1304171-14	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/L	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/L	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/L	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

INITIAL CALIBRATION STANDARDS
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22007

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22002
Instrument: 339

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
3040064	25ppm BNA	3D22007-CAL8		
3030363	dftpp tune	3D22007-TUN1	dft0328a.D	04/01/13 13:13
3040050	0.5ppm BNA	3D22007-CAL1	05bna0401.D	04/01/13 13:31
3040053	1ppm BNA	3D22007-CAL2	1bna0401.D	04/01/13 14:05
3040055	2ppm BNA	3D22007-CAL3	2bna0401.D	04/01/13 14:38
3040057	5ppm BNA	3D22007-CAL4	5bna0401.D	04/01/13 15:11
3040059	10ppm BNA	3D22007-CAL5	10bna0401.D	04/01/13 15:45
3040061	15ppm BNA	3D22007-CAL6	15bna0401.D	04/01/13 16:18
3040063	20ppm BNA	3D22007-CAL7	20bna0401.D	04/01/13 16:51
3040064	25ppm BNA	3D22007-CAL8	25bna0401.D	04/01/13 17:24
3040702	10ppm BNA scv	3D22007-SCV1	SCVBNA.D	04/01/13 18:36

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D22007-TUN1
Lab File ID: dft0328a.D
Injection Date: 04/01/13
Injection Time: 13:13
Sequence: 3D22007
Calibration: 3D22002
Instrument ID: 339

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	58.5	PASS
68	Less than 2% of 69	1.65	PASS
69	Less than 200% of 198	50.5	PASS
70	Less than 2% of 69	0.715	PASS
127	40 - 60% of 198	54.6	PASS
197	Less than 1% of 198	0.36	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.74	PASS
275	10 - 30% of 198	25.1	PASS
365	1.0001 - 200% of 198	2.98	PASS
441	0.0001 - 99.9999% of 443	78.3	PASS
442	40.0001 - 200% of 198	75.2	PASS
443	17 - 23% of 442	18.7	PASS

INITIAL CALIBRATION DATA (Continued)
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Calibration: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Calibration Date: 04/01/13 08:40
Instrument: 339

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.147554	5.567601	14.50388	5.935834E-02			CCC (30)	
Acenaphthylene	1.805214	4.90981	14.07987	5.819054E-02			15	
Anthracene	1.045983	6.684503	18.006	3.900372E-02			15	
Benzo(a)anthracene	0.8653254	6.418967	21.50525	1.854527E-02			15	
Benzo(a)pyrene	0.9773103	13.19302	23.1195	2.996428E-02			CCC (30)	
Benzo(b)fluoranthene	1.050912	14.20002	22.70475	1.377968E-02			15	
Benzo(k)fluoranthene	1.12062	9.31513	22.73825	2.829815E-02			15	
Benzo(g,h,i)perylene	0.6564267	10.42174	25.31033	8.007758E-03			15	
Chrysene	0.8475443	4.938214	21.54475	9.860658E-03			15	
Dibenz(a,h)anthracene	0.599113	18.3764	24.8655	6.364623E-02	0.99639		0.99	
Fluoranthene	1.050904	6.198136	19.79588	1.901372E-02			CCC (30)	
Fluorene	1.264605	6.624887	15.74187	5.504957E-02			15	
Indeno(1,2,3-cd)pyrene	0.749439	13.92463	24.82667	2.903179E-02	0.99658		0.99	
2-Methylnaphthalene	0.5828175	5.382707	11.97787	0.0424316			15	
Naphthalene	0.8716551	4.83689	10.35675	5.170748E-02			15	
Phenanthrene	1.01216	6.454715	17.91	3.800349E-02			15	
Pyrene	1.085645	8.942709	20.087	2.511328E-02			15	
Nitrobenzene-d5	0.3183788	5.674099	8.730286	0.1281308			15	
2-Fluorobiphenyl	1.332025	4.451311	12.89371	5.062925E-02			15	
o-Terphenyl	0.5408711	4.930548	18.63343	2.559704E-02			15	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22010

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22002
Instrument: 339

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D22010-TUN1	dft0419b.D	04/19/13 17:35
Calibration Check	3D22010-CCV1	10c0419.D	04/19/13 17:54
Blank	1303525-BLK1	1303525-blk1.D	04/19/13 18:30
LCS	1303525-BS1	1303525-bs1.D	04/19/13 19:03
DASS246-0002	1304314-03	1304314-03 x10.D	04/19/13 19:37
DASS245-0002	1304314-02	1304314-02 x10.D	04/19/13 20:42
DASS246-0002	1303525-MS3	1303525-ms3 x10.D	04/19/13 21:15
DASS246-0002	1303525-MSD3	1303525-msd3 x10.D	04/19/13 21:49

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D22010-TUN1
Lab File ID: dft0419b.D
Injection Date: 04/19/13
Injection Time: 17:35
Sequence: 3D22010
Instrument ID: 339

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	49.8	PASS
68	Less than 2% of 69	1.66	PASS
69	Less than 200% of 198	38.9	PASS
70	Less than 2% of 69	0.617	PASS
127	40 - 60% of 198	41	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.26	PASS
275	10 - 30% of 198	27.7	PASS
365	1.0001 - 200% of 198	4.35	PASS
441	0.0001 - 99.9999% of 443	84.1	PASS
442	40.0001 - 200% of 198	79.6	PASS
443	17 - 23% of 442	18.8	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Lab Sample ID: 3D22010-CCV1
Lab File ID: 10c0419.D
Injection Date: 04/19/13
Injection Time: 17:54
Calibration Date: 04/01/13 08:40
Calibration: 3D22002
Sequence: 3D22010
Instrument ID: 339

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	10.2	1.147554	1.165847		1.6	20
Acenaphthylene	A	10.0	9.75	1.805214	1.759418		-2.5	20
Anthracene	A	10.0	9.85	1.045983	1.029836		-1.5	20
Benzo(a)anthracene	A	10.0	10.4	0.8653254	0.8982651		3.8	20
Benzo(a)pyrene	A	10.0	10.4	0.9773103	1.018288		4.2	20
Benzo(b)fluoranthene	A	10.0	10.3	1.050912	1.085729		3.3	20
Benzo(k)fluoranthene	A	10.0	9.30	1.12062	1.04256		-7.0	20
Benzo(g,h,i)perylene	A	10.0	11.4	0.6564267	0.7479989		14.0	20
Chrysene	A	10.0	9.15	0.8475443	0.7752807		-8.5	20
Dibenz(a,h)anthracene	L	10.0	12.0	0.599113	0.8416711		19.5	20
Fluoranthene	A	10.0	9.96	1.050904	1.046643		-0.4	20
Fluorene	A	10.0	10.3	1.264605	1.30323		3.1	20
Indeno(1,2,3-cd)pyrene	L	10.0	11.5	0.749439	0.9555752		14.6	20
2-Methylnaphthalene	A	10.0	11.0	0.5828175	0.6386021		9.6	20
Naphthalene	A	10.0	9.79	0.8716551	0.8530087		-2.1	20
Phenanthrene	A	10.0	9.96	1.01216	1.007618		-0.4	20
Pyrene	A	10.0	8.91	1.085645	0.967615		-10.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

QC BATCH SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303525 QC Batch Matrix: Soil

Preparation: 3550C Sonication Extraction

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303525-BLK1	04/19/13 13:10	
LCS	1303525-BS1	04/19/13 13:10	
DASS244-0002	1303525-MS1	04/19/13 13:10	
DASS245-0002	1303525-MS2	04/19/13 13:10	
DASS246-0002	1303525-MS3	04/19/13 13:10	
DASS244-0002	1303525-MSD1	04/19/13 13:10	
DASS245-0002	1303525-MSD2	04/19/13 13:10	
DASS246-0002	1303525-MSD3	04/19/13 13:10	
DASS244-0002	1304314-01	04/19/13 13:10	DOD PAHs
DASS245-0002	1304314-02	04/19/13 13:10	DOD PAHs
DASS246-0002	1304314-03	04/19/13 13:10	DOD PAHs

METHOD BLANK DATA SHEET
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303525-BLK1 File ID: 1303525-blk1.D

Prepared: 04/19/13 13:10 Analyzed: 04/19/13 18:30

Preparation: 3550C Sonication Extract Initial/Final: 30.3 g / 1 mL

QC Batch: 1303525 Sequence: 3D22010 Calibration: 3D22002 Instrument: 339

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.017	mg/kg wet	0.0046	0.017	0.017	U
208-96-8	Acenaphthylene	0.017	mg/kg wet	0.0042	0.017	0.017	U
120-12-7	Anthracene	0.017	mg/kg wet	0.0040	0.017	0.017	U
56-55-3	Benzo(a)anthracene	0.0083	mg/kg wet	0.0028	0.0083	0.017	U
50-32-8	Benzo(a)pyrene	0.0083	mg/kg wet	0.0023	0.0083	0.017	U
205-99-2	Benzo(b)fluoranthene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
207-08-9	Benzo(k)fluoranthene	0.0083	mg/kg wet	0.0020	0.0083	0.017	U
191-24-2	Benzo(g,h,i)perylene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
218-01-9	Chrysene	0.017	mg/kg wet	0.0039	0.017	0.017	U
53-70-3	Dibenz(a,h)anthracene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
206-44-0	Fluoranthene	0.017	mg/kg wet	0.0045	0.017	0.017	U
86-73-7	Fluorene	0.017	mg/kg wet	0.0040	0.017	0.017	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	mg/kg wet	0.0027	0.0033	0.017	U
91-57-6	2-Methylnaphthalene	0.017	mg/kg wet	0.0046	0.017	0.017	U
91-20-3	Naphthalene	0.017	mg/kg wet	0.0056	0.017	0.017	U
85-01-8	Phenanthrene	0.017	mg/kg wet	0.0041	0.017	0.017	U
129-00-0	Pyrene	0.017	mg/kg wet	0.0043	0.017	0.017	U

System Monitoring Compound	Added (mg/kg wet)	Conc. (mg/kg wet)	% REC	QC Limits	Q
Nitrobenzene-d5	0.330	0.269	82	35 - 100	
2-Fluorobiphenyl	0.330	0.295	89	45 - 105	
o-Terphenyl	0.333	0.367	110	30 - 125	

Internal Standard	Area	RT	% REC	Ref. RT	Q
1,4-Dichlorobenzene-d4	148863	7.632	94	7.556	
Naphthalene-d8	593529	10.36	96	10.307	
Acenaphthene-d10	304791	14.48	92	14.422	
Phenanthrene-d10	527103	17.908	92	17.861	
Chrysene-d12	596011	21.545	95	21.515	
Perylene-d12	441867	23.229	93	23.194	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D22051-TUN1	dft0422f.D	04/22/13 11:52
Cal Standard	3D22051-CAL5	10c0422c.D	04/22/13 12:44
Cal Standard	3D22051-CAL1	05bna0422.D	04/22/13 13:16
Cal Standard	3D22051-CAL2	1bna0422.D	04/22/13 13:50
Cal Standard	3D22051-CAL3	2bna0422.D	04/22/13 14:23
Cal Standard	3D22051-CAL4	5bna0422.D	04/22/13 14:56
Cal Standard	3D22051-CAL6	15bna0422.D	04/22/13 15:29
Cal Standard	3D22051-CAL7	20bna0422.D	04/22/13 16:01
Cal Standard	3D22051-CAL8	25bna0422.D	04/22/13 16:34
Secondary Cal Check	3D22051-SCV1	scvbna0422.D	04/22/13 17:08
DASS244-0002	1304314-01	1304314-01 20x.D	04/22/13 18:14
DASS244-0002	1303525-MS1	1303525-ms1 20x.D	04/22/13 18:47
DASS244-0002	1303525-MSD1	1303525-msd1 20x.D	04/22/13 19:20
DASS245-0002	1303525-MS2	1303525-ms2 10x.D	04/22/13 19:53
DASS245-0002	1303525-MSD2	1303525-msd2 10x.D	04/22/13 20:27

INITIAL CALIBRATION STANDARDS
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
3030363	dftpp tune	3D22051-TUN1	dft0422f.D	04/22/13 11:52
3040641	10ppm BNA	3D22051-CAL5	10c0422c.D	04/22/13 12:44
3040050	0.5ppm BNA	3D22051-CAL1	05bna0422.D	04/22/13 13:16
3040053	1ppm BNA	3D22051-CAL2	1bna0422.D	04/22/13 13:50
3040055	2ppm BNA	3D22051-CAL3	2bna0422.D	04/22/13 14:23
3040057	5ppm BNA	3D22051-CAL4	5bna0422.D	04/22/13 14:56
3040061	15ppm BNA	3D22051-CAL6	15bna0422.D	04/22/13 15:29
3040063	20ppm BNA	3D22051-CAL7	20bna0422.D	04/22/13 16:01
3040064	25ppm BNA	3D22051-CAL8	25bna0422.D	04/22/13 16:34
3040702	10ppm BNA scv	3D22051-SCV1	scvbna0422.D	04/22/13 17:08

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D22051-TUN1
Injection Date: 04/22/13
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Lab File ID: dft0422f.D
Injection Time: 11:52
Calibration: 3D22015
Instrument ID: 339

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	50.4	PASS
68	Less than 2% of 69	0	PASS
69	Less than 200% of 198	39.6	PASS
70	Less than 2% of 69	0.751	PASS
127	40 - 60% of 198	41.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.73	PASS
275	10 - 30% of 198	27.4	PASS
365	1.0001 - 200% of 198	4.42	PASS
441	0.0001 - 99.9999% of 443	82.2	PASS
442	40.0001 - 200% of 198	76.9	PASS
443	17 - 23% of 442	19.8	PASS

INITIAL CALIBRATION DATA (Continued)
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Calibration: 3D22015

SDG: 1304314
Project: USCG Atwater Facility
Calibration Date: 04/22/13 20:41
Instrument: 339

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.185664	5.283492	14.44388	0.0741443			CCC (30)	
Acenaphthylene	1.768671	5.916225	14.01975	7.629907E-02			15	
Anthracene	1.053065	2.937062	17.95263	4.011653E-02			15	
Benzo(a)anthracene	0.9361937	3.013168	21.45625	2.664035E-02			15	
Benzo(a)pyrene	1.039613	4.797422	23.04775	2.724653E-02			CCC (30)	
Benzo(b)fluoranthene	1.182231	7.277578	22.6405	0.0331963			15	
Benzo(k)fluoranthene	1.091303	6.529869	22.6755	3.275927E-02			15	
Benzo(g,h,i)perylene	0.7734255	10.27954	25.19775	5.106899E-02			15	
Chrysene	0.8309534	4.104971	21.4965	2.622317E-02			15	
Dibenz(a,h)anthracene	0.8401171	6.669722	24.75038	4.089085E-02			15	
Fluoranthene	1.099587	5.410839	19.74812	1.591413E-02			CCC (30)	
Fluorene	1.335947	4.857526	15.67875	6.363922E-02			15	
Indeno(1,2,3-cd)pyrene	0.9887393	7.495037	24.719	4.367728E-02			15	
2-Methylnaphthalene	0.6173173	4.540085	11.918	5.427702E-02			15	
Naphthalene	0.8256674	3.082629	10.2975	6.798052E-02			15	
Phenanthrene	1.023657	2.431187	17.855	3.596781E-02			15	
Pyrene	0.9804177	7.627923	20.04025	2.161513E-02			15	
2-Fluorophenol	0.9553335	4.742579	5.025625	0.6162255			15	
Phenol-d6	1.138118	5.617761	6.8055	0.3895884			15	
Nitrobenzene-d5	0.2824539	4.185498	8.67775	0.172938			15	
2-Fluorobiphenyl	1.37321	3.183765	12.836	8.778232E-02			15	
2,4,6-Tribromophenol	0.2018113	6.381811	16.253	8.942424E-02			15	
o-Terphenyl	0.6551156	3.126046	18.583	4.163036E-02			15	

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Laboratory ID: 3D22051-SCV1
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Standard ID: 3040702
Calibration: 3D22015

Analyte	Expected (ug/mL)	Found (ug/mL)	% Rec.	QC Limit
Acenaphthene	10.0	9.03	90	80-120
Acenaphthylene	10.0	9.32	93	80-120
Anthracene	10.0	8.93	89	80-120
Benzo(a)anthracene	10.0	8.81	88	80-120
Benzo(a)pyrene	10.0	8.80	88	80-120
Benzo(b)fluoranthene	10.0	8.60	86	80-120
Benzo(k)fluoranthene	10.0	8.32	83	80-120
Benzo(g,h,i)perylene	10.0	8.62	86	80-120
Chrysene	10.0	9.40	94	80-120
Dibenz(a,h)anthracene	10.0	8.37	84	80-120
Fluoranthene	10.0	8.41	84	80-120
Fluorene	10.0	8.64	86	80-120
Indeno(1,2,3-cd)pyrene	10.0	8.40	84	80-120
2-Methylnaphthalene	10.0	8.89	89	80-120
Naphthalene	10.0	9.29	93	80-120
Phenanthrene	10.0	9.00	90	80-120
Pyrene	10.0	8.73	87	80-120

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22010

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22002
Instrument: 339

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D22010-CCV1)		**Lab File ID: 10c0419.D**		**Analyzed: 04/19/13 17:54**			
Nitrobenzene-d5	8.79	8.73	0.06	+/-1.0	92	80 - 120	
2-Fluorobiphenyl	12.95	12.89	0.06	+/-1.0	101	80 - 120	
o-Terphenyl	18.67	18.63	0.04	+/-1.0	115	80 - 120	
Blank (1303525-BLK1)		**Lab File ID: 1303525-blk1.I**		**Analyzed: 04/19/13 18:30**			
Nitrobenzene-d5	8.79	8.73	0.06	+/-1.0	82	35 - 100	
2-Fluorobiphenyl	12.94	12.89	0.05	+/-1.0	89	45 - 105	
o-Terphenyl	18.67	18.63	0.03	+/-1.0	110	30 - 125	
LCS (1303525-BS1)		**Lab File ID: 1303525-bs1.D**		**Analyzed: 04/19/13 19:03**			
Nitrobenzene-d5	8.79	8.73	0.06	+/-1.0	76	35 - 100	
2-Fluorobiphenyl	12.95	12.89	0.05	+/-1.0	86	45 - 105	
o-Terphenyl	18.67	18.63	0.03	+/-1.0	103	30 - 125	
DASS246-0002 (1304314-03)		**Lab File ID: 1304314-03 x1**		**Analyzed: 04/19/13 19:37**			
Nitrobenzene-d5	8.79	8.73	0.06	+/-1.0	65	35 - 100	
2-Fluorobiphenyl	12.94	12.89	0.05	+/-1.0	85	45 - 105	
o-Terphenyl	18.67	18.63	0.04	+/-1.0	105	30 - 125	
DASS245-0002 (1304314-02)		**Lab File ID: 1304314-02 x1**		**Analyzed: 04/19/13 20:42**			
Nitrobenzene-d5	8.79	8.73	0.06	+/-1.0	57	35 - 100	
2-Fluorobiphenyl	12.94	12.89	0.05	+/-1.0	64	45 - 105	
o-Terphenyl	18.67	18.63	0.03	+/-1.0	85	30 - 125	
Matrix Spike (1303525-MS3)		**Lab File ID: 1303525-ms3 x**		**Analyzed: 04/19/13 21:15**			
Nitrobenzene-d5	8.78	8.73	0.05	+/-1.0	76	35 - 100	
2-Fluorobiphenyl	12.94	12.89	0.05	+/-1.0	84	45 - 105	
o-Terphenyl	18.67	18.63	0.03	+/-1.0	99	30 - 125	
Matrix Spike Dup (1303525-MSD3)		**Lab File ID: 1303525-msd3**		**Analyzed: 04/19/13 21:49**			
Nitrobenzene-d5	8.78	8.73	0.05	+/-1.0	82	35 - 100	
2-Fluorobiphenyl	12.94	12.89	0.05	+/-1.0	86	45 - 105	
o-Terphenyl	18.67	18.63	0.03	+/-1.0	114	30 - 125	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Cal Standard (3D22051-CAL5)		**Lab File ID: 10c0422c.D**		**Analyzed: 04/22/13 12:44**			
2-Fluorophenol	5.02	5.03	-0.01	+/-1.0	NA	NA	
Phenol-d6	6.80	6.81	-0.01	+/-1.0	NA	NA	
Nitrobenzene-d5	8.68	8.68	0.00	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.84	12.84	0.00	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.26	16.25	0.00	+/-1.0	NA	NA	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL1)		**Lab File ID: 05bna0422.D**		**Analyzed: 04/22/13 13:16**			
2-Fluorophenol	5.00	5.03	-0.02	+/-1.0	NA	NA	
Phenol-d6	6.79	6.81	-0.02	+/-1.0	NA	NA	
Nitrobenzene-d5	8.66	8.68	-0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.24	16.25	-0.01	+/-1.0	NA	NA	
o-Terphenyl	18.57	18.58	-0.01	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL2)		**Lab File ID: 1bna0422.D**		**Analyzed: 04/22/13 13:50**			
2-Fluorophenol	5.00	5.03	-0.02	+/-1.0	NA	NA	
Phenol-d6	6.78	6.81	-0.02	+/-1.0	NA	NA	
Nitrobenzene-d5	8.66	8.68	-0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.24	16.25	-0.02	+/-1.0	NA	NA	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL3)		**Lab File ID: 2bna0422.D**		**Analyzed: 04/22/13 14:23**			
2-Fluorophenol	5.01	5.03	-0.02	+/-1.0	NA	NA	
Phenol-d6	6.78	6.81	-0.02	+/-1.0	NA	NA	
Nitrobenzene-d5	8.67	8.68	-0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.24	16.25	-0.01	+/-1.0	NA	NA	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL4)		**Lab File ID: 5bna0422.D**		**Analyzed: 04/22/13 14:56**			
2-Fluorophenol	5.01	5.03	-0.02	+/-1.0	NA	NA	
Phenol-d6	6.79	6.81	-0.01	+/-1.0	NA	NA	
Nitrobenzene-d5	8.67	8.68	-0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.25	16.25	-0.01	+/-1.0	NA	NA	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	NA	NA	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Cal Standard (3D22051-CAL6)	Lab File ID: 15bna0422.D Analyzed: 04/22/13 15:29						
2-Fluorophenol	5.02	5.03	0.00	+/-1.0	NA	NA	
Phenol-d6	6.82	6.81	0.02	+/-1.0	NA	NA	
Nitrobenzene-d5	8.69	8.68	0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.84	12.84	0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.26	16.25	0.00	+/-1.0	NA	NA	
o-Terphenyl	18.59	18.58	0.01	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL7)	Lab File ID: 20bna0422.D Analyzed: 04/22/13 16:01						
2-Fluorophenol	5.06	5.03	0.03	+/-1.0	NA	NA	
Phenol-d6	6.83	6.81	0.03	+/-1.0	NA	NA	
Nitrobenzene-d5	8.69	8.68	0.01	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.85	12.84	0.01	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.27	16.25	0.02	+/-1.0	NA	NA	
o-Terphenyl	18.59	18.58	0.01	+/-1.0	NA	NA	
Cal Standard (3D22051-CAL8)	Lab File ID: 25bna0422.D Analyzed: 04/22/13 16:34						
2-Fluorophenol	5.09	5.03	0.06	+/-1.0	NA	NA	
Phenol-d6	6.85	6.81	0.05	+/-1.0	NA	NA	
Nitrobenzene-d5	8.70	8.68	0.03	+/-1.0	NA	NA	
2-Fluorobiphenyl	12.85	12.84	0.02	+/-1.0	NA	NA	
2,4,6-Tribromophenol	16.28	16.25	0.02	+/-1.0	NA	NA	
o-Terphenyl	18.60	18.58	0.01	+/-1.0	NA	NA	
Matrix Spike (1303525-MS2)	Lab File ID: 1303525-ms2 1Analyzed: 04/22/13 19:53						
2-Fluorophenol	5.04	5.03	0.01	+/-1.0	84	35 - 105	
Phenol-d6	6.79	6.81	-0.01	+/-1.0	83	40 - 100	
Nitrobenzene-d5	8.66	8.68	-0.02	+/-1.0	72	35 - 100	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	78	45 - 105	
2,4,6-Tribromophenol	16.24	16.25	-0.01	+/-1.0	85	35 - 125	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	80	30 - 125	
Matrix Spike Dup (1303525-MSD2)	Lab File ID: 1303525-msd2 Analyzed: 04/22/13 20:27						
2-Fluorophenol	5.04	5.03	0.02	+/-1.0	82	35 - 105	
Phenol-d6	6.79	6.81	-0.01	+/-1.0	84	40 - 100	
Nitrobenzene-d5	8.66	8.68	-0.02	+/-1.0	84	35 - 100	
2-Fluorobiphenyl	12.83	12.84	-0.01	+/-1.0	81	45 - 105	
2,4,6-Tribromophenol	16.24	16.25	-0.01	+/-1.0	86	35 - 125	
o-Terphenyl	18.58	18.58	0.00	+/-1.0	84	30 - 125	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MS1

Preparation: 3550C Sonication Extraction

Initial/Final: 28.6 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.397	ND	0.333	84	45 - 110	mg/kg dry
Acenaphthylene	0.397	ND	0.294	74	45 - 105	mg/kg dry
Anthracene	0.397	ND	0.294	74	55 - 105	mg/kg dry
Benzo(a)anthracene	0.397	0.150	0.429	70	50 - 110	mg/kg dry
Benzo(a)pyrene	0.397	0.143	0.452	78	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.397	0.173	0.429	64	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.397	0.105	0.413	77	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.397	0.0827	0.310	57	40 - 125	mg/kg dry
Chrysene	0.397	0.150	0.468	80	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.397	ND	0.270	68	40 - 125	mg/kg dry
Fluoranthene	0.397	0.256	0.460	52 *	55 - 115	mg/kg dry
Fluorene	0.397	ND	0.286	72	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.397	ND	0.317	80	40 - 120	mg/kg dry
2-Methylnaphthalene	0.397	ND	0.325	82	45 - 105	mg/kg dry
Naphthalene	0.397	ND	0.317	80	40 - 105	mg/kg dry
Phenanthrene	0.397	0.113	0.413	76	50 - 110	mg/kg dry
Pyrene	0.397	0.218	0.484	67	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MSD1

Preparation: 3550C Sonication Extraction

Initial/Final: 29.5 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.385	0.308	80	8	30	45 - 110	mg/kg dry
Acenaphthylene	0.385	0.285	74	3	30	45 - 105	mg/kg dry
Anthracene	0.385	0.315	82	7	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.385	0.454	79	6	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.385	0.477	87	5	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.385	0.516	89	18	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.385	0.377	71	9	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.385	0.323	63	4	30	40 - 125	mg/kg dry
Chrysene	0.385	0.516	95	10	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.385	0.231	60	16	30	40 - 125	mg/kg dry
Fluoranthene	0.385	0.585	86	24	30	55 - 115	mg/kg dry
Fluorene	0.385	0.300	78	5	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.385	0.277	72	14	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.385	0.277	72	16	30	45 - 105	mg/kg dry
Naphthalene	0.385	0.300	78	6	30	40 - 105	mg/kg dry
Phenanthrene	0.385	0.485	97	16	30	50 - 110	mg/kg dry
Pyrene	0.385	0.531	81	9	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MS2

Preparation: 3550C Sonication Extraction

Initial/Final: 28.7 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.418	0.0843	0.435	84	45 - 110	mg/kg dry
Acenaphthylene	0.418	ND	0.381	91	45 - 105	mg/kg dry
Anthracene	0.418	< 0.197	0.473	66	55 - 105	mg/kg dry
Benzo(a)anthracene	0.418	> 0.510	0.874	87	50 - 110	mg/kg dry
Benzo(a)pyrene	0.418	> 0.474	0.795	77	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.418	> 0.590	1.00	98	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.418	0.289	0.577	69	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.418	0.137	0.435	71	40 - 125	mg/kg dry
Chrysene	0.418	0.385	0.803	100	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.418	ND	0.297	71	40 - 125	mg/kg dry
Fluoranthene	0.418	> 0.996	1.34	82	55 - 115	mg/kg dry
Fluorene	0.418	0.100	0.439	81	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.418	< 0.217	0.443	54	40 - 120	mg/kg dry
2-Methylnaphthalene	0.418	ND	0.397	95	45 - 105	mg/kg dry
Naphthalene	0.418	ND	0.372	89	40 - 105	mg/kg dry
Phenanthrene	0.418	> 0.831	1.05	52	50 - 110	mg/kg dry
Pyrene	0.418	> 0.779	1.20	101	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MSD2

Preparation: 3550C Sonication Extraction

Initial/Final: 29.3 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.410	0.418	81	4	30	45 - 110	mg/kg dry
Acenaphthylene	0.410	0.381	93	0.1	30	45 - 105	mg/kg dry
Anthracene	0.410	0.393	48 *	18	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.410	0.631	30 *	32 *	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.410	0.615	34 *	26	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.410	0.672	20 *	39 *	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.410	0.549	63	5	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.410	0.316	44	32 *	30	40 - 125	mg/kg dry
Chrysene	0.410	0.627	59	25	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.410	0.283	69	5	30	40 - 125	mg/kg dry
Fluoranthene	0.410	0.893	-25 *	40 *	30	55 - 115	mg/kg dry
Fluorene	0.410	0.393	72	11	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.410	0.324	26 *	31 *	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.410	0.352	86	12	30	45 - 105	mg/kg dry
Naphthalene	0.410	0.365	89	2	30	40 - 105	mg/kg dry
Phenanthrene	0.410	0.754	19 *	33 *	30	50 - 110	mg/kg dry
Pyrene	0.410	0.852	18 *	34 *	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MS3

Preparation: 3550C Sonication Extraction

Initial/Final: 30.8 g / 1 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.392	ND	0.407	104	45 - 110	mg/kg dry
Acenaphthylene	0.392	ND	0.372	95	45 - 105	mg/kg dry
Anthracene	0.392	ND	0.364	93	55 - 105	mg/kg dry
Benzo(a)anthracene	0.392	0.128	0.525	101	50 - 110	mg/kg dry
Benzo(a)pyrene	0.392	0.0953	0.478	98	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.392	0.137	0.583	114	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.392	0.0788	0.462	98	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.392	0.0456	0.266	56	40 - 125	mg/kg dry
Chrysene	0.392	0.0995	0.435	86	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.392	ND	0.396	101	40 - 125	mg/kg dry
Fluoranthene	0.392	0.182	0.564	97	55 - 115	mg/kg dry
Fluorene	0.392	ND	0.399	102	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.392	0.133	0.360	58	40 - 120	mg/kg dry
2-Methylnaphthalene	0.392	ND	0.376	96	45 - 105	mg/kg dry
Naphthalene	0.392	ND	0.368	94	40 - 105	mg/kg dry
Phenanthrene	0.392	0.120	0.478	91	50 - 110	mg/kg dry
Pyrene	0.392	0.149	0.454	78	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-8270C

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303525

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303525-MSD3

Preparation: 3550C Sonication Extraction

Initial/Final: 29.2 g / 1 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Acenaphthene	0.413	0.425	103	4	30	45 - 110	mg/kg dry
Acenaphthylene	0.413	0.355	86	5	30	45 - 105	mg/kg dry
Anthracene	0.413	0.421	102	15	30	55 - 105	mg/kg dry
Benzo(a)anthracene	0.413	0.570	107	8	30	50 - 110	mg/kg dry
Benzo(a)pyrene	0.413	0.562	113 *	16	30	50 - 110	mg/kg dry
Benzo(b)fluoranthene	0.413	0.698	136 *	18	30	45 - 115	mg/kg dry
Benzo(k)fluoranthene	0.413	0.508	104	9	30	45 - 125	mg/kg dry
Benzo(g,h,i)perylene	0.413	0.215	41	21	30	40 - 125	mg/kg dry
Chrysene	0.413	0.516	101	17	30	55 - 110	mg/kg dry
Dibenz(a,h)anthracene	0.413	0.359	87	10	30	40 - 125	mg/kg dry
Fluoranthene	0.413	0.595	100	5	30	55 - 115	mg/kg dry
Fluorene	0.413	0.397	96	0.7	30	50 - 110	mg/kg dry
Indeno(1,2,3-cd)pyrene	0.413	0.347	52	4	30	40 - 120	mg/kg dry
2-Methylnaphthalene	0.413	0.405	98	7	30	45 - 105	mg/kg dry
Naphthalene	0.413	0.392	95	6	30	40 - 105	mg/kg dry
Phenanthrene	0.413	0.541	102	12	30	50 - 110	mg/kg dry
Pyrene	0.413	0.549	97	19	30	45 - 125	mg/kg dry

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303525-BS1
Preparation: 3550C Sonication Extraction
Initial/Final: 30.6 g / 1 mL
Sequence: 3D22010

QC Batch: 1303525

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.327	0.305	93	45 - 110	mg/kg wet
Acenaphthylene	0.327	0.287	88	45 - 105	mg/kg wet
Anthracene	0.327	0.306	94	55 - 105	mg/kg wet
Benzo(a)anthracene	0.327	0.328	100	50 - 110	mg/kg wet
Benzo(a)pyrene	0.327	0.331	101	50 - 110	mg/kg wet
Benzo(b)fluoranthene	0.327	0.335	102	45 - 115	mg/kg wet
Benzo(k)fluoranthene	0.327	0.292	89	45 - 125	mg/kg wet
Benzo(g,h,i)perylene	0.327	0.378	116	40 - 125	mg/kg wet
Chrysene	0.327	0.313	96	55 - 110	mg/kg wet
Dibenz(a,h)anthracene	0.327	0.391	120	40 - 125	mg/kg wet
Fluoranthene	0.327	0.322	98	55 - 115	mg/kg wet
Fluorene	0.327	0.321	98	50 - 110	mg/kg wet
Indeno(1,2,3-cd)pyrene	0.327	0.391	120	40 - 120	mg/kg wet
2-Methylnaphthalene	0.327	0.312	95	45 - 105	mg/kg wet
Naphthalene	0.327	0.291	89	40 - 105	mg/kg wet
Phenanthrene	0.327	0.321	98	50 - 110	mg/kg wet
Pyrene	0.327	0.289	89	45 - 125	mg/kg wet

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22010

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22002
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D22010-CCV1)			Lab File ID: 10c0419.D			Analyzed: 04/19/13 17:54			
1,4-Dichlorobenzene-d4	158962	7.608	236225	7.556	67	50 - 200	0.0520	+/-0.50	
Naphthalene-d8	616091	10.371	970218	10.307	64	50 - 200	0.0640	+/-0.50	
Acenaphthene-d10	332780	14.486	442790	14.422	75	50 - 200	0.0640	+/-0.50	
Phenanthrene-d10	576153	17.913	697203	17.861	83	50 - 200	0.0520	+/-0.50	
Chrysene-d12	627405	21.545	694719	21.515	90	50 - 200	0.0300	+/-0.50	
Perylene-d12	474746	23.235	508704	23.194	93	50 - 200	0.0410	+/-0.50	
Blank (1303525-BLK1)			Lab File ID: 1303525-blk1.D			Analyzed: 04/19/13 18:30			
1,4-Dichlorobenzene-d4	148863	7.632	158962	7.556	94	50 - 200	0.0760	+/-0.50	
Naphthalene-d8	593529	10.36	616091	10.307	96	50 - 200	0.0530	+/-0.50	
Acenaphthene-d10	304791	14.48	332780	14.422	92	50 - 200	0.0580	+/-0.50	
Phenanthrene-d10	527103	17.908	576153	17.861	91	50 - 200	0.0470	+/-0.50	
Chrysene-d12	596011	21.545	627405	21.515	95	50 - 200	0.0300	+/-0.50	
Perylene-d12	441867	23.229	474746	23.194	93	50 - 200	0.0350	+/-0.50	
LCS (1303525-BS1)			Lab File ID: 1303525-bs1.D			Analyzed: 04/19/13 19:03			
1,4-Dichlorobenzene-d4	150231	7.632	158962	7.556	95	50 - 200	0.0760	+/-0.50	
Naphthalene-d8	600005	10.365	616091	10.307	97	50 - 200	0.0580	+/-0.50	
Acenaphthene-d10	316439	14.486	332780	14.422	95	50 - 200	0.0640	+/-0.50	
Phenanthrene-d10	537534	17.914	576153	17.861	93	50 - 200	0.0530	+/-0.50	
Chrysene-d12	583795	21.545	627405	21.515	93	50 - 200	0.0300	+/-0.50	
Perylene-d12	458331	23.229	474746	23.194	97	50 - 200	0.0350	+/-0.50	
DASS246-0002 (1304314-03)			Lab File ID: 1304314-03 x10.D			Analyzed: 04/19/13 19:37			
1,4-Dichlorobenzene-d4	135114	7.614	158962	7.556	85	50 - 200	0.0580	+/-0.50	
Naphthalene-d8	569214	10.365	616091	10.307	92	50 - 200	0.0580	+/-0.50	
Acenaphthene-d10	273866	14.48	332780	14.422	82	50 - 200	0.0580	+/-0.50	
Phenanthrene-d10	448263	17.908	576153	17.861	78	50 - 200	0.0470	+/-0.50	
Chrysene-d12	497913	21.539	627405	21.515	79	50 - 200	0.0240	+/-0.50	
Perylene-d12	369950	23.229	474746	23.194	78	50 - 200	0.0350	+/-0.50	
DASS245-0002 (1304314-02)			Lab File ID: 1304314-02 x10.D			Analyzed: 04/19/13 20:42			
1,4-Dichlorobenzene-d4	136869	7.609	158962	7.556	86	50 - 200	0.0530	+/-0.50	
Naphthalene-d8	591688	10.36	616091	10.307	96	50 - 200	0.0530	+/-0.50	
Acenaphthene-d10	302451	14.475	332780	14.422	91	50 - 200	0.0530	+/-0.50	
Phenanthrene-d10	528023	17.908	576153	17.861	92	50 - 200	0.0470	+/-0.50	
Chrysene-d12	527115	21.545	627405	21.515	84	50 - 200	0.0300	+/-0.50	
Perylene-d12	297765	23.229	474746	23.194	63	50 - 200	0.0350	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22010

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22002
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (1303525-MS3)			Lab File ID:	1303525-ms3 x10.D		Analyzed:	04/19/13 21:15		
1,4-Dichlorobenzene-d4	144925	7.609	158962	7.556	91	50 - 200	0.0530	+/-0.50	
Naphthalene-d8	561461	10.36	616091	10.307	91	50 - 200	0.0530	+/-0.50	
Acenaphthene-d10	276286	14.481	332780	14.422	83	50 - 200	0.0590	+/-0.50	
Phenanthrene-d10	505585	17.908	576153	17.861	88	50 - 200	0.0470	+/-0.50	
Chrysene-d12	551827	21.545	627405	21.515	88	50 - 200	0.0300	+/-0.50	
Perylene-d12	351834	23.229	474746	23.194	74	50 - 200	0.0350	+/-0.50	
Matrix Spike Dup (1303525-MSD3)			Lab File ID:	1303525-msd3 x10.D		Analyzed:	04/19/13 21:49		
1,4-Dichlorobenzene-d4	145591	7.608	158962	7.556	92	50 - 200	0.0520	+/-0.50	
Naphthalene-d8	578660	10.365	616091	10.307	94	50 - 200	0.0580	+/-0.50	
Acenaphthene-d10	300773	14.48	332780	14.422	90	50 - 200	0.0580	+/-0.50	
Phenanthrene-d10	508950	17.908	576153	17.861	88	50 - 200	0.0470	+/-0.50	
Chrysene-d12	531287	21.539	627405	21.515	85	50 - 200	0.0240	+/-0.50	
Perylene-d12	266220	23.229	474746	23.194	56	50 - 200	0.0350	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (3D22051-CAL5)			Lab File ID:	10c0422c.D		Analyzed:	04/22/13 12:44		
1,4-Dichlorobenzene-d4	162650	7.492	162650	7.492	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	734651	10.249	734651	10.249	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	362632	14.364	362632	14.364	100	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	603828	17.809	603828	17.809	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12	601578	21.469	601578	21.469	100	50 - 200	0.0000	+/-0.50	
Perylene-d12	473861	23.118	473861	23.118	100	50 - 200	0.0000	+/-0.50	
Cal Standard (3D22051-CAL1)			Lab File ID:	05bna0422.D		Analyzed:	04/22/13 13:16		
1,4-Dichlorobenzene-d4	154397	7.486	162650	7.492	95	50 - 200	-0.0060	+/-0.50	
Naphthalene-d8	668373	10.249	734651	10.249	91	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	333619	14.352	362632	14.364	92	50 - 200	-0.0120	+/-0.50	
Phenanthrene-d10	536005	17.803	603828	17.809	89	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	606063	21.463	601578	21.469	101	50 - 200	-0.0060	+/-0.50	
Perylene-d12	500478	23.118	473861	23.118	106	50 - 200	0.0000	+/-0.50	
Cal Standard (3D22051-CAL2)			Lab File ID:	1bna0422.D		Analyzed:	04/22/13 13:50		
1,4-Dichlorobenzene-d4	142614	7.492	162650	7.492	88	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	571398	10.249	734651	10.249	78	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	279624	14.358	362632	14.364	77	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	478689	17.803	603828	17.809	79	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	547836	21.463	601578	21.469	91	50 - 200	-0.0060	+/-0.50	
Perylene-d12	464624	23.118	473861	23.118	98	50 - 200	0.0000	+/-0.50	
Cal Standard (3D22051-CAL3)			Lab File ID:	2bna0422.D		Analyzed:	04/22/13 14:23		
1,4-Dichlorobenzene-d4	149090	7.486	162650	7.492	92	50 - 200	-0.0060	+/-0.50	
Naphthalene-d8	613922	10.243	734651	10.249	84	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10	326566	14.358	362632	14.364	90	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	535508	17.803	603828	17.809	89	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	610870	21.463	601578	21.469	102	50 - 200	-0.0060	+/-0.50	
Perylene-d12	465733	23.118	473861	23.118	98	50 - 200	0.0000	+/-0.50	
Cal Standard (3D22051-CAL4)			Lab File ID:	5bna0422.D		Analyzed:	04/22/13 14:56		
1,4-Dichlorobenzene-d4	148829	7.492	162650	7.492	92	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	624729	10.249	734651	10.249	85	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	309290	14.358	362632	14.364	85	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	513423	17.803	603828	17.809	85	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	598221	21.463	601578	21.469	99	50 - 200	-0.0060	+/-0.50	
Perylene-d12	451409	23.113	473861	23.118	95	50 - 200	-0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Cal Standard (3D22051-CAL6)			Lab File ID: 15bna0422.D			Analyzed: 04/22/13 15:29			
1,4-Dichlorobenzene-d4	147667	7.486	162650	7.492	91	50 - 200	-0.0060	+/-0.50	
Naphthalene-d8	655178	10.249	734651	10.249	89	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	336501	14.376	362632	14.364	93	50 - 200	0.0120	+/-0.50	
Phenanthrene-d10	556726	17.809	603828	17.809	92	50 - 200	0.0000	+/-0.50	
Chrysene-d12	627725	21.469	601578	21.469	104	50 - 200	0.0000	+/-0.50	
Perylene-d12	440751	23.118	473861	23.118	93	50 - 200	0.0000	+/-0.50	
Cal Standard (3D22051-CAL7)			Lab File ID: 20bna0422.D			Analyzed: 04/22/13 16:01			
1,4-Dichlorobenzene-d4	161311	7.503	162650	7.492	99	50 - 200	0.0110	+/-0.50	
Naphthalene-d8	651927	10.254	734651	10.249	89	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10	335434	14.375	362632	14.364	92	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	552617	17.814	603828	17.809	92	50 - 200	0.0050	+/-0.50	
Chrysene-d12	624150	21.475	601578	21.469	104	50 - 200	0.0060	+/-0.50	
Perylene-d12	445779	23.124	473861	23.118	94	50 - 200	0.0060	+/-0.50	
Cal Standard (3D22051-CAL8)			Lab File ID: 25bna0422.D			Analyzed: 04/22/13 16:34			
1,4-Dichlorobenzene-d4	165185	7.509	162650	7.492	102	50 - 200	0.0170	+/-0.50	
Naphthalene-d8	673527	10.26	734651	10.249	92	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	339204	14.375	362632	14.364	94	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	542323	17.814	603828	17.809	90	50 - 200	0.0050	+/-0.50	
Chrysene-d12	624487	21.475	601578	21.469	104	50 - 200	0.0060	+/-0.50	
Perylene-d12	433655	23.124	473861	23.118	92	50 - 200	0.0060	+/-0.50	
Secondary Cal Check (3D22051-SCV1)			Lab File ID: scvbna0422.D			Analyzed: 04/22/13 17:08			
1,4-Dichlorobenzene-d4	149686	7.492	162650	7.492	92	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	665138	10.249	734651	10.249	91	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	342791	14.364	362632	14.364	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	558367	17.808	603828	17.809	92	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	616588	21.469	601578	21.469	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	496999	23.118	473861	23.118	105	50 - 200	0.0000	+/-0.50	
DASS244-0002 (1304314-01)			Lab File ID: 1304314-01 20x.D			Analyzed: 04/22/13 18:14			
1,4-Dichlorobenzene-d4	165334	7.492	162650	7.492	102	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	648604	10.243	734651	10.249	88	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10	300196	14.358	362632	14.364	83	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	504581	17.809	603828	17.809	84	50 - 200	0.0000	+/-0.50	
Chrysene-d12	590602	21.463	601578	21.469	98	50 - 200	-0.0060	+/-0.50	
Perylene-d12	386535	23.113	473861	23.118	82	50 - 200	-0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D22051

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (1303525-MS1)			Lab File ID: 1303525-ms1 20x.D			Analyzed: 04/22/13 18:47			
1,4-Dichlorobenzene-d4	170664	7.492	162650	7.492	105	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	697512	10.249	734651	10.249	95	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	338394	14.358	362632	14.364	93	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	581271	17.803	603828	17.809	96	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	617174	21.463	601578	21.469	103	50 - 200	-0.0060	+/-0.50	
Perylene-d12	444930	23.118	473861	23.118	94	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (1303525-MSD1)			Lab File ID: 1303525-msd1 20x.D			Analyzed: 04/22/13 19:20			
1,4-Dichlorobenzene-d4	172754	7.492	162650	7.492	106	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	713149	10.249	734651	10.249	97	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	347355	14.358	362632	14.364	96	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	560028	17.803	603828	17.809	93	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	622343	21.463	601578	21.469	103	50 - 200	-0.0060	+/-0.50	
Perylene-d12	419394	23.118	473861	23.118	89	50 - 200	0.0000	+/-0.50	
Matrix Spike (1303525-MS2)			Lab File ID: 1303525-ms2 10x.D			Analyzed: 04/22/13 19:53			
1,4-Dichlorobenzene-d4	170861	7.492	162650	7.492	105	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	714594	10.249	734651	10.249	97	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	373660	14.358	362632	14.364	103	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10	628180	17.803	603828	17.809	104	50 - 200	-0.0060	+/-0.50	
Chrysene-d12	692812	21.469	601578	21.469	115	50 - 200	0.0000	+/-0.50	
Perylene-d12	425637	23.118	473861	23.118	90	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (1303525-MSD2)			Lab File ID: 1303525-msd2 10x.D			Analyzed: 04/22/13 20:27			
1,4-Dichlorobenzene-d4	153432	7.492	162650	7.492	94	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	653350	10.249	734651	10.249	89	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	323494	14.364	362632	14.364	89	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	538130	17.809	603828	17.809	89	50 - 200	0.0000	+/-0.50	
Chrysene-d12	579672	21.463	601578	21.469	96	50 - 200	-0.0060	+/-0.50	
Perylene-d12	367909	23.118	473861	23.118	78	50 - 200	0.0000	+/-0.50	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D19028

SDG: 1304314
Project: USCG Atwater Facility
Calibration: UNASSIGNED
Instrument: 210

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	1303589-BLK1		04/19/13 19:15
DASS244-0002	1304314-01		04/19/13 19:15
DASS244-0002	1303589-DUP1		04/19/13 19:15
DASS245-0002	1304314-02		04/19/13 19:15
DASS245-0002	1303589-DUP2		04/19/13 19:15
DASS246-0002	1304314-03		04/19/13 19:15
DASS246-0002	1303589-DUP3		04/19/13 19:15

QC BATCH SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303589 QC Batch Matrix: Soil

Preparation: Method Specific Preparation

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303589-BLK1	04/19/13 17:22	
DASS244-0002	1303589-DUP1	04/19/13 17:22	
DASS245-0002	1303589-DUP2	04/19/13 17:22	
DASS246-0002	1303589-DUP3	04/19/13 17:22	
DASS244-0002	1304314-01	04/19/13 17:22	
DASS245-0002	1304314-02	04/19/13 17:22	
DASS246-0002	1304314-03	04/19/13 17:22	

METHOD BLANK DATA SHEET
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303589-BLK1 File ID:

Prepared: 04/19/13 17:22 Analyzed: 04/19/13 19:15

Preparation: Method Specific Preparat Initial/Final: 10 g / 10 mL

QC Batch: 1303589 Sequence: 3D19028 Calibration: UNASSIGNE Instrument: 210

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
	Percent Solids	0.1	%	0.1	0.1	0.1	U

DUPLICATES
USEPA-3550C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Lab Source ID: 1304314-01
% Solids: 88.11
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303589-DUP1
Source Sample Name: DASS244-0002
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

Analyte	Control Limit	Sample Conc.	C	Dup. Conc.	C	RPD %	Q	Method	Units
Percent Solids	5	88		86		2		USEPA-3550C	%

* Values outside of QC limits

DUPLICATES
USEPA-3550C

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Lab Source ID: 1304314-02
% Solids: 83.29
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303589-DUP2
Source Sample Name: DASS245-0002
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

Analyte	Control Limit	Sample Conc.	C	Dup. Conc.	C	RPD %	Q	Method	Units
Percent Solids	5	83		82		2		USEPA-3550C	%

* Values outside of QC limits

DUPLICATES
USEPA-3550C

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Lab Source ID: 1304314-03
% Solids: 82.91
QC Batch: 1303589

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303589-DUP3
Source Sample Name: DASS246-0002
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

Analyte	Control Limit	Sample Conc.	C	Dup. Conc.	C	RPD %	Q	Method	Units
Percent Solids	5	83		85		3		USEPA-3550C	%

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22006
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D22002-CAL1	3d22002-001	04/22/13 08:14
Cal Standard	3D22002-CAL2	3d22002-002	04/22/13 08:17
Cal Standard	3D22002-CAL3	3d22002-003	04/22/13 08:20
Cal Standard	3D22002-CAL5	3d22002-005	04/22/13 08:25
Cal Standard	3D22002-CAL6	3d22002-006	04/22/13 08:28
Secondary Cal Check	3D22002-SCV1	3d22002-007	04/22/13 08:31
Calibration Check	3D22002-CCV1	3d22002-007	04/22/13 08:31
Calibration Blank	3D22002-CCB1	3d22002-008	04/22/13 08:34
Interference Check A	3D22002-IFA1	3d22002-009	04/22/13 08:36
Interference Check B	3D22002-IFB1	3d22002-010	04/22/13 08:39
Calibration Check	3D22002-CCV2	3d22002-011	04/22/13 08:42
Calibration Blank	3D22002-CCB2	3d22002-012	04/22/13 08:45
Blank	1303582-BLK1	3d22002-013	04/22/13 08:48
LCS	1303582-BS1	3d22002-014	04/22/13 08:51
Calibration Check	3D22002-CCV3	3d22002-023	04/22/13 09:16
Calibration Blank	3D22002-CCB3	3d22002-024	04/22/13 09:19
DASB-CF-01	1304314-04	3d22002-026	04/22/13 09:28
DASB-CF-02	1304314-05	3d22002-027	04/22/13 09:31
Calibration Check	3D22002-CCV4	3d22002-028	04/22/13 09:34
Calibration Blank	3D22002-CCB4	3d22002-029	04/22/13 09:37
DASS244-0002	1304314-01	3d22002-030	04/22/13 09:41
DASS244-0002	3D22002-SRD4	3d22002-031	04/22/13 09:44
DASS244-0002	1303582-PS4	3d22002-032	04/22/13 09:47
DASS245-0002	1304314-02	3d22002-033	04/22/13 09:50
DASS245-0002	3D22002-SRD5	3d22002-034	04/22/13 09:52
DASS245-0002	1303582-PS5	3d22002-035	04/22/13 09:55
DASS246-0002	1304314-03	3d22002-036	04/22/13 09:58
DASS246-0002	3D22002-SRD6	3d22002-037	04/22/13 10:01
DASS246-0002	1303582-PS6	3d22002-038	04/22/13 10:04
Calibration Check	3D22002-CCV5	3d22002-039	04/22/13 10:07
Calibration Blank	3D22002-CCB5	3d22002-040	04/22/13 10:09

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22024

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22012
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D22024-CAL1	3d22024-001	04/22/13 11:16
Cal Standard	3D22024-CAL2	3d22024-002	04/22/13 11:18
Cal Standard	3D22024-CAL3	3d22024-003	04/22/13 11:21
Cal Standard	3D22024-CAL4	3d22024-004	04/22/13 11:24
Cal Standard	3D22024-CAL5	3d22024-005	04/22/13 11:26
Cal Standard	3D22024-CAL6	3d22024-006	04/22/13 11:29
Secondary Cal Check	3D22024-SCV1	3d22024-007	04/22/13 11:31
Calibration Check	3D22024-CCV1	3d22024-007	04/22/13 11:31
Calibration Blank	3D22024-CCB1	3d22024-008	04/22/13 11:34
Interference Check A	3D22024-IFA1	3d22024-009	04/22/13 11:36
Interference Check B	3D22024-IFB1	3d22024-010	04/22/13 11:39
Calibration Check	3D22024-CCV2	3d22024-011	04/22/13 11:42
Calibration Blank	3D22024-CCB2	3d22024-012	04/22/13 11:44
Blank	1303582-BLK2	3d22024-013	04/22/13 11:47
LCS	1303582-BS2	3d22024-014	04/22/13 11:49
DASS244-0002	1304314-01	3d22024-015	04/22/13 11:52
DASS244-0002	1303582-MS1	3d22024-016	04/22/13 11:54
DASS244-0002	1303582-MSD1	3d22024-017	04/22/13 11:57
DASS244-0002	3D22024-SRD1	3d22024-018	04/22/13 12:00
DASS244-0002	1303582-PS1	3d22024-019	04/22/13 12:02
DASS245-0002	1303582-MS2	3d22024-021	04/22/13 12:07
DASS245-0002	1303582-MSD2	3d22024-022	04/22/13 12:10
Calibration Check	3D22024-CCV3	3d22024-023	04/22/13 12:13
Calibration Blank	3D22024-CCB3	3d22024-024	04/22/13 12:15
DASS246-0002	1304314-03	3d22024-027	04/22/13 12:23
DASS246-0002	1303582-MS3	3d22024-028	04/22/13 12:25
DASS246-0002	1303582-MSD3	3d22024-029	04/22/13 12:28
DASS246-0002	3D22024-SRD3	3d22024-030	04/22/13 12:31
DASS246-0002	1303582-PS3	3d22024-031	04/22/13 12:33
DASB-CF-01	1304314-04	3d22024-032	04/22/13 12:36
DASB-CF-02	1304314-05	3d22024-033	04/22/13 12:38
Calibration Check	3D22024-CCV4	3d22024-034	04/22/13 12:41

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22024

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22012
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	3D22024-CCB4	3d22024-035	04/22/13 12:43
DASS245-0002	1304314-02	3d22024-037	04/22/13 12:49
DASS245-0002	3D22024-SRD2	3d22024-038	04/22/13 12:51
Calibration Check	3D22024-CCV5	3d22024-039	04/22/13 12:54
Calibration Blank	3D22024-CCB5	3d22024-040	04/22/13 12:56
DASS245-0002	1303582-PS2	3d22024-041	04/22/13 12:59
Calibration Check	3D22024-CCV6	3d22024-042	04/22/13 13:02
Calibration Blank	3D22024-CCB6	3d22024-043	04/22/13 13:04

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22002
Control Limt: +/- 10.00%

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22006
Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D22002-CCV1	Lead	0.0400	0.0386	96	mg/L	04/22/13 08:31
3D22002-CCV2	Lead	0.0400	0.0382	96	mg/L	04/22/13 08:42
3D22002-CCV3	Lead	0.0400	0.0394	99	mg/L	04/22/13 09:16
3D22002-CCV4	Lead	0.0400	0.0389	97	mg/L	04/22/13 09:34
3D22002-CCV5	Lead	0.0400	0.0382	95	mg/L	04/22/13 10:07

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Sequence: 3D22024
Calibration: 3D22012
Control Limt: +/- 10.00%
Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D22024-CCV1	Arsenic	0.0400	0.0379	95	mg/L	04/22/13 11:31
3D22024-CCV2	Arsenic	0.0400	0.0383	96	mg/L	04/22/13 11:42
3D22024-CCV3	Arsenic	0.0400	0.0379	95	mg/L	04/22/13 12:13
3D22024-CCV4	Arsenic	0.0400	0.0379	95	mg/L	04/22/13 12:41
3D22024-CCV5	Arsenic	0.0400	0.0365	91	mg/L	04/22/13 12:54
3D22024-CCV6	Arsenic	0.0400	0.0381	95	mg/L	04/22/13 13:02

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Laboratory ID: 3D22002-SCV1
Sequence: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Instrument: 114
Calibration: 3D22006

Analyte	Expected	Found	% R	QC Limit	Units
Lead	0.0400	0.0386	97	90-110	mg/L

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Laboratory ID: 3D22024-SCV1

Sequence: 3D22024

SDG: 1304314

Project: USCG Atwater Facility

Instrument: 114

Calibration: 3D22012

Analyte	Expected	Found	% R	QC Limit	Units
Arsenic	0.0400	0.0379	95	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22006
Instrument ID: 114

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D22002-CCB1	Lead	0.0000090	mg/L	0.000066	0.00020	0.0010	U	04/22/13 08:34
3D22002-CCB2	Lead	0.0000080	mg/L	0.000066	0.00020	0.0010	U	04/22/13 08:45
3D22002-CCB3	Lead	0.000081	mg/L	0.000066	0.00020	0.0010	J	04/22/13 09:19
3D22002-CCB4	Lead	0.000028	mg/L	0.000066	0.00020	0.0010	U	04/22/13 09:37
3D22002-CCB5	Lead	0.000010	mg/L	0.000066	0.00020	0.0010	U	04/22/13 10:09

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22024

SDG: 1304314
Project: USCG Atwater Facility
Calibration: 3D22012
Instrument ID: 114

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D22024-CCB1	Arsenic	-0.000084	mg/L	0.00016	0.00050	0.0010	U	04/22/13 11:34
3D22024-CCB2	Arsenic	-0.00011	mg/L	0.00016	0.00050	0.0010	U	04/22/13 11:44
3D22024-CCB3	Arsenic	0.000060	mg/L	0.00016	0.00050	0.0010	U	04/22/13 12:15
3D22024-CCB4	Arsenic	0.00039	mg/L	0.00016	0.00050	0.0010	J	04/22/13 12:43
3D22024-CCB5	Arsenic	0.00026	mg/L	0.00016	0.00050	0.0010	J	04/22/13 12:56
3D22024-CCB6	Arsenic	0.00025	mg/L	0.00016	0.00050	0.0010	J	04/22/13 13:04

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Sequence: 3D22002

SDG: 1304314

Project: USCG Atwater Facility

Calibration: 3D22006

Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units
3D22002-IFA1	Lead	0.00	0.00000900		mg/L
3D22002-IFB1	Lead	0.0200	0.0191	96	mg/L

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Sequence: 3D22024

SDG: 1304314

Project: USCG Atwater Facility

Calibration: 3D22012

Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units
3D22024-IFA1	Arsenic	0.00	0.0000430		mg/L
3D22024-IFB1	Arsenic	0.0200	0.0189	95	mg/L

* Values outside of QC limits

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303582 QC Batch Matrix: Soil

Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303582-BLK1	04/19/13 07:00	
Blank	1303582-BLK2	04/19/13 07:00	
LCS	1303582-BS1	04/19/13 07:00	
LCS	1303582-BS2	04/19/13 07:00	
DASS244-0002	1303582-MS1	04/19/13 07:00	
DASS245-0002	1303582-MS2	04/19/13 07:00	
DASS246-0002	1303582-MS3	04/19/13 07:00	
DASS244-0002	1303582-MSD1	04/19/13 07:00	
DASS245-0002	1303582-MSD2	04/19/13 07:00	
DASS246-0002	1303582-MSD3	04/19/13 07:00	
DASS244-0002	1304314-01	04/19/13 07:00	
DASS245-0002	1304314-02	04/19/13 07:00	
DASS246-0002	1304314-03	04/19/13 07:00	
DASB-CF-01	1304314-04	04/19/13 07:00	
DASB-CF-02	1304314-05	04/19/13 07:00	

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Laboratory ID: 1303582-BLK1
File ID: 3d22002-013
Prepared: 04/19/13 07:00
Analyzed: 04/22/13 08:48
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
QC Batch: 1303582
Sequence: 3D22002
Calibration: 3D22006
Instrument: 114

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303582-BLK2 File ID: 3d22024-013

Prepared: 04/19/13 07:00 Analyzed: 04/22/13 11:47

Preparation: 3050B Digestion Initial/Final: 0.5 g / 50 mL

QC Batch: 1303582 Sequence: 3D22024 Calibration: 3D22012 Instrument: 114

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7440-38-2	Arsenic, Total	0.050	mg/kg dry wt.	0.016	0.050	0.10	U

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MS1

Preparation: 3050B Digestion

Initial/Final: 0.5194 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.85	6.34	10.5	108	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MSD1

Preparation: 3050B Digestion

Initial/Final: 0.5059 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.95	11.2	124 *	7	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MS2

Preparation: 3050B Digestion

Initial/Final: 0.502 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.98	9.45	13.9	112	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MSD2

Preparation: 3050B Digestion

Initial/Final: 0.504 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.97	12.7	81	9	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASS246-0002

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MS3

Preparation: 3050B Digestion

Initial/Final: 0.5125 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.90	5.55	9.37	98	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303582

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 1303582-MSD3

Preparation: 3050B Digestion

Initial/Final: 0.5047 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.96	9.15	91	2	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 88.11
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS1
Lab Source ID: 1304314-01
Initial/Final: 0.040592 g / 4 mL
Sequence: 3D22024

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0830	0.0643	mg/L	0.0200	93	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.29
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS2
Lab Source ID: 1304314-02
Initial/Final: 0.020064 g / 2 mL
Sequence: 3D22024

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.132	0.0948	mg/L	0.0400	92	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 82.91
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS3
Lab Source ID: 1304314-03
Initial/Final: 0.040616 g / 4 mL
Sequence: 3D22024

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0758	0.0564	mg/L	0.0200	97	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 88.11
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS4
Lab Source ID: 1304314-01
Initial/Final: 0.0010148 g / 0.1 mL
Sequence: 3D22002

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	6.37	4.39	mg/L	2.00	99	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 83.29
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS5
Lab Source ID: 1304314-02
Initial/Final: 0.0010032 g / 0.1 mL
Sequence: 3D22002

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	8.16	6.26	mg/L	2.00	95	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 82.91
Preparation: 3050B Digestion
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-PS6
Lab Source ID: 1304314-03
Initial/Final: 0.010154 g / 1 mL
Sequence: 3D22002

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Lead, Total	0.719	0.525	mg/L	0.200	97	75 - 125

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-BS1
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
Sequence: 3D22002

QC Batch: 1303582

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Lead, Total	4.00	3.98	99	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1303582-BS2
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
Sequence: 3D22024

QC Batch: 1303582

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	4.00	3.89	97	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SERIAL DILUTION
USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 88.11
QC Batch: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 3D22002-SRD4
Lab Source ID: 1304314-01
Sequence: 3D22002

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0439		0.0431		2.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 83.29

QC Batch: 3D22002

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 3D22002-SRD5

Lab Source ID: 1304314-02

Sequence: 3D22002

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0626		0.0579		7.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION
USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 82.91
QC Batch: 3D22002

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 3D22002-SRD6
Lab Source ID: 1304314-03
Sequence: 3D22002

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Lead, Total	0.0525		0.0517		2.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION
USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids: 88.11
QC Batch: 3D22024

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 3D22024-SRD1
Lab Source ID: 1304314-01
Sequence: 3D22024

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0643		0.0632		2.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION

USEPA-6020A

DASS245-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 83.29

QC Batch: 3D22024

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 3D22024-SRD2

Lab Source ID: 1304314-02

Sequence: 3D22024

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0474		0.0500		5.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

SERIAL DILUTION

USEPA-6020A

DASS246-0002

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids: 82.91

QC Batch: 3D22024

SDG: 1304314

Project: USCG Atwater Facility

Laboratory ID: 3D22024-SRD3

Lab Source ID: 1304314-03

Sequence: 3D22024

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0564		0.0575		2.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT USCG Altwater Facility		JOB NUMBER SDG 1304313	
SUBJECT			
BASED ON		DRAWING NUMBER	
BY Ann Cognetti	CHECKED BY	APPROVED BY	DATE May 14, 2013

I. Sample DA55244-0002; Chrysene

$$\frac{33766}{590602} * \frac{5\,ng/uL}{0.9804177} * 20 * \frac{1\,mL}{30.2\,g} * \frac{1}{0.8811} = 0.22\,mg/kg$$

Sample Calculation

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304314
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Laboratory ID: 1304314-01
File ID: 1304314-01 20x.D
Sampled: 04/17/13 17:30
Prepared: 04/19/13 13:10
Analyzed: 04/22/13 18:14
Solids: 88.11
Preparation: 3550C Sonication Extract
Initial/Final: 30.2 g / 1 mL
QC Batch: 1303525
Sequence: 3D22051
Calibration: 3D22015
Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	20	0.38	0.11	0.38	0.38	U
208-96-8	Acenaphthylene	20	0.38	0.095	0.38	0.38	U
120-12-7	Anthracene	20	0.38	0.091	0.38	0.38	U
56-55-3	Benzo(a)anthracene	20	0.15	0.062	0.19	0.38	J
50-32-8	Benzo(a)pyrene	20	0.14	0.052	0.19	0.38	J
205-99-2	Benzo(b)fluoranthene	20	0.17	0.043	0.19	0.38	J
207-08-9	Benzo(k)fluoranthene	20	0.11	0.044	0.19	0.38	J
191-24-2	Benzo(g,h,i)perylene	20	0.083	0.043	0.19	0.38	J
218-01-9	Chrysene	20	0.15	0.088	0.38	0.38	J
53-70-3	Dibenz(a,h)anthracene	20	0.19	0.043	0.19	0.38	U
206-44-0	Fluoranthene	20	0.26	0.10	0.38	0.38	J
86-73-7	Fluorene	20	0.38	0.091	0.38	0.38	U
193-39-5	Indeno(1,2,3-cd)pyrene	20	0.076	0.061	0.076	0.38	U
91-57-6	2-Methylnaphthalene	20	0.38	0.10	0.38	0.38	U
91-20-3	Naphthalene	20	0.38	0.13	0.38	0.38	U
85-01-8	Phenanthrene	20	0.11	0.093	0.38	0.38	J
129-00-0	Pyrene	20	0.22	0.098	0.38	0.38	J

Internal Standard	Area	RT	% REC.	Ref. RT	Q
1,4-Dichlorobenzene-d4	165334	7.492	102	7.492	
Naphthalene-d8	648604	10.243	88	10.249	
Acenaphthene-d10	300196	14.358	83	14.364	
Phenanthrene-d10	504581	17.809	84	17.809	
Chrysene-d12	590602	21.463	98	21.469	
Perylene-d12	386535	23.113	82	23.118	

* Values outside of QC limits

Quantitation Report (QT Reviewed) Sample Calculation

Data Path : C:\msdchem\1\data\042213_339\
Data File : 1304314-01 20x.D
Acq On : 22 Apr 2013 18:14
Operator : JLB DA55244-0002
Sample : 1304314-01 20x Inst : 339
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 22 18:44:56 2013
Quant Method : C:\msdchem\1\methods\042213bna.M
Quant Title : 8270/625 BNA
QLast Update : Mon Apr 22 17:37:59 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.492	152	165334	5.00 ng/uL	#-0.02
21) Naphthalene-d8	10.243	136	648604	5.00 ng/uL	-0.02
43) Acenaphthene-d10	14.358	164	300196	5.00 ng/uL	-0.02
67) Phenanthrene-d10	17.809	188	504581	5.00 ng/uL	0.00
82) Chrysene-d12	21.463	240	590602	5.00 ng/uL	#-0.01
93) Perylene-d12	23.113	264	386535	5.00 ng/uL	#-0.01
System Monitoring Compounds					
4) 2-Fluorophenol	5.026	112	22245	0.70 ng/uL	-0.06
7) Phenol-d6	6.792	99	23415	0.62 ng/uL	-0.06
22) Nitrobenzene-d5	8.745	82	273	0.01 ng/uL	0.04
24) Decafluorobiphenyl	8.902	334	17958	0.35 ng/uL	-0.02
48) 2-Fluorobiphenyl	12.825	172	30342	0.37 ng/uL	-0.03
71) 2,4,6-Tribromophenol	16.246	330	6837	0.55 ng/uL	-0.03
79) o-Terphenyl	18.572	230	27887	0.42 ng/uL	-0.02
Target Compounds					Qvalue
2) N-Nitroso-dimethylamine	2.747	74	5061	0.25 ng/uL#	12
3) Pyridine	2.777	79	185	0.01 ng/uL#	14
5) Aniline	0.000		0	N.D.	
6) Benzaldehyde	7.801	105	247	0.20 ng/uL#	56
8) Phenol	0.000		0	N.D.	
9) Bis(2-chloroethyl)ether	0.000		0	N.D.	
10) 2-Chlorophenol	0.000		0	N.D.	
11) 1,3-Dichlorobenzene	0.000		0	N.D.	
12) 1,4-Dichlorobenzene	0.000		0	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) Bis(2-chloroisipropyl)...	0.000		0	N.D.	
15) Benzyl Alcohol	0.000		0	N.D.	
16) 2-Methylphenol	0.000		0	N.D.	
17) Acetophenone	0.000		0	N.D.	
18) Hexachloroethane	8.529	119	109	0.01 ng/uL#	3
19) 4-Methylphenol	0.000		0	N.D.	
20) N-Nitroso-di-n-propyla...	8.215	70	160	0.01 ng/uL#	1
23) Nitrobenzene	0.000		0	N.D.	
25) Isophorone	9.048	82	105	0.00 ng/uL#	58
26) 2-Chloroaniline	0.000		0	N.D.	
27) 2-Nitrophenol	0.000		0	N.D.	
28) 2,4-Dimethylphenol	0.000		0	N.D.	
29) Bis(2-chlorethoxy)methane	10.249	93	596	0.02 ng/uL#	1
30) 2,4-Dichlorophenol	0.000		0	N.D.	
31) Benzoic Acid	10.220	105	339	2.39 ng/uL#	11
32) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
33) Naphthalene	10.284	128	1205	0.01 ng/uL#	1
34) 4-Chloroaniline	0.000		0	N.D.	
35) 2,6-Dichlorophenol	0.000		0	N.D.	
36) Hexachlorobutadiene	0.000		0	N.D.	
37) Caprolactam	11.391	55	154	0.01 ng/uL#	21
38) 1,2-Bis(2-chloroethoxy...	0.000		0	N.D.	
39) 4-Chloro-3-methylphenol	0.000		0	N.D.	
40) 2-Methylnaphthalene	11.904	142	601	0.01 ng/uL#	1
41) 1-Methylnaphthalene	12.137	142	673	0.01 ng/uL#	47

Quantitation Report (QT Reviewed) Sample Calculation

Data Path : C:\msdchem\1\data\042213_339\
Data File : 1304314-01 20x.D
Acq On : 22 Apr 2013 18:14
Operator : JLB
Sample : 1304314-01 20x Inst : 339
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 22 18:44:56 2013
Quant Method : C:\msdchem\1\methods\042213bna.M
Quant Title : 8270/625 BNA
QLast Update : Mon Apr 22 17:37:59 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,3 Dinitrobenzene	14.020	168	55	0.00 ng/uL	100
44) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.	
45) Hexachlorocyclopentadiene	0.000		0	N.D.	
46) 2,4,6-Trichlorophenol	0.000		0	N.D.	
47) 2,4,5-Trichlorophenol	0.000		0	N.D.	
49) 2-Chloronaphthalene	13.431	162	200	0.00 ng/uL#	35
50) 1,1'-Biphenyl	0.000		0	N.D.	
51) 2-Nitroaniline	13.769	138	106	0.01 ng/uL#	10
52) Acenaphthylene	14.008	152	500	0.00 ng/uL#	55
53) 2,6-Dinitrotoluene	0.000		0	N.D.	
54) Dimethyl Phthalate	0.000		0	N.D.	
55) 3-Nitroaniline	0.000		0	N.D.	
56) Acenaphthene	14.434	153	484	0.01 ng/uL	92
57) 2,4-Dinitrophenol	0.000		0	N.D.	
58) Dibenzofuran	14.848	168	686	0.01 ng/uL#	52
59) 4-Nitrophenol	14.801	65	584	0.51 ng/uL#	6
60) 2,4-Dinitrotoluene	14.795	165	156	0.01 ng/uL#	17
61) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
62) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
63) Fluorene	15.675	166	683	0.01 ng/uL#	51
64) Diethyl Phthalate	15.565	149	2737	0.04 ng/uL#	88
65) 4-Chlorophenyl Phenyl ...	0.000		0	N.D.	
66) 4-Nitroaniline	0.000		0	N.D.	
68) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
69) N-Nitroso-diphenylamine	16.363	169	338	0.01 ng/uL#	26
70) 1,2-Diphenylhydrazine	16.293	182	147	0.01 ng/uL	78
72) 4-Bromophenyl Phenyl E...	0.000		0	N.D.	
73) Hexachlorobenzene	0.000		0	N.D.	
74) Atrazine	0.000		0	N.D.	
75) Pentachlorophenol	0.000		0	N.D.	
76) Phenanthrene	17.844	178	15967	0.15 ng/uL#	90
77) Anthracene	17.948	178	3928	0.04 ng/uL#	78
78) Carbazole	18.788	167	289	0.00 ng/uL#	33
80) Di-n-butyl Phthalate	18.957	149	3432	0.03 ng/uL#	88
81) Fluoroanthene	19.738	202	38214	0.34 ng/uL#	86
83) Benzidine	20.198	184	179	2.69 ng/uL#	1
84) Pyrene	20.035	202	33766	0.29 ng/uL#	85
85) Butyl Benzyl Phthalate	20.944	149	1062	0.02 ng/uL	91
86) Bis(2-ethylhexyl) adipate	21.020	129	1304	0.03 ng/uL#	100
87) Benzo(a)anthracene	21.451	228	22418	0.20 ng/uL#	80
88) 3,3'-Dichlorobenzidine	21.434	252	234	0.01 ng/uL#	19
89) Chrysene	21.486	228	19585	0.20 ng/uL#	88
90) Bis(2-ethylhexyl)phtha...	21.352	149	936	0.01 ng/uL	99
91) Dicyclohexyl Phthalate	21.556	149	1131	0.02 ng/uL#	100
92) Di-n-octyl Phthalate	22.168	149	1036	0.01 ng/uL#	1
94) Benzo(b)fluoroanthene	22.629	252	21099m	0.23 ng/uL	
95) Benzo(k)fluoranthene	22.646	252	11668m	0.14 ng/uL	
96) Benzo(a)pyrene	23.037	252	15435m	0.19 ng/uL	
97) Indeno(1,2,3-cd)pyrene	24.663	276	407	0.01 ng/uL	100
98) Dibdenz(a,h)anthracene	24.785	278	433	0.01 ng/uL#	60
99) Benzo(g,h,i)Perylene	25.164	276	6358m	0.11 ng/uL	

INITIAL CALIBRATION DATA (Continued)

USEPA-8270C

Sample Calculation

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304314

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Calibration: 3D22015

Calibration Date: 04/22/13 20:41

Instrument: 339

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.185664	5.283492	14.44388	0.0741443			CCC (30)	
Acenaphthylene	1.768671	5.916225	14.01975	7.629907E-02			15	
Anthracene	1.053065	2.937062	17.95263	4.011653E-02			15	
Benzo(a)anthracene	0.9361937	3.013168	21.45625	2.664035E-02			15	
Benzo(a)pyrene	1.039613	4.797422	23.04775	2.724653E-02			CCC (30)	
Benzo(b)fluoranthene	1.182231	7.277578	22.6405	0.0331963			15	
Benzo(k)fluoranthene	1.091303	6.529869	22.6755	3.275927E-02			15	
Benzo(g,h,i)perylene	0.7734255	10.27954	25.19775	5.106899E-02			15	
Chrysene	0.8309534	4.104971	21.4965	2.622317E-02			15	
Dibenz(a,h)anthracene	0.8401171	6.669722	24.75038	4.089085E-02			15	
Fluoranthene	1.099587	5.410839	19.74812	1.591413E-02			CCC (30)	
Fluorene	1.335947	4.857526	15.67875	6.363922E-02			15	
Indeno(1,2,3-cd)pyrene	0.9887393	7.495037	24.719	4.367728E-02			15	
2-Methylnaphthalene	0.6173173	4.540085	11.918	5.427702E-02			15	
Naphthalene	0.8256674	3.082629	10.2975	6.798052E-02			15	
Phenanthrene	1.023657	2.431187	17.855	3.596781E-02			15	
Pyrene	0.9804177	7.627923	20.04025	2.161513E-02			15	
2-Fluorophenol	0.9553335	4.742579	5.025625	0.6162255			15	
Phenol-d6	1.138118	5.617761	6.8055	0.3895884			15	
Nitrobenzene-d5	0.2824539	4.185498	8.67775	0.172938			15	
2-Fluorobiphenyl	1.37321	3.183765	12.836	8.778232E-02			15	
2,4,6-Tribromophenol	0.2018113	6.381811	16.253	8.942424E-02			15	
o-Terphenyl	0.6551156	3.126046	18.583	4.163036E-02			15	

Sample Calculation

INORGANIC ANALYSIS DATA SHEET

USEPA-6020A

DASS244-0002

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/17/13 17:30
Solids: 88.11
QC Batch: 1303582

SDG: 1304314
Project: USCG Atwater Facility
Laboratory ID: 1304314-01
Prepared: 04/19/13 07:00
Preparation: 3050B Digestion
Initial/Final: 0.5074 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	6.3	mg/kg dry wt.	0.016	0.050	0.10		04/22/13 11:52
7439-92-1	Lead, Total	100	430	mg/kg dry wt.	0.66	2.0	10		04/22/13 09:41

Sample Calculation

Sample Information

Sample ID: 1304314-01 DA55244-0002
Autosampler Position: 38
Sample Date/Time: Monday, April 22, 2013 09:41:39
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):
Number of Replicates: 3
Sample File: C:\Elandata\Sample\3D22002.sam
Method File: c:\elandata\Method\Trimatrix_DoD4.2_Solid_6020A_114.mth
Dataset File: C:\Elandata\DataSet\3D22002\1304314-01.030
Tuning File: C:\Elandata\Tuning\22APR2013_6020A_A.tun
Optimization File: C:\Elandata\Optimize\22APR2013_6020A.dac

X100

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Report Unit
⌈>	Ge	72	507476.685	507476.685				mg/L
⌊	As	75	1965.947	0.003	0.001980	0.000	4.415	mg/L
⌈	Pb	208	776455.315	1.198	0.043949	0.001	1.916	mg/L
⌊>	Bi	209	647952.830	647952.830				mg/L

QC Calculated Values

	Analyte	Mass	Int Std % Recovery
⌈>	Ge	71.922	98.188
⌊	As	74.922	
⌈	Pb	207.977	
⌊>	Bi	208.980	102.849

$0.043949 \times 100 \times \frac{50mL}{0.5074g} \times \frac{1}{0.8811}$

$\approx 433.1 mg/kg$

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Replicates

Repeat 1

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	515639.401	515639.401		mg/L
As	75	2058.202	0.003	0.002080	mg/L
Pb	208	760830.423	1.171	0.042982	mg/L
Bi	209	656761.044	656761.044		mg/L

Repeat 2

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	503848.554	503848.554		mg/L
As	75	1919.012	0.003	0.001833	mg/L
Pb	208	778787.044	1.208	0.044343	mg/L
Bi	209	644037.188	644037.188		mg/L

Repeat 3

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	502942.010	502942.010		mg/L
As	75	1910.628	0.003	0.001926	mg/L
Pb	208	780748.478	1.213	0.044522	mg/L
Bi	209	643059.381	643059.381		mg/L

00491

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**J. LOGAN**	**DATE:**	**MAY 14, 2013**
FROM:	**A. COGNETTI**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – PAH / METALS / PERCENT SOLIDS**
USCG ATWATER FACILITY
SAMPLE DELIVERY GROUP (SDG) - 1304363

SAMPLES: 1/Soil/PAH/Percent Solids

DASB-CF-04

2/Soil/Metals

DASB-CF-03 DASB-CF-04

OVERVIEW

The sample set for USCG Atwater Facility, SDG 1304363 consists of one (1) soil environmental sample analyzed for polynuclear aromatic hydrocarbons (PAHs) and percent solids. Two (2) soil environmental samples were also analyzed for the select metals arsenic and lead. No field duplicate pair is included within this SDG.

The samples were collected by Tetra Tech on April 19 and 23, 2013 and analyzed by TriMatrix Laboratories. USEPA SW 846 Method 8270C for PAHs and 6020A for metals and 3550C for percent solids analytical and reporting protocols were used. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Initial and Continuing Calibrations
* • Laboratory Blank Analyses
* • Surrogate Recoveries
* • Laboratory Control Sample Results
* • Matrix Spike / Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • ICP Interference Analysis
* • ICP Serial Dilution Results
* • Analyte Quantitation
* • Analyte Identification
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Additional Comments:

The following contaminant was detected in the continuing calibration blanks and method blank at the following maximum concentration:

Analyte	Maximum Concentration (mg/L)	Action Level (mg/kg)
Arsenic (1)	0.00042	0.21

(1) Maximum concentration detected in the continuing calibration blank (CCB 3) analyzed on April 25, 2013 @ 13:41.

An action level of 5X the maximum concentration has been established in order to evaluate sample data for blank contamination. Sample aliquot, percent solids and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No action was taken because the sample results were greater than the action level.

The nondetected results were reported to the laboratory reporting limit

Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other factors affecting data quality: Positive results less than the reporting limit (RL) were qualified as estimated, J, due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October 1999), EPA Functional Guidelines for Inorganic Data Review (October 2004), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (October 2010). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 02435	NSAMPLE	DASB-CF-03			DASB-CF-04		
SDG: 1304363	LAB_ID	1304363-01			1304363-02		
FRACTION: M	SAMP_DATE	4/19/2013			4/23/2013		
MEDIA: SOIL	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS				84.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ARSENIC		3.3			3.2		
LEAD		3.3			12		

PROJ_NO: 02435	NSAMPLE	DASB-CF-04		
SDG: 1304363	LAB_ID	1304363-02		
FRACTION: MISC	SAMP_DATE	4/23/2013		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	%		
	PCT_SOLIDS	84.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
PERCENT SOLIDS		84		

PROJ_NO: 02435	NSAMPLE	DASB-CF-04		
SDG: 1304363	LAB_ID	1304363-02		
FRACTION: PAH	SAMP_DATE	4/23/2013		
MEDIA: SOIL	QC_TYPE	NM		
	UNITS	MG/KG		
	PCT_SOLIDS	84.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
2-METHYLNAPHTHALENE		0.08	U	
ACENAPHTHENE		0.08	U	
ACENAPHTHYLENE		0.08	U	
ANTHRACENE		0.08	U	
BENZO(A)ANTHRACENE		0.067	J	P
BENZO(A)PYRENE		0.07	J	P
BENZO(B)FLUORANTHENE		0.099		
BENZO(G,H,I)PERYLENE		0.028	J	P
BENZO(K)FLUORANTHENE		0.052	J	P
CHRYSENE		0.07	J	P
DIBENZO(A,H)ANTHRACENE		0.08	U	
FLUORANTHENE		0.13		
FLUORENE		0.08	U	
INDENO(1,2,3-CD)PYRENE		0.02	J	P
NAPHTHALENE		0.08	U	
PHENANTHRENE		0.06	J	P
PYRENE		0.13		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304363
Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility
Matrix: Soil Laboratory ID: 1304363-02 File ID: 1304363-02 4x.D
Sampled: 04/23/13 11:10 Prepared: 04/24/13 07:58 Analyzed: 04/24/13 12:56
Solids: 83.67 Preparation: 3550C Sonication Extract Initial/Final: 29.4 g / 1 mL
QC Batch: 1303708 Sequence: 3D25003 Calibration: 3D22015 Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	4	0.080	0.022	0.080	0.080	U
208-96-8	Acenaphthylene	4	0.080	0.020	0.080	0.080	U
120-12-7	Anthracene	4	0.080	0.019	0.080	0.080	U
56-55-3	Benzo(a)anthracene	4	0.067	0.013	0.040	0.080	J
50-32-8	Benzo(a)pyrene	4	0.070	0.011	0.040	0.080	J
205-99-2	Benzo(b)fluoranthene	4	0.099	0.0091	0.040	0.080	
207-08-9	Benzo(k)fluoranthene	4	0.052	0.0093	0.040	0.080	J
191-24-2	Benzo(g,h,i)perylene	4	0.028	0.0090	0.040	0.080	J
218-01-9	Chrysene	4	0.070	0.019	0.080	0.080	J
53-70-3	Dibenz(a,h)anthracene	4	0.040	0.0091	0.040	0.080	U
206-44-0	Fluoranthene	4	0.13	0.021	0.080	0.080	
86-73-7	Fluorene	4	0.080	0.019	0.080	0.080	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	0.020	0.013	0.016	0.080	J
91-57-6	2-Methylnaphthalene	4	0.080	0.022	0.080	0.080	U
91-20-3	Naphthalene	4	0.080	0.027	0.080	0.080	U
85-01-8	Phenanthrene	4	0.060	0.020	0.080	0.080	J
129-00-0	Pyrene	4	0.13	0.021	0.080	0.080	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
2-Fluorophenol	0.813	0.672	83	35 - 105	D
Phenol-d6	0.813	0.693	85	40 - 100	D
Nitrobenzene-d5	0.407	0.346	85	35 - 100	D
2-Fluorobiphenyl	0.407	0.340	84	45 - 105	D
2,4,6-Tribromophenol	0.817	0.592	72	35 - 125	D
o-Terphenyl	0.411	0.337	82	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	153586	7.375	162650	7.492	
Naphthalene-d8	639572	10.126	734651	10.249	
Acenaphthene-d10	334404	14.241	362632	14.364	
Phenanthrene-d10	593001	17.704	603828	17.809	
Chrysene-d12	576755	21.393	601578	21.469	
Perylene-d12	280188	23.019	473861	23.118	

* Values outside of QC limits

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-CF-03

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/19/13 09:45
Solids: 0.00
QC Batch: 1303713

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1304363-01
Prepared: 04/24/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5058 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	3.3	mg/kg dry wt.	0.016	0.050	0.10		04/25/13 13:21
7439-92-1	Lead, Total	1	3.3	mg/kg dry wt.	0.0066	0.020	0.10		04/25/13 13:21

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/23/13 11:10
Solids: 83.67
QC Batch: 1303713

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1304363-02
Prepared: 04/24/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5306 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	3.2	mg/kg dry wt.	0.015	0.047	0.094		04/25/13 13:36
7439-92-1	Lead, Total	5	12	mg/kg dry wt.	0.031	0.094	0.47		04/25/13 13:53

INORGANIC ANALYSIS DATA SHEET
USEPA-3550C

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/23/13 11:10
Solids: 83.67
QC Batch: 1303738

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1304363-02
Prepared: 04/25/13 09:12
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
	Percent Solids	1	84	%	0.1	0.1	0.1		04/25/13 09:12

APPENDIX C

SUPPORT DOCUMENTATION

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Sample Receipt and Login -- Work Order: 1304363

TriMatrix Laboratories received the cooler(s) for this work order on April 23, 2013, at 18:45pm. Receiving documents include field chain-of-custody (COC) record(s), sample receipt form(s), and TriMatrix Courier shipping document(s). The condition of the custody seals, the type and location of the coolant, and the temperatures recorded for each cooler are presented on the TriMatrix *Sample Receiving / Log-In Checklist* provided in section A of this package. The receipt temperature of the samples was determined by using an infrared thermometer to record the temperature of three random samples of varying container types and the accompanying temperature blank, if present.

Samples were scheduled for the analyses listed on the corresponding COC form. Field IDs and assigned laboratory identifiers are presented in the table below.

Field Sample Name	Laboratory Sample ID	Matrix	Date Sampled
DASB-CF-03	1304363-01	Soil	4/19/2013
DASB-CF-04	1304363-02	Soil	4/23/2013

No administrative issues were encountered during the receipt and analysis of this work order.

This report shall not be reproduced except in full, without written authorization of TriMatrix Laboratories, Inc.
Individual sample results relate only to the sample tested.

TRIMATRIX LABORATORIES

SDG CASE NARRATIVE

Attachment 2
Statement of Data Qualifications

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

Sample/Analyte:		
	1303708-BS1	Naphthalene
	1304363-02 DASB-CF-04	Benzo(b)fluoranthene
	1304363-02 DASB-CF-04	Benzo(k)fluoranthene
	3D22051-CAL1	Benzo(g,h,i)perylene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample/Analyte: 1304363-02 DASB-CF-04

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Individual sample results relate only to the sample tested.

5560 Corporate Exchange Court SE ▲ Grand Rapids, MI 49512 ▲ Phone: 616.975.4500 ▲ Fax: 616.940.7140

R-1307560 Part 4

TETRA TECH NUS, INC. (24-21) CHAIN OF CUSTODY | NUMBER № 2289 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02435	USCG - Atwater	Joe Logan	4129217231	TriMatrix / Gary Wood
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jim Goerdt	PHONE NUMBER: 4124430244	ADDRESS: 5560 Corp Exchange Ct.
		CARRIER/WAYBILL NUMBER: TriMatrix Courier		CITY, STATE: Grand Rapids, MI

STANDARD TAT ☐
RUSH TAT ☐
☒ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: 4°C 4°C

TYPE OF ANALYSIS: Pb, As | Pb, As, PAHs

DATE YEAR 2013	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS (#17)	Pb, As	Pb, As, PAHs							COMMENTS
4/19	945	DASB-CF-03	-	-	-	SO	G	1	1						-	01	sand
4/23	1110	DASB-CF-04	-	-	-	SO	G	1		1					-	02	top soil

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	4-23-13	1210	1. RECEIVED BY	4/23/13	1210
2. RELINQUISHED BY	4/23/13	1425	2. RECEIVED BY	4-23-13	1425
3. RELINQUISHED BY	4-23-13	1845	3. RECEIVED BY D. Nardin	4-23-13	1845

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: TETRA TECH
Receipt Record Page/Line #: 24-21
Work Order #: 1304363
New / Add To
Project Chemist: GLW
Sample #s

Recorded by (initials/date): JN 4-23-13

☐ Cooler ☐ Box ☐ Other ____ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
TTV2002	2133	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☑ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container
		☐ None; ☐ Present / Intact; ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB); ☐ 1 Container

Cooler #	Recorded °C	Correction Factor °C	Actual °C
TTV2002	Temp Blank:	0	4.6
	TB location: Representative / Not Representative		
	1 4.6	0	4.6
	2 4.7	0	4.7
	3		
	Average °C		4.7
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
Cooler #	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
Cooler #	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
Cooler #	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
	Average °C		
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	■	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☐	☑	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other TETRA TECH

COC ID Numbers: 2289

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	■	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐		Completed Sample Preservation Verification Form?
☑	■		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	■	Sample ID matches COC?
☑	■	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	■	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	■	☑	Broken containers/lids?
	■	☑	Missing or incomplete labels?
	■	☑	Illegible information on labels?
	■	☑	Low volume received?
	■	☑	Inappropriate or non-TriMatrix containers received?
☑	■	☐	VOC vials / TOX containers have headspace?
☑	■	☐	Extra sample locations / containers not listed on COC?

Notes

Rush

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
JN 4-23-13	4-23-13	Yes / No

HOLDTIME

SDG 1304171

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/25/2013	1	1	2
M	MG/KG	DASB-CF-03	1304363-01	NM	4/19/2013	4/24/2013	4/25/2013	5	1	6
M	MG/KG	DASB-CF-02	1304314-05	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB-CF-01	1304314-04	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/16/2013	4	1	5
M	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
M	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/15/2013	4/16/2013	5	1	6
M	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
M	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
M	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
M	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
M	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/15/2013	1	3	4
PCS	%	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PCS	%	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PCS	%	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PCS	%	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PCS	%	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PCS	%	DASB-CF-04	1304363-02	NM	4/23/2013	4/25/2013	4/25/2013	2	0	2
PCS	%	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCS	%	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PCS	%	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB236-0305	1304212-10	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB237-0305	1304212-11	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-01	1304171-07	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/KG	DASB-CF-04	1304363-02	NM	4/23/2013	4/24/2013	4/24/2013	1	0	1
PAH	MG/KG	DASB234-0305	1304212-08	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB233-0305	1304212-07	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB232-0305	1304212-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASB231-0305	1304208-04	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB230-0305	1304208-03	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB229-0305	1304208-02	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB228-0305	1304208-01	NM	4/11/2013	4/15/2013	4/15/2013	4	0	4
PAH	MG/KG	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASB226-0507	1304185-10	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS214-0002	1304171-09	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS217-0002	1304171-12	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS220-0002	1304171-15	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/10/2013	4/11/2013	4/11/2013	1	0	1
PAH	MG/KG	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/KG	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/KG	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/KG	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS219-0002	1304171-14	NM	4/10/2013	4/11/2013	4/12/2013	1	1	2
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/12/2013	4/12/2013	4/12/2013	0	0	0
PAH	MG/KG	DASBFD-04	1304208-05	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASBFD-05	1304208-06	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/KG	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/KG	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS210-0002	1304212-03	NM	4/15/2013	4/15/2013	4/15/2013	0	0	0
PAH	MG/KG	DASS212-0002	1304212-05	NM	4/12/2013	4/15/2013	4/15/2013	3	0	3
PAH	MG/KG	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/KG	DASB-FD-03	1304185-12	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/KG	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS216-0002	1304171-11	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS215-0002	1304171-10	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS214-0002	1304171-09	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS213-0002	1304171-08	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASS218-0002	1304171-13	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS209-0002	1304212-02	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS223-0002	1304171-18	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS208-0002	1304212-01	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS211-0002	1304212-04	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASS219-0002	1304171-14	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS220-0002	1304171-15	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASS222-0002	1304171-17	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS244-0002	1304314-01	NM	4/17/2013	4/19/2013	4/22/2013	2	3	5
PAH	MG/L	DASS245-0002	1304314-02	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS246-0002	1304314-03	NM	4/17/2013	4/19/2013	4/19/2013	2	0	2
PAH	MG/L	DASS207-0002	1304185-07	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB239-0305	1304171-02	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS221-0002	1304171-16	NM	4/11/2013	4/11/2013	4/11/2013	0	0	0
PAH	MG/L	DASB-CF-04	1304363-02	NM	4/24/2013	4/24/2013	4/24/2013	0	0	0
PAH	MG/L	DASB224-0507	1304185-08	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB225-0507	1304185-09	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB227-0507	1304185-11	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB234-0305	1304212-08	NM	4/16/2013	4/15/2013	4/16/2013	-1	1	0
PAH	MG/L	DASB235-0305	1304212-09	NM	4/12/2013	4/15/2013	4/16/2013	3	1	4
PAH	MG/L	DASB238-0305	1304171-01	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASB240-0305	1304171-03	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB241-0305	1304171-04	NM	4/9/2013	4/11/2013	4/12/2013	2	1	3
PAH	MG/L	DASB243-0305	1304171-06	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2
PAH	MG/L	DASS206-0002	1304185-06	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PAH	MG/L	DASB-FD-01	1304171-07	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASB-FD-02	1304171-19	NM	4/12/2013	4/11/2013	4/12/2013	-1	1	0
PAH	MG/L	DASS201-0002	1304185-01	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS202-0002	1304185-02	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS203-0002	1304185-03	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS204-0002	1304185-04	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASS205-0002	1304185-05	NM	4/11/2013	4/12/2013	4/12/2013	1	0	1
PAH	MG/L	DASB242-0305	1304171-05	NM	4/9/2013	4/11/2013	4/11/2013	2	0	2

STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was performed on this sample for the analyte(s) listed below in accordance with the TriMatrix Manual Integration SOP. All necessary documentation, including the signed review, is included in the raw data section of the data package.

Analysis: USEPA-8270C

1303708-BS1	Naphthalene
1304363-02 DASB-CF-04	Benzo(b)fluoranthene
1304363-02 DASB-CF-04	Benzo(k)fluoranthene
3D22051-CAL1	Benzo(g,h,i)perylene

Qualification: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample/Analyte: 1304363-02 DASB-CF-04

SAMPLE ID SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

SDG: 1304363

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASB-CF-04	1304363-02

HOLDING TIME SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Method: Semivolatile Organic Compounds by EPA Method 8270C

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASB-CF-04	04/23/13	04/23/13		04/24/13	1	14	04/24/13	0	40	

SAMPLE ID SUMMARY

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASB-CF-03	1304363-01
DASB-CF-04	1304363-02

HOLDING TIME SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Total Metals

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASB-CF-03	04/19/13	04/23/13		04/24/13	5	NA	04/25/13	6	180	
DASB-CF-03	04/19/13	04/23/13		04/24/13	5	NA	04/25/13	6	180	
DASB-CF-04	04/23/13	04/23/13		04/24/13	1	NA	04/25/13	2	180	
DASB-CF-04	04/23/13	04/23/13		04/24/13	1	NA	04/25/13	2	180	

SAMPLE ID SUMMARY

USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Client Sample Id:	Lab Sample Id:
DASB-CF-04	1304363-02

HOLDING TIME SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

Analyte: Percent Solids

Sample Name	Date Collected	Date Received	Date Leached	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
DASB-CF-04	04/23/13	04/23/13		04/25/13	2	NA	04/25/13	2	14	

INITIAL CALIBRATION STANDARDS
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D22051

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
3030363	dftpp tune	3D22051-TUN1	dft0422f.D	04/22/13 11:52
3040641	10ppm BNA	3D22051-CAL5	10c0422c.D	04/22/13 12:44
3040050	0.5ppm BNA	3D22051-CAL1	05bna0422.D	04/22/13 13:16
3040053	1ppm BNA	3D22051-CAL2	1bna0422.D	04/22/13 13:50
3040055	2ppm BNA	3D22051-CAL3	2bna0422.D	04/22/13 14:23
3040057	5ppm BNA	3D22051-CAL4	5bna0422.D	04/22/13 14:56
3040061	15ppm BNA	3D22051-CAL6	15bna0422.D	04/22/13 15:29
3040063	20ppm BNA	3D22051-CAL7	20bna0422.D	04/22/13 16:01
3040064	25ppm BNA	3D22051-CAL8	25bna0422.D	04/22/13 16:34
3040702	10ppm BNA scv	3D22051-SCV1	scvbna0422.D	04/22/13 17:08

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D22051-TUN1
Injection Date: 04/22/13
Sequence: 3D22051

SDG: 1304363
Project: USCG Atwater Facility
Lab File ID: dft0422f.D
Injection Time: 11:52
Calibration: 3D22015
Instrument ID: 339

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	50.4	PASS
68	Less than 2% of 69	0	PASS
69	Less than 200% of 198	39.6	PASS
70	Less than 2% of 69	0.751	PASS
127	40 - 60% of 198	41.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.73	PASS
275	10 - 30% of 198	27.4	PASS
365	1.0001 - 200% of 198	4.42	PASS
441	0.0001 - 99.9999% of 443	82.2	PASS
442	40.0001 - 200% of 198	76.9	PASS
443	17 - 23% of 442	19.8	PASS

INITIAL CALIBRATION DATA (Continued)
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Calibration: 3D22015

SDG: 1304363
Project: USCG Atwater Facility
Calibration Date: 04/22/13 20:41
Instrument: 339

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.185664	5.283492	14.44388	0.0741443			CCC (30)	
Acenaphthylene	1.768671	5.916225	14.01975	7.629907E-02			15	
Anthracene	1.053065	2.937062	17.95263	4.011653E-02			15	
Benzo(a)anthracene	0.9361937	3.013168	21.45625	2.664035E-02			15	
Benzo(a)pyrene	1.039613	4.797422	23.04775	2.724653E-02			CCC (30)	
Benzo(b)fluoranthene	1.182231	7.277578	22.6405	0.0331963			15	
Benzo(k)fluoranthene	1.091303	6.529869	22.6755	3.275927E-02			15	
Benzo(g,h,i)perylene	0.7734255	10.27954	25.19775	5.106899E-02			15	
Chrysene	0.8309534	4.104971	21.4965	2.622317E-02			15	
Dibenz(a,h)anthracene	0.8401171	6.669722	24.75038	4.089085E-02			15	
Fluoranthene	1.099587	5.410839	19.74812	1.591413E-02			CCC (30)	
Fluorene	1.335947	4.857526	15.67875	6.363922E-02			15	
Indeno(1,2,3-cd)pyrene	0.9887393	7.495037	24.719	4.367728E-02			15	
2-Methylnaphthalene	0.6173173	4.540085	11.918	5.427702E-02			15	
Naphthalene	0.8256674	3.082629	10.2975	6.798052E-02			15	
Phenanthrene	1.023657	2.431187	17.855	3.596781E-02			15	
Pyrene	0.9804177	7.627923	20.04025	2.161513E-02			15	
2-Fluorophenol	0.9553335	4.742579	5.025625	0.6162255			15	
Phenol-d6	1.138118	5.617761	6.8055	0.3895884			15	
Nitrobenzene-d5	0.2824539	4.185498	8.67775	0.172938			15	
2-Fluorobiphenyl	1.37321	3.183765	12.836	8.778232E-02			15	
2,4,6-Tribromophenol	0.2018113	6.381811	16.253	8.942424E-02			15	
o-Terphenyl	0.6551156	3.126046	18.583	4.163036E-02			15	

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Laboratory ID: 3D22051-SCV1
Sequence: 3D22051

SDG: 1304363
Project: USCG Atwater Facility
Standard ID: 3040702
Calibration: 3D22015

Analyte	Expected (ug/mL)	Found (ug/mL)	% Rec.	QC Limit
Acenaphthene	10.0	9.03	90	80-120
Acenaphthylene	10.0	9.32	93	80-120
Anthracene	10.0	8.93	89	80-120
Benzo(a)anthracene	10.0	8.81	88	80-120
Benzo(a)pyrene	10.0	8.80	88	80-120
Benzo(b)fluoranthene	10.0	8.60	86	80-120
Benzo(k)fluoranthene	10.0	8.32	83	80-120
Benzo(g,h,i)perylene	10.0	8.62	86	80-120
Chrysene	10.0	9.40	94	80-120
Dibenz(a,h)anthracene	10.0	8.37	84	80-120
Fluoranthene	10.0	8.41	84	80-120
Fluorene	10.0	8.64	86	80-120
Indeno(1,2,3-cd)pyrene	10.0	8.40	84	80-120
2-Methylnaphthalene	10.0	8.89	89	80-120
Naphthalene	10.0	9.29	93	80-120
Phenanthrene	10.0	9.00	90	80-120
Pyrene	10.0	8.73	87	80-120

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D25003

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	3D25003-TUN1	dft0424a.D	04/24/13 10:10
Calibration Check	3D25003-CCV1	10bna0424a.D	04/24/13 10:29
Blank	1303708-BLK1	1303708-blk1.D	04/24/13 11:02
LCS	1303708-BS1	1303708-bs1.D	04/24/13 11:35
DASB-CF-04	1304363-02	1304363-02 4x.D	04/24/13 12:56

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D25003-TUN1
Injection Date: 04/24/13
Sequence: 3D25003

SDG: 1304363
Project: USCG Atwater Facility
Lab File ID: dft0424a.D
Injection Time: 10:10
Instrument ID: 339

m/z	Ion Abundance Criteria	% Relative Abundance	
51	30 - 60% of 198	48.2	PASS
68	Less than 2% of 69	0	PASS
69	Less than 200% of 198	38.3	PASS
70	Less than 2% of 69	0.544	PASS
127	40 - 60% of 198	40.7	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.68	PASS
275	10 - 30% of 198	27.7	PASS
365	1.0001 - 200% of 198	4.4	PASS
441	0.0001 - 99.9999% of 443	85.8	PASS
442	40.0001 - 200% of 198	80.8	PASS
443	17 - 23% of 442	20.5	PASS

CONTINUING CALIBRATION CHECK
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Lab Sample ID: 3D25003-CCV1
Injection Date: 04/24/13
Calibration Date: 04/22/13 20:41
Sequence: 3D25003

SDG: 1304363
Project: USCG Atwater Facility
Lab File ID: 10bna0424a.D
Injection Time: 10:29
Calibration: 3D22015
Instrument ID: 339

Analyte	Type	CONC. (ug/mL)		Response Factor			% Diff. / Drift	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	10.0	9.86	1.185664	1.166846		-1.6	20
Acenaphthylene	A	10.0	9.91	1.768671	1.755826		-0.7	20
Anthracene	A	10.0	9.75	1.053065	1.028739		-2.3	20
Benzo(a)anthracene	A	10.0	9.67	0.9361937	0.8998013		-3.9	20
Benzo(a)pyrene	A	10.0	10.1	1.039613	1.054759		1.5	20
Benzo(b)fluoranthene	A	10.0	9.62	1.182231	1.138969		-3.7	20
Benzo(k)fluoranthene	A	10.0	9.81	1.091303	1.085857		-0.5	20
Benzo(g,h,i)perylene	A	10.0	10.0	0.7734255	0.7508063		-2.9	20
Chrysene	A	10.0	9.67	0.8309534	0.8044774		-3.2	20
Dibenz(a,h)anthracene	A	10.0	10.4	0.8401171	0.8483935		1.0	20
Fluoranthene	A	10.0	9.38	1.099587	1.028482		-6.5	20
Fluorene	A	10.0	9.65	1.335947	1.293336		-3.2	20
Indeno(1,2,3-cd)pyrene	A	10.0	10.2	0.9887393	0.9819777		-0.7	20
2-Methylnaphthalene	A	10.0	9.96	0.6173173	0.6194861		0.4	20
Naphthalene	A	10.0	9.93	0.8256674	0.8231597		-0.3	20
Phenanthrene	A	10.0	9.92	1.023657	1.015601		-0.8	20
Pyrene	A	10.0	10.8	0.9804177	1.03886		6.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk
* Values outside of QC limits

QC BATCH SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303708 QC Batch Matrix: Soil

Preparation: 3550C Sonication Extraction

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303708-BLK1	04/24/13 07:58	
LCS	1303708-BS1	04/24/13 07:58	
DASB-CF-04	1304363-02	04/24/13 07:58	DOD PAHs

METHOD BLANK DATA SHEET
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303708-BLK1 File ID: 1303708-blk1.D

Prepared: 04/24/13 07:58 Analyzed: 04/24/13 11:02

Preparation: 3550C Sonication Extract Initial/Final: 30.1 g / 1 mL

QC Batch: 1303708 Sequence: 3D25003 Calibration: 3D22015 Instrument: 339

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.017	mg/kg wet	0.0046	0.017	0.017	U
208-96-8	Acenaphthylene	0.017	mg/kg wet	0.0042	0.017	0.017	U
120-12-7	Anthracene	0.017	mg/kg wet	0.0040	0.017	0.017	U
56-55-3	Benzo(a)anthracene	0.0083	mg/kg wet	0.0028	0.0083	0.017	U
50-32-8	Benzo(a)pyrene	0.0083	mg/kg wet	0.0023	0.0083	0.017	U
205-99-2	Benzo(b)fluoranthene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
207-08-9	Benzo(k)fluoranthene	0.0083	mg/kg wet	0.0020	0.0083	0.017	U
191-24-2	Benzo(g,h,i)perylene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
218-01-9	Chrysene	0.017	mg/kg wet	0.0039	0.017	0.017	U
53-70-3	Dibenz(a,h)anthracene	0.0083	mg/kg wet	0.0019	0.0083	0.017	U
206-44-0	Fluoranthene	0.017	mg/kg wet	0.0045	0.017	0.017	U
86-73-7	Fluorene	0.017	mg/kg wet	0.0040	0.017	0.017	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0033	mg/kg wet	0.0027	0.0033	0.017	U
91-57-6	2-Methylnaphthalene	0.017	mg/kg wet	0.0046	0.017	0.017	U
91-20-3	Naphthalene	0.017	mg/kg wet	0.0056	0.017	0.017	U
85-01-8	Phenanthrene	0.017	mg/kg wet	0.0041	0.017	0.017	U
129-00-0	Pyrene	0.017	mg/kg wet	0.0043	0.017	0.017	U

System Monitoring Compound	Added (mg/kg wet)	Conc. (mg/kg wet)	% REC	QC Limits	Q
2-Fluorophenol	0.664	0.599	90	35 - 105	
Phenol-d6	0.664	0.591	89	40 - 100	
Nitrobenzene-d5	0.332	0.277	83	35 - 100	
2-Fluorobiphenyl	0.332	0.280	84	45 - 105	
2,4,6-Tribromophenol	0.668	0.518	78	35 - 125	
o-Terphenyl	0.336	0.291	87	30 - 125	

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	164317	7.393	162650	7.492	
Naphthalene-d8	685643	10.121	734651	10.249	
Acenaphthene-d10	345495	14.23	362632	14.364	
Phenanthrene-d10	603493	17.698	603828	17.809	
Chrysene-d12	682228	21.393	601578	21.469	
Perylene-d12	490874	23.019	473861	23.118	

SURROGATE STANDARD RECOVERY AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D25003

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Lab Sample Id Surrogate Compound Name	RT	Calibration Mean RT	RT Diff	RT Diff Limit	% Recovery	Recovery Limits	Q
Calibration Check (3D25003-CCV1)	Lab File ID: 10bna0424a.D Analyzed: 04/24/13 10:29						
2-Fluorophenol	4.91	5.03	-0.12	+/-1.0	95	80 - 120	
Phenol-d6	6.72	6.81	-0.09	+/-1.0	100	80 - 120	
Nitrobenzene-d5	8.56	8.68	-0.11	+/-1.0	96	80 - 120	
2-Fluorobiphenyl	12.72	12.84	-0.12	+/-1.0	96	80 - 120	
2,4,6-Tribromophenol	16.14	16.25	-0.12	+/-1.0	90	80 - 120	
o-Terphenyl	18.50	18.58	-0.09	+/-1.0	97	80 - 120	
Blank (1303708-BLK1)	Lab File ID: 1303708-blk1.IAnalyzed: 04/24/13 11:02						
2-Fluorophenol	5.06	5.03	0.04	+/-1.0	90	35 - 105	
Phenol-d6	6.75	6.81	-0.06	+/-1.0	89	40 - 100	
Nitrobenzene-d5	8.55	8.68	-0.13	+/-1.0	83	35 - 100	
2-Fluorobiphenyl	12.71	12.84	-0.13	+/-1.0	84	45 - 105	
2,4,6-Tribromophenol	16.12	16.25	-0.13	+/-1.0	78	35 - 125	
o-Terphenyl	18.49	18.58	-0.09	+/-1.0	87	30 - 125	
LCS (1303708-BS1)	Lab File ID: 1303708-bs1.DAnalyzed: 04/24/13 11:35						
2-Fluorophenol	5.06	5.03	0.04	+/-1.0	87	35 - 105	
Phenol-d6	6.75	6.81	-0.05	+/-1.0	85	40 - 100	
Nitrobenzene-d5	8.56	8.68	-0.12	+/-1.0	77	35 - 100	
2-Fluorobiphenyl	12.71	12.84	-0.12	+/-1.0	76	45 - 105	
2,4,6-Tribromophenol	16.14	16.25	-0.12	+/-1.0	71	35 - 125	
o-Terphenyl	18.49	18.58	-0.09	+/-1.0	82	30 - 125	
DASB-CF-04 (1304363-02)	Lab File ID: 1304363-02 4x.Analyzed: 04/24/13 12:56						
2-Fluorophenol	4.97	5.03	-0.06	+/-1.0	83	35 - 105	
Phenol-d6	6.72	6.81	-0.09	+/-1.0	85	40 - 100	
Nitrobenzene-d5	8.54	8.68	-0.14	+/-1.0	85	35 - 100	
2-Fluorobiphenyl	12.71	12.84	-0.12	+/-1.0	84	45 - 105	
2,4,6-Tribromophenol	16.12	16.25	-0.13	+/-1.0	72	35 - 125	
o-Terphenyl	18.49	18.58	-0.09	+/-1.0	82	30 - 125	

LCS / LCS DUPLICATE RECOVERY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1303708-BS1
Preparation: 3550C Sonication Extraction
Initial/Final: 29.5 g / 1 mL
Sequence: 3D25003

QC Batch: 1303708

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Acenaphthene	0.339	0.283	84	45 - 110	mg/kg wet
Acenaphthylene	0.339	0.291	86	45 - 105	mg/kg wet
Anthracene	0.339	0.287	85	55 - 105	mg/kg wet
Benzo(a)anthracene	0.339	0.292	86	50 - 110	mg/kg wet
Benzo(a)pyrene	0.339	0.287	85	50 - 110	mg/kg wet
Benzo(b)fluoranthene	0.339	0.276	81	45 - 115	mg/kg wet
Benzo(k)fluoranthene	0.339	0.283	84	45 - 125	mg/kg wet
Benzo(g,h,i)perylene	0.339	0.336	99	40 - 125	mg/kg wet
Chrysene	0.339	0.299	88	55 - 110	mg/kg wet
Dibenz(a,h)anthracene	0.339	0.333	98	40 - 125	mg/kg wet
Fluoranthene	0.339	0.296	87	55 - 115	mg/kg wet
Fluorene	0.339	0.280	83	50 - 110	mg/kg wet
Indeno(1,2,3-cd)pyrene	0.339	0.332	98	40 - 120	mg/kg wet
2-Methylnaphthalene	0.339	0.285	84	45 - 105	mg/kg wet
Naphthalene	0.339	0.286	84	40 - 105	mg/kg wet
Phenanthrene	0.339	0.299	88	50 - 110	mg/kg wet
Pyrene	0.339	0.332	98	45 - 125	mg/kg wet

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

INTERNAL STANDARD AREA AND RT SUMMARY
USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sequence: 3D25003

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D22015
Instrument: 339

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (3D25003-CCV1)			Lab File ID: 10bna0424a.D			Analyzed: 04/24/13 10:29			
1,4-Dichlorobenzene-d4	196122	7.375	162650	7.492	121	50 - 200	-0.1170	+/-0.50	
Naphthalene-d8	803725	10.132	734651	10.249	109	50 - 200	-0.1170	+/-0.50	
Acenaphthene-d10	424836	14.247	362632	14.364	117	50 - 200	-0.1170	+/-0.50	
Phenanthrene-d10	714739	17.704	603828	17.809	118	50 - 200	-0.1050	+/-0.50	
Chrysene-d12	710992	21.399	601578	21.469	118	50 - 200	-0.0700	+/-0.50	
Perylene-d12	545989	23.019	473861	23.118	115	50 - 200	-0.0990	+/-0.50	
Blank (1303708-BLK1)			Lab File ID: 1303708-blk1.D			Analyzed: 04/24/13 11:02			
1,4-Dichlorobenzene-d4	164317	7.393	162650	7.492	101	50 - 200	-0.0990	+/-0.50	
Naphthalene-d8	685643	10.121	734651	10.249	93	50 - 200	-0.1280	+/-0.50	
Acenaphthene-d10	345495	14.23	362632	14.364	95	50 - 200	-0.1340	+/-0.50	
Phenanthrene-d10	603493	17.698	603828	17.809	100	50 - 200	-0.1110	+/-0.50	
Chrysene-d12	682228	21.393	601578	21.469	113	50 - 200	-0.0760	+/-0.50	
Perylene-d12	490874	23.019	473861	23.118	104	50 - 200	-0.0990	+/-0.50	
LCS (1303708-BS1)			Lab File ID: 1303708-bs1.D			Analyzed: 04/24/13 11:35			
1,4-Dichlorobenzene-d4	164475	7.399	162650	7.492	101	50 - 200	-0.0930	+/-0.50	
Naphthalene-d8	700630	10.132	734651	10.249	95	50 - 200	-0.1170	+/-0.50	
Acenaphthene-d10	362500	14.247	362632	14.364	100	50 - 200	-0.1170	+/-0.50	
Phenanthrene-d10	621503	17.704	603828	17.809	103	50 - 200	-0.1050	+/-0.50	
Chrysene-d12	647478	21.393	601578	21.469	108	50 - 200	-0.0760	+/-0.50	
Perylene-d12	500507	23.019	473861	23.118	106	50 - 200	-0.0990	+/-0.50	
DASB-CF-04 (1304363-02)			Lab File ID: 1304363-02 4x.D			Analyzed: 04/24/13 12:56			
1,4-Dichlorobenzene-d4	153586	7.375	162650	7.492	94	50 - 200	-0.1170	+/-0.50	
Naphthalene-d8	639572	10.126	734651	10.249	87	50 - 200	-0.1230	+/-0.50	
Acenaphthene-d10	334404	14.241	362632	14.364	92	50 - 200	-0.1230	+/-0.50	
Phenanthrene-d10	593001	17.704	603828	17.809	98	50 - 200	-0.1050	+/-0.50	
Chrysene-d12	576755	21.393	601578	21.469	96	50 - 200	-0.0760	+/-0.50	
Perylene-d12	280188	23.019	473861	23.118	59	50 - 200	-0.0990	+/-0.50	

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D25021

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D25011
Instrument: 114

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	3D25021-CAL1	3d25021-001	04/25/13 12:23
Cal Standard	3D25021-CAL2	3d25021-002	04/25/13 12:26
Cal Standard	3D25021-CAL3	3d25021-003	04/25/13 12:29
Cal Standard	3D25021-CAL4	3d25021-004	04/25/13 12:32
Cal Standard	3D25021-CAL5	3d25021-005	04/25/13 12:35
Cal Standard	3D25021-CAL6	3d25021-006	04/25/13 12:37
Secondary Cal Check	3D25021-SCV1	3d25021-007	04/25/13 12:59
Calibration Check	3D25021-CCV1	3d25021-007	04/25/13 12:59
Calibration Blank	3D25021-CCB1	3d25021-008	04/25/13 13:02
Interference Check A	3D25021-IFA1	3d25021-009	04/25/13 13:04
Interference Check B	3D25021-IFB1	3d25021-010	04/25/13 13:07
Calibration Check	3D25021-CCV2	3d25021-011	04/25/13 13:10
Calibration Blank	3D25021-CCB2	3d25021-012	04/25/13 13:13
Blank	1303713-BLK1	3d25021-013	04/25/13 13:16
LCS	1303713-BS1	3d25021-014	04/25/13 13:19
DASB-CF-03	1304363-01	3d25021-015	04/25/13 13:21
DASB-CF-03	1304363-01	3d25021-015	04/25/13 13:21
DASB-CF-03	1303713-MS1	3d25021-016	04/25/13 13:24
DASB-CF-03	1303713-MSD1	3d25021-017	04/25/13 13:27
DASB-CF-03	3D25021-SRD1	3d25021-018	04/25/13 13:30
DASB-CF-04	1304363-02	3d25021-020	04/25/13 13:36
Calibration Check	3D25021-CCV3	3d25021-021	04/25/13 13:38
Calibration Blank	3D25021-CCB3	3d25021-022	04/25/13 13:41
DASB-CF-03	1303713-PS1	3d25021-023	04/25/13 13:50
DASB-CF-04	1304363-02	3d25021-024	04/25/13 13:53
Calibration Check	3D25021-CCV4	3d25021-025	04/25/13 13:56
Calibration Blank	3D25021-CCB4	3d25021-026	04/25/13 13:59

INITIAL AND CONTINUING CALIBRATION CHECK

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D25021
Control Limt: +/- 10.00%

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D25011
Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units	Analyzed
3D25021-CCV1	Arsenic	0.0400	0.0406	101	mg/L	04/25/13 12:59
	Lead	0.0400	0.0408	102	mg/L	04/25/13 12:59
3D25021-CCV2	Arsenic	0.0400	0.0398	100	mg/L	04/25/13 13:10
	Lead	0.0400	0.0404	101	mg/L	04/25/13 13:10
3D25021-CCV3	Arsenic	0.0400	0.0406	102	mg/L	04/25/13 13:38
	Lead	0.0400	0.0407	102	mg/L	04/25/13 13:38
3D25021-CCV4	Arsenic	0.0400	0.0399	100	mg/L	04/25/13 13:56
	Lead	0.0400	0.0407	102	mg/L	04/25/13 13:56

* Values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Laboratory ID: 3D25021-SCV1

Sequence: 3D25021

SDG: 1304363

Project: USCG Atwater Facility

Instrument: 114

Calibration: 3D25011

Analyte	Expected	Found	% R	QC Limit	Units
Arsenic	0.0400	0.0406	102	90-110	mg/L
Lead	0.0400	0.0408	102	90-110	mg/L

* Values outside of QC limits

BLANKS
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D25021

SDG: 1304363
Project: USCG Atwater Facility
Calibration: 3D25011
Instrument ID: 114

Lab Sample ID	Analyte	Found	Unit	DL	LOD	LOQ	C	Analyzed
3D25021-CCB1	Arsenic	0.00032	mg/L	0.00016	0.00050	0.0010	J	04/25/13 13:02
	Lead	0.0000060	mg/L	0.000066	0.00020	0.0010	U	04/25/13 13:02
3D25021-CCB2	Arsenic	0.00013	mg/L	0.00016	0.00050	0.0010	U	04/25/13 13:13
	Lead	0.000010	mg/L	0.000066	0.00020	0.0010	U	04/25/13 13:13
3D25021-CCB3	Arsenic	0.00042	mg/L	0.00016	0.00050	0.0010	J	04/25/13 13:41
	Lead	0.0000060	mg/L	0.000066	0.00020	0.0010	U	04/25/13 13:41
3D25021-CCB4	Arsenic	0.00030	mg/L	0.00016	0.00050	0.0010	J	04/25/13 13:59
	Lead	0.000012	mg/L	0.000066	0.00020	0.0010	U	04/25/13 13:59

* Values outside of QC limits

ICP INTERFERENCE CHECK SAMPLE

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Sequence: 3D25021

SDG: 1304363

Project: USCG Atwater Facility

Calibration: 3D25011

Instrument ID: 114

Lab Sample ID	Analyte	True	Found	%R	Units
3D25021-IFA1	Arsenic	0.00	0.0000130		mg/L
	Lead	0.00	0.0000130		mg/L
3D25021-IFB1	Arsenic	0.0200	0.0200	100	mg/L
	Lead	0.0200	0.0199	99	mg/L

* Values outside of QC limits

QC BATCH SUMMARY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303713 QC Batch Matrix: Soil

Preparation: 3050B Digestion

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303713-BLK1	04/24/13 08:00	
LCS	1303713-BS1	04/24/13 08:00	
DASB-CF-03	1303713-MS1	04/24/13 08:00	
DASB-CF-03	1303713-MSD1	04/24/13 08:00	
DASB-CF-03	1304363-01	04/24/13 08:00	
DASB-CF-04	1304363-02	04/24/13 08:00	

METHOD BLANK DATA SHEET
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
SDG: 1304363
Client: TETRA TECH NUS - Pittsburgh
Project: USCG Atwater Facility
Matrix: Soil
Laboratory ID: 1303713-BLK1
File ID: 3d25021-013
Prepared: 04/24/13 08:00
Analyzed: 04/25/13 13:16
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
QC Batch: 1303713
Sequence: 3D25021
Calibration: 3D25011
Instrument: 114

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
7440-38-2	Arsenic, Total	0.028	mg/kg dry wt.	0.016	0.050	0.10	J
7439-92-1	Lead, Total	0.020	mg/kg dry wt.	0.0066	0.020	0.10	U

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

USEPA-6020A

DASB-CF-03

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303713

SDG: 1304363

Project: USCG Atwater Facility

Laboratory ID: 1303713-MS1

Preparation: 3050B Digestion

Initial/Final: 0.5399 g / 50 mL

Analyte	Spike Added	Sample Conc.	MS Conc.	MS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	3.70	3.32	7.22	105	80 - 120	mg/kg dry wt.
Lead, Total	3.70	3.34	7.33	108	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

DASB-CF-03

USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

QC Batch: 1303713

SDG: 1304363

Project: USCG Atwater Facility

Laboratory ID: 1303713-MSD1

Preparation: 3050B Digestion

Initial/Final: 0.5057 g / 50 mL

Analyte	Spike Added	MSD Conc.	MSD % Rec. #	% RPD #	QC Limits RPD	QC Limits Rec.	Units
Arsenic, Total	3.95	7.77	113	7	20	80 - 120	mg/kg dry wt.
Lead, Total	3.95	8.09	120	10	20	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

USEPA-6020A

DASB-CF-03

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
% Solids:
Preparation: 3050B Digestion
QC Batch: 1303713

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1303713-PS1
Lab Source ID: 1304363-01
Initial/Final: 0.040464 g / 4 mL
Sequence: 3D25021

Analyte	Spike Sample Result (SSR)	Sample Result (SR)	Units	Spike Added (SA)	%R	Control Limit %R
Arsenic, Total	0.0528	0.0335	mg/L	0.0200	96	75 - 125
Lead, Total	0.0536	0.0338	mg/L	0.0200	99	75 - 125

* Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY
USEPA-6020A

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1303713-BS1
Preparation: 3050B Digestion
Initial/Final: 0.5 g / 50 mL
Sequence: 3D25021

QC Batch: 1303713

Analyte	Spike Added	LCS Conc.	LCS % Rec. #	QC Limits Rec.	Units
Arsenic, Total	4.00	4.23	106	80 - 120	mg/kg dry wt.
Lead, Total	4.00	4.34	109	80 - 120	mg/kg dry wt.

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

SERIAL DILUTION

USEPA-6020A

DASB-CF-03

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Matrix: Soil

% Solids:

QC Batch: 3D25021

SDG: 1304363

Project: USCG Atwater Facility

Laboratory ID: 3D25021-SRD1

Lab Source ID: 1304363-01

Sequence: 3D25021

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Units	QC Limits % Difference
Arsenic, Total	0.0335		0.0343		2.0		mg/L	10
Lead, Total	0.0338		0.0319		6.0		mg/L	10

* Values outside of QC limits

Initial Sample Result (I) was less than 50xMDL (for 6010) or 100xMDL (for 6020), therefore serial dilution is not required.

ANALYSIS BATCH (SEQUENCE) SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Sequence: 3D25004

SDG: 1304363
Project: USCG Atwater Facility
Calibration: UNASSIGNED
Instrument: 210

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	1303738-BLK1		04/25/13 09:12
DASB-CF-04	1304363-02		04/25/13 09:12
DASB-CF-04	1303738-DUP1		04/25/13 09:12

QC BATCH SUMMARY
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc.

SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh

Project: USCG Atwater Facility

QC Batch: 1303738 QC Batch Matrix: Soil

Preparation: Method Specific Preparation

Sample Name	Lab Sample ID	Date Prepared	Observations
Blank	1303738-BLK1	04/25/13 09:12	
DASB-CF-04	1303738-DUP1	04/25/13 09:12	
DASB-CF-04	1304363-02	04/25/13 09:12	

METHOD BLANK DATA SHEET
USEPA-3550C

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1303738-BLK1 File ID:

Prepared: 04/25/13 09:12 Analyzed: 04/25/13 09:12

Preparation: Method Specific Preparat Initial/Final: 10 g / 10 mL

QC Batch: 1303738 Sequence: 3D25004 Calibration: UNASSIGNE Instrument: 210

CAS No.	Analyte	Concentration	Unit	DL	LOD	LOQ	Q
	Percent Solids	0.1	%	0.1	0.1	0.1	U

DUPLICATES
USEPA-3550C

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Lab Source ID: 1304363-02
% Solids: 83.67
QC Batch: 1303738

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1303738-DUP1
Source Sample Name: DASB-CF-04
Preparation: Method Specific Preparation
Initial/Final: 10 g / 10 mL

Analyte	Control Limit	Sample Conc.	C	Dup. Conc.	C	RPD %	Q	Method	Units
Percent Solids	5	84		84		0.6		USEPA-3550C	%

* Values outside of QC limits

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT USCG Atlantic Facility		JOB NUMBER SDG 1304363	
SUBJECT Sample Calculation			
BASED ON		DRAWING NUMBER	
BY Ann Coquette	CHECKED BY	APPROVED BY	DATE May 15, 2013

Sample DASB-CF-04; Chrysene

$$\frac{85153}{576755} \times 4 \times \frac{5\ ng/uL}{0.9804177} \times \frac{1\ mL}{29.4\ g} \times \frac{1}{0.8367} = 0.12\ mg/kg$$

Sample DASB-CF-04; lead

$$0.025939 \times 5 \times \frac{50\ mL}{0.5306\ g} = 12.2\ mg/kg$$

Sample Calculation

ORGANIC ANALYSIS DATA SHEET
USEPA-8270C

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc. SDG: 1304363

Client: TETRA TECH NUS - Pittsburgh Project: USCG Atwater Facility

Matrix: Soil Laboratory ID: 1304363-02 File ID: 1304363-02 4x.D

Sampled: 04/23/13 11:10 Prepared: 04/24/13 07:58 Analyzed: 04/24/13 12:56

Solids: 83.67 Preparation: 3550C Sonication Extract Initial/Final: 29.4 g / 1 mL

QC Batch: 1303708 Sequence: 3D25003 Calibration: 3D22015 Instrument: 339

CAS No.	Analyte	Dilution	CONC. (mg/kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	4	0.080	0.022	0.080	0.080	U
208-96-8	Acenaphthylene	4	0.080	0.020	0.080	0.080	U
120-12-7	Anthracene	4	0.080	0.019	0.080	0.080	U
56-55-3	Benzo(a)anthracene	4	0.067	0.013	0.040	0.080	J
50-32-8	Benzo(a)pyrene	4	0.070	0.011	0.040	0.080	J
205-99-2	Benzo(b)fluoranthene	4	0.099	0.0091	0.040	0.080	
207-08-9	Benzo(k)fluoranthene	4	0.052	0.0093	0.040	0.080	J
191-24-2	Benzo(g,h,i)perylene	4	0.028	0.0090	0.040	0.080	J
218-01-9	Chrysene	4	0.070	0.019	0.080	0.080	J
53-70-3	Dibenz(a,h)anthracene	4	0.040	0.0091	0.040	0.080	U
206-44-0	Fluoranthene	4	0.13	0.021	0.080	0.080	
86-73-7	Fluorene	4	0.080	0.019	0.080	0.080	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	0.020	0.013	0.016	0.080	J
91-57-6	2-Methylnaphthalene	4	0.080	0.022	0.080	0.080	U
91-20-3	Naphthalene	4	0.080	0.027	0.080	0.080	U
85-01-8	Phenanthrene	4	0.060	0.020	0.080	0.080	J
129-00-0	Pyrene	4	0.13	0.021	0.080	0.080	

System Monitoring Compound	ADDED (mg/kg dry)	CONC (mg/kg dry)	% REC.	QC Limits	Q
2-Fluorophenol	0.813	0.672	83	35 - 105	D
Phenol-d6	0.813	0.693	85	40 - 100	D
Nitrobenzene-d5	0.407	0.346	85	35 - 100	D
2-Fluorobiphenyl	0.407	0.340	84	45 - 105	D
2,4,6-Tribromophenol	0.817	0.592	72	35 - 125	D
o-Terphenyl	0.411	0.337	82	30 - 125	D

Internal Standard	Area	RT	Ref. Area	Ref. RT	Q
1,4-Dichlorobenzene-d4	153586	7.375	162650	7.492	
Naphthalene-d8	639572	10.126	734651	10.249	
Acenaphthene-d10	334404	14.241	362632	14.364	
Phenanthrene-d10	593001	17.704	603828	17.809	
Chrysene-d12	576755	21.393	601578	21.469	
Perylene-d12	280188	23.019	473861	23.118	

* Values outside of QC limits

Quantitation Report (QT Reviewed)

Sample Calculation

Data Path : C:\msdchem\1\data\042413_339\
Data File : 1304363-02 4x.D
Acq On : 24 Apr 2013 12:56
Operator : ASC
Sample : 1304363-02 4x DASB-CF-04 Inst : 339
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 24 13:25:51 2013
Quant Method : C:\msdchem\1\methods\042213bna.M
Quant Title : 8270/625 BNA
QLast Update : Wed Apr 24 11:36:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	7.375	152	153586	5.00 ng/uL	# 0.00
21) Naphthalene-d8	10.126	136	639572	5.00 ng/uL	0.00
43) Acenaphthene-d10	14.241	164	334404	5.00 ng/uL	0.00
67) Phenanthrene-d10	17.704	188	593001	5.00 ng/uL	0.00
82) Chrysene-d12	21.393	240	576755	5.00 ng/uL	# 0.00
93) Perylene-d12	23.019	264	280188	5.00 ng/uL	# 0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.968	112	120035	4.13 ng/uL	0.06
7) Phenol-d6	6.717	99	149696	4.26 ng/uL	0.00
22) Nitrobenzene-d5	8.541	82	78024	2.13 ng/uL	-0.02
24) Decafluorobiphenyl	8.797	334	95003	1.89 ng/uL	0.00
48) 2-Fluorobiphenyl	12.714	172	191235	2.09 ng/uL	0.00
71) 2,4,6-Tribromophenol	16.124	330	53007	3.64 ng/uL	-0.01
79) o-Terphenyl	18.490	230	162039	2.07 ng/uL	0.00
Target Compounds					Qvalue
2) N-Nitroso-dimethylamine	2.596	74	3062	0.17 ng/uL#	1
3) Pyridine	2.940	79	187	0.01 ng/uL#	28
5) Aniline	6.722	93	250	0.01 ng/uL#	1
6) Benzaldehyde	7.941	105	260	0.27 ng/uL#	56
8) Phenol	6.816	94	174	0.00 ng/uL#	58
9) Bis(2-chloroethyl)ether	6.757	93	361	0.01 ng/uL	100
10) 2-Chlorophenol	0.000		0	N.D.	
11) 1,3-Dichlorobenzene	7.259	146	153	0.00 ng/uL#	34
12) 1,4-Dichlorobenzene	7.259	146	153	0.00 ng/uL#	36
13) 1,2-Dichlorobenzene	7.719	146	249	0.01 ng/uL	98
14) Bis(2-chloroisipropyl)...	7.941	45	189	0.01 ng/uL#	51
15) Benzyl Alcohol	7.707	108	721	0.03 ng/uL#	1
16) 2-Methylphenol	7.772	108	479	0.02 ng/uL#	11
17) Acetophenone	8.244	105	120	0.00 ng/uL#	52
18) Hexachloroethane	0.000		0	N.D.	
19) 4-Methylphenol	8.349	107	196	0.01 ng/uL#	1
20) N-Nitroso-di-n-propyla...	8.092	70	383	0.02 ng/uL#	1
23) Nitrobenzene	8.541	77	1380	0.04 ng/uL#	1
25) Isophorone	9.013	82	132	0.00 ng/uL#	58
26) 2-Chloroaniline	8.803	127	2429	0.06 ng/uL#	56
27) 2-Nitrophenol	0.000		0	N.D.	
28) 2,4-Dimethylphenol	0.000		0	N.D.	
29) Bis(2-chlorethoxy)methane	9.678	93	352	0.01 ng/uL#	16
30) 2,4-Dichlorophenol	0.000		0	N.D.	
31) Benzoic Acid	10.126	105	1540	2.09 ng/uL#	1
32) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
33) Naphthalene	10.173	128	308	0.00 ng/uL#	1
34) 4-Chloroaniline	0.000		0	N.D.	
35) 2,6-Dichlorophenol	0.000		0	N.D.	
36) Hexachlorobutadiene	0.000		0	N.D.	
37) Caprolactam	11.228	55	462	0.04 ng/uL#	21
38) 1,2-Bis(2-chloroethoxy...	11.106	63	180	0.01 ng/uL#	100
39) 4-Chloro-3-methylphenol	0.000		0	N.D.	
40) 2-Methylnaphthalene	11.788	142	208	0.00 ng/uL#	17
41) 1-Methylnaphthalene	12.021	142	869	0.01 ng/uL#	23

✓ 4-25-13

Quantitation Report (QT Reviewed)

Sample Calculation

Data Path : C:\msdchem\1\data\042413_339\
Data File : 1304363-02 4x.D
Acq On : 24 Apr 2013 12:56
Operator : ASC
Sample : 1304363-02 4x Inst : 339
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 24 13:25:51 2013
Quant Method : C:\msdchem\1\methods\042213bna.M
Quant Title : 8270/625 BNA
QLast Update : Wed Apr 24 11:36:18 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 1,3 Dinitrobenzene	0.000		0	N.D.	
44) 1,2,4,5-Tetrachloroben...	0.000		0	N.D.	
45) Hexachlorocyclopentadiene	0.000		0	N.D.	
46) 2,4,6-Trichlorophenol	12.510	196	194	0.01 ng/uL#	10
47) 2,4,5-Trichlorophenol	12.510	196	194	0.01 ng/uL#	11
49) 2-Chloronaphthalene	12.866	162	55	0.00 ng/uL#	1
50) 1,1'-Biphenyl	12.936	154	296	0.00 ng/uL#	1
51) 2-Nitroaniline	13.495	138	1829	0.09 ng/uL#	25
52) Acenaphthylene	13.892	152	368	0.00 ng/uL#	88
53) 2,6-Dinitrotoluene	0.000		0	N.D.	
54) Dimethyl Phthalate	13.728	163	2153	0.02 ng/uL	98
55) 3-Nitroaniline	14.201	138	319	0.02 ng/uL#	1
56) Acenaphthene	14.300	153	1255	0.02 ng/uL#	81
57) 2,4-Dinitrophenol	0.000		0	N.D.	
58) Dibenzofuran	14.743	168	1063	0.01 ng/uL#	59
59) 4-Nitrophenol	14.789	65	424	0.04 ng/uL#	39
60) 2,4-Dinitrotoluene	14.638	165	109	0.00 ng/uL#	1
61) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
62) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
63) Fluorene	15.541	166	2846	0.03 ng/uL#	89
64) Diethyl Phthalate	15.413	149	837	0.01 ng/uL#	50
65) 4-Chlorophenyl Phenyl ...	0.000		0	N.D.	
66) 4-Nitroaniline	15.990	138	113	0.01 ng/uL#	1
68) 4,6-Dinitro-2-methylph...	16.130	198	378	0.34 ng/uL#	1
69) N-Nitroso-diphenylamine	16.118	169	2102	0.03 ng/uL#	38
70) 1,2-Diphenylhydrazine	16.002	182	193	0.01 ng/uL#	24
72) 4-Bromophenyl Phenyl E...	0.000		0	N.D.	
73) Hexachlorobenzene	0.000		0	N.D.	
74) Atrazine	0.000		0	N.D.	
75) Pentachlorophenol	0.000		0	N.D.	
76) Phenanthrene	17.750	178	44812	0.37 ng/uL#	89
77) Anthracene	17.849	178	10646	0.09 ng/uL#	92
78) Carbazole	18.193	167	4045	0.04 ng/uL#	90
80) Di-n-butyl Phthalate	18.887	149	13515	0.10 ng/uL	98
81) Fluoroanthene	19.668	202	103064	0.79 ng/uL#	73
83) Benzidine	20.117	184	160	2.38 ng/uL#	1
84) Pyrene	19.959	202	85153	0.77 ng/uL#	90
85) Butyl Benzyl Phthalate	20.356	149	859	0.02 ng/uL	93
86) Bis(2-ethylhexyl) adipate	20.909	129	4902	0.12 ng/uL#	100
87) Benzo(a)anthracene	21.381	228	43706	0.41 ng/uL#	92
88) 3,3'-Dichlorobenzidine	21.306	252	968	0.03 ng/uL	84
89) Chrysene	21.422	228	40908	0.43 ng/uL#	82
90) Bis(2-ethylhexyl)phtha...	21.440	149	18620	0.23 ng/uL#	72
91) Dicyclohexyl Phthalate	21.486	149	1113	0.02 ng/uL#	100
92) Di-n-octyl Phthalate	21.929	149	2133	0.02 ng/uL	100
94) Benzo(b)fluoroanthene	22.559	252	40218m	0.61 ng/uL	
95) Benzo(k)fluoranthene	22.571	252	20068m	0.32 ng/uL	
96) Benzo(a)pyrene	22.949	252	24832	0.43 ng/uL#	90
97) Indeno(1,2,3-cd)pyrene	24.576	276	6650	0.12 ng/uL	96
98) Dibdenz(a,h)anthracene	24.611	278	1248	0.03 ng/uL#	44
99) Benzo(g,h,i)Perylene	25.024	276	6933	0.17 ng/uL#	57

Sample Calculation

INITIAL CALIBRATION DATA (Continued)

USEPA-8270C

Laboratory: TriMatrix Laboratories, Inc.

Client: TETRA TECH NUS - Pittsburgh

Calibration: 3D22015

SDG: 1304363

Project: USCG Atwater Facility

Calibration Date: 04/22/13 20:41

Instrument: 339

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	Limit	Q
Acenaphthene	1.185664	5.283492	14.44388	0.0741443			CCC (30)	
Acenaphthylene	1.768671	5.916225	14.01975	7.629907E-02			15	
Anthracene	1.053065	2.937062	17.95263	4.011653E-02			15	
Benzo(a)anthracene	0.9361937	3.013168	21.45625	2.664035E-02			15	
Benzo(a)pyrene	1.039613	4.797422	23.04775	2.724653E-02			CCC (30)	
Benzo(b)fluoranthene	1.182231	7.277578	22.6405	0.0331963			15	
Benzo(k)fluoranthene	1.091303	6.529869	22.6755	3.275927E-02			15	
Benzo(g,h,i)perylene	0.7734255	10.27954	25.19775	5.106899E-02			15	
Chrysene	0.8309534	4.104971	21.4965	2.622317E-02			15	
Dibenz(a,h)anthracene	0.8401171	6.669722	24.75038	4.089085E-02			15	
Fluoranthene	1.099587	5.410839	19.74812	1.591413E-02			CCC (30)	
Fluorene	1.335947	4.857526	15.67875	6.363922E-02			15	
Indeno(1,2,3-cd)pyrene	0.9887393	7.495037	24.719	4.367728E-02			15	
2-Methylnaphthalene	0.6173173	4.540085	11.918	5.427702E-02			15	
Naphthalene	0.8256674	3.082629	10.2975	6.798052E-02			15	
Phenanthrene	1.023657	2.431187	17.855	3.596781E-02			15	
Pyrene	0.9804177	7.627923	20.04025	2.161513E-02			15	
2-Fluorophenol	0.9553335	4.742579	5.025625	0.6162255			15	
Phenol-d6	1.138118	5.617761	6.8055	0.3895884			15	
Nitrobenzene-d5	0.2824539	4.185498	8.67775	0.172938			15	
2-Fluorobiphenyl	1.37321	3.183765	12.836	8.778232E-02			15	
2,4,6-Tribromophenol	0.2018113	6.381811	16.253	8.942424E-02			15	
o-Terphenyl	0.6551156	3.126046	18.583	4.163036E-02			15	

Sample Calculation

INORGANIC ANALYSIS DATA SHEET
USEPA-6020A

DASB-CF-04

Laboratory: TriMatrix Laboratories, Inc.
Client: TETRA TECH NUS - Pittsburgh
Matrix: Soil
Sampled: 04/23/13 11:10
Solids: 83.67
QC Batch: 1303713

SDG: 1304363
Project: USCG Atwater Facility
Laboratory ID: 1304363-02
Prepared: 04/24/13 08:00
Preparation: 3050B Digestion
Initial/Final: 0.5306 g / 50 mL

CAS No.	Analyte	Dil. Factor	Conc.	Units	DL	LOD	LOQ	Q	Analyzed
7440-38-2	Arsenic, Total	1	3.2	mg/kg dry wt.	0.015	0.047	0.094		04/25/13 13:36
7439-92-1	Lead, Total	5	12	mg/kg dry wt.	0.031	0.094	0.47		04/25/13 13:53

Sample Calculation

Sample Information

Sample ID: 1304363-02 DASB-CF-04
Autosampler Position: 26
Sample Date/Time: Thursday, April 25, 2013 13:53:35
Initial Sample Quantity (mg):
Sample Prep Volume (mL):
Aliquot Volume (mL):
Diluted To Volume (mL):
Number of Replicates: 3
Sample File: c:\elandata\Sample\3D25021.sam
Method File: c:\elandata\Method\Trimatrix_DoD4.2_Solid_6020A_114.mth
Dataset File: c:\elandata\Dataset\3D25021\1304363-02.024
Tuning File: c:\elandata\Tuning\25APR2013_6020A_A_114.tun
Optimization File: c:\elandata\Optimize\25APR2013_6020A_114.dac

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Conc. Mean	Conc. SD	Conc. RSD	Report Unit
[>	Ge	72	376326.693	376326.693				mg/L
[	As	75	4970.143	0.009	0.006505	0.000	3.847	mg/L
[	Pb	208	337019.385	0.681	0.025939	0.001	2.396	mg/L
[>	Bi	209	494628.652	494628.652				mg/L

x5

QC Calculated Values

	Analyte	Mass	Int Std % Recovery
[>	Ge	71.922	97.878
[	As	74.922	
[	Pb	207.977	
[>	Bi	208.980	98.988

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Replicates

Repeat 1

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	380370.277	380370.277		mg/L
As	75	5044.844	0.009	0.006544	mg/L
Pb	208	332261.814	0.670	0.025620	mg/L
Bi	209	495552.202	495552.202		mg/L

Repeat 2

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	378753.335	378753.335		mg/L
As	75	4862.998	0.009	0.006238	mg/L
Pb	208	337771.674	0.673	0.025645	mg/L
Bi	209	501313.156	501313.156		mg/L

Repeat 3

Analyte	Mass	Meas. Intensity	Net Intensity	Concentration	Report Unit
Ge	72	369856.467	369856.467		mg/L
As	75	5002.586	0.009	0.006734	mg/L
Pb	208	341024.667	0.680	0.026853	mg/L
Bi	209	487020.598	487020.598		mg/L

Appendix F

Statistical Analysis of Data

Post-Remediation Exposure Point Concentration Calculation

Exposure point concentrations (EPCs) were calculated based on data for post-remediation surface soil and subsurface soil samples representing current conditions at the USCG Atwater Facility at Detroit, Michigan. Surface soil was defined as the 0-2 ft below ground surface (bgs) soil interval and subsurface soil was defined as the soil interval greater than 2 ft bgs (but above the saturated zone). The dataset evaluated is comprised of the data reported for pre-remediation soil samples and confirmation soil samples *not excavated* during the removal action. For purposes of human health risk assessment, an EPC is defined as the concentration in an environmental medium to which a human receptor is exposed. With the exception of lead, the EPC is typically the calculated 95 percent upper confidence limit (UCL) on the arithmetic mean. Per EPA guidance, the arithmetic mean (versus the 95% UCL) is typically used as the EPC when conducting a human health risk assessment for lead. EPCs were calculated using USEPA's ProUCL version 4.1.01 software. The sample detection limit was used as an input for non-detected results in the EPC calculations.

Arsenic, lead, and benzo(a)pyrene equivalent (BAP) concentrations were the chemicals of concern (COCs) identified in the EE/CA (Tetra Tech 2013). Two EPCs were calculated for BAPs. The BAP Equivalents POS value was calculated using positive detections only for the individual carcinogenic PAHs. The BAP Equivalents HALFND value was calculated using one half the detection limit when an individual carcinogenic PAH was reported as not detected. A list of surface and subsurface soil samples used in the calculations are provided in Table 1 and the EPCs for surface and subsurface soil are provided in Tables 2 and 3, respectively. None of the EPCs calculated for the COCs exceed remedial goals established for the removal action.

Table 1 Sample List Used in Exposure Point Concentration Calculation	
Surface Soil	**Subsurface Soil**
DASS101-0002	DASB010607-AVG
DASS103-0002	DASB020607
DASS106-0002	DASB101-0305
DASS108-0002	DASB103-0305
DASS201-0002	DASB104-0305
DASS202-0002	DASB104A-0204
DASS203-0002-AVG	DASB106-0305
DASS204-0002	DASB108-0305
DASS205-0002	DASB115-0305
DASS208-0002	DASB115A-0204
DASS210-0002	DASB224-0507
DASS216-0002	DASB225-0507
DASS244-0002	DASB226-0507
DASS245-0002	DASB227-0507
DASS246-0002	DASB229-0305-AVG
DASB15_01.5-03	DASB230-0305
	DASB231-0305-AVG
	DASB232-0305
	DASB233-0305
	DASB236-0305
	DASB237-0305
	DASB240-0305
	DASB241-0305-AVG
	DASB242-0305
	DASB16_04-05.5
	DASS206-0002
	DASS207-0002
	DASS211-0002
	DASS212-0002
	DASS219-0002
	DASS220-0002
	DASS221-0002
	DASS222-0002-AVG
	DASS223-0002

TABLE 2 SURFACE SOIL EXPOSURE POINT CONCENTRATIONS						
CHEMICAL	**ARITHMETIC MEAN**	**95% UCL**	**MAXIMUM CONCENTRATION**	**EPC**	**EPC STATISTIC**	**REMEDIAL GOALS**
Arsenic	6	6.8 (NP)	9.4	6.8	95% Modified T UCL	7.6
Lead	129	236 (G)	620	129	Arithmetic Mean	400
BAP Equivalents HALFND	0.39	0.52 (NP)	1.05	0.52	95% KM (Chebyshev) UCL	2
BAP Equivalents POS	0.35	0.68 (G)	1.05	0.68	95% KM (Chebyshev) UCL	2

Units are mg/kg

TABLE 3 SUBURFACE SOIL EXPOSURE POINT CONCENTRATIONS						
CHEMICAL	**ARITHMETIC MEAN**	**95% UCL**	**MAXIMUM CONCENTRATION**	**EPC**	**EPC STATISTIC**	**REMEDIAL GOALS**
Arsenic	6	6.9 (NP)	18	6.9	95% Student's T UCL	7.6
Lead	93.9	139 (G)	595	93.9	Arithmetic Mean	400
BAP Equivalents HALFND	0.64	1.7 (G)	7.9	1.7	95% KM (Chebyshev) UCL	2
BAP Equivalents POS	0.62	1.7 (G)	7.9	1.7	95% KM (Chebyshev) UCL	2

Units are mg/kg

ProUCL Surface Soil Input Files

Samples	ARSENIC	d_ARSENIC	LEAD	d_LEAD	BAP EQUIVALENT-HALFND	d_BAP EQUIVALENT-HALFND	BAP EQUIVALENT-POS	d_BAP EQUIVALENT-POS
DASS101-0002	5.7	1	31	1	0.22466	1	0.22466	1
DASS103-0002	6.8	1	43	1	0.21718	1	0.21718	1
DASS106-0002	6.4	1	99	1	0.25027	1	0.25027	1
DASS108-0002	2.5	1	11	1	0.101303	1	0.083303	1
DASS201-0002	6.7	1	66	1	0.32256	1	0.32256	1
DASS202-0002	6.3	1	39	1	0.93951	1	0.93951	1
DASS203-0002-AVG	5.25	1	29	1	0.616765	1	0.616765	1
DASS204-0002	6.2	1	40	1	0.25212	1	0.25212	1
DASS205-0002	6.1	1	21	1	1.04584	1	1.04584	1
DASS208-0002	7.7	1	340	1	0.37869	1	0.37869	1
DASS210-0002	2.3	1	2.7	1	0.019	0	0.019	0
DASS216-0002	6.8	1	180	1	0.3508	1	0.2458	1
DASS244-0002	6.3	1	430	1	0.38225	1	0.17325	1
DASS245-0002	9.4	1	620	1	0.70529	1	0.60529	1
DASS246-0002	5.6	1	52	1	0.235889	1	0.135889	1
DASB15_01.5-03	6.3	1	66	1	0.259114	1	0.053764	1

ProUCL Subsurface Soil Input Files

Samples	ARSENIC	d_ARSENIC	LEAD	d_LEAD	BAP EQUIVALENT-HALFND	d_BAP EQUIVALENT-HALFND	BAP EQUIVALENT-POS	d_BAP EQUIVALENT-POS
DASB010607-AVG			9.1	1	0.172416	1	0.061416	1
DASB020607			91.1	1	0.274526	1	0.159026	1
DASB101-0305	7.6	1	180	1	0.46073	1	0.46073	1
DASB103-0305	5	1	12	1	0.030473	1	0.020973	1
DASB104-0305	6.4	1	16	1	0.040265	1	0.019365	1
DASB104A-0204					0.63346	1	0.53346	1
DASB106-0305	5.5	1	8.5	1	0.02741	1	0.00761	1
DASB108-0305	3.3	1	53	1	0.027548	1	0.017548	1
DASB115-0305	5.5	1	140	1	1.8889	1	1.8889	1
DASB115A-0204					0.97648	1	0.87648	1
DASB224-0507	5.1	1	63	1	0.046229	1	0.046229	1
DASB225-0507	2.6	1	31	1	0.090433	1	0.090433	1
DASB226-0507	4.2	1	35	1	0.42905	1	0.42905	1
DASB227-0507	5.9	1	72	1	0.25159	1	0.25159	1
DASB229-0305-AVG	5.85	1	6.8	1	0.014159	1	0.00416	1
DASB230-0305	4.3	1	6.9	1	0.02	0	0.02	0
DASB231-0305-AVG	5.05	1	8.35	1	0.017576	1	0.0018535	1
DASB232-0305	6.1	1	7	1	0.021244	1	0.00024	1
DASB233-0305	5.8	1	16	1	0.023571	1	0.013571	1
DASB236-0305	4.9	1	26	1	0.14682	1	0.14682	1
DASB237-0305	2.5	1	31	1	0.016439	1	0.004889	1
DASB240-0305	7.2	1	120	1	1.9302	1	1.9302	1
DASB241-0305-AVG	7.85	1	295	1	1.014695	1	1.014695	1
DASB242-0305	7	1	18	1	0.022323	1	0.022323	1
DASB16_04-05.5	7.5	1	57	1	0.35881	1	0.16186	1
DASS206-0002	8.9	1	410	1	0.39145	1	0.39145	1
DASS207-0002	6.1	1	99	1	0.28432	1	0.28432	1
DASS211-0002	5.8	1	43	1	0.131942	1	0.082442	1
DASS212-0002	5.4	1	220	1	0.36905	1	0.36905	1
DASS219-0002	6	1	270	1	7.873	1	7.873	1
DASS220-0002	18	1	13	1	0.37989	1	0.37989	1
DASS221-0002	5.1	1	35	1	0.14505	1	0.14505	1
DASS222-0002-AVG	5.35	1	595	1	1.48676	1	1.48676	1
DASS223-0002	4.2	1	16	1	1.8324	1	1.8324	1

ProUCL Surface Soil Output Files

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2			User Selected Options									
3			From File	0-2wo excav_sat_property.wst								
4			Full Precision	OFF								
5			Confidence Coefficient	95%								
6			Number of Bootstrap Operations	2000								
7												
8												
9	ARSENIC											
10												
11						General Statistics						
12						Number of Valid Observations	16			Number of Distinct Observations	13	
13						Number of Missing Values	9					
14												
15						Raw Statistics				Log-transformed Statistics		
16						Minimum	2.3			Minimum of Log Data	0.833	
17						Maximum	9.4			Maximum of Log Data	2.241	
18						Mean	6.022			Mean of log Data	1.744	
19						Geometric Mean	5.719			SD of log Data	0.365	
20						Median	6.3					
21						SD	1.702					
22						Std. Error of Mean	0.425					
23						Coefficient of Variation	0.283					
24						Skewness	-0.791					
25												
26						Relevant UCL Statistics						
27						Normal Distribution Test				Lognormal Distribution Test		
28						Shapiro Wilk Test Statistic	0.858			Shapiro Wilk Test Statistic	0.739	
29						Shapiro Wilk Critical Value	0.887			Shapiro Wilk Critical Value	0.887	
30						Data not Normal at 5% Significance Level				Data not Lognormal at 5% Significance Level		
31												
32						Assuming Normal Distribution				Assuming Lognormal Distribution		
33						95% Student's-t UCL	6.768			95% H-UCL	7.325	
34						95% UCLs (Adjusted for Skewness)				95% Chebyshev (MVUE) UCL	8.545	
35						95% Adjusted-CLT UCL (Chen-1995)	6.632			97.5% Chebyshev (MVUE) UCL	9.609	
36						95% Modified-t UCL (Johnson-1978)	6.754			99% Chebyshev (MVUE) UCL	11.7	
37												
38						Gamma Distribution Test				Data Distribution		
39						k star (bias corrected)	8.034			Data do not follow a Discernable Distribution (0.05)		
40						Theta Star	0.75					
41						MLE of Mean	6.022					
42						MLE of Standard Deviation	2.125					
43						nu star	257.1					
44						Approximate Chi Square Value (.05)	221			Nonparametric Statistics		
45						Adjusted Level of Significance	0.0335			95% CLT UCL	6.722	
46						Adjusted Chi Square Value	217.1			95% Jackknife UCL	6.768	
47										95% Standard Bootstrap UCL	6.695	
48						Anderson-Darling Test Statistic	1.629			95% Bootstrap-t UCL	6.67	
49						Anderson-Darling 5% Critical Value	0.739			95% Hall's Bootstrap UCL	6.682	
50						Kolmogorov-Smirnov Test Statistic	0.266			95% Percentile Bootstrap UCL	6.681	
51						Kolmogorov-Smirnov 5% Critical Value	0.215			95% BCA Bootstrap UCL	6.644	
52						Data not Gamma Distributed at 5% Significance Level				95% Chebyshev(Mean, Sd) UCL	7.876	
53										97.5% Chebyshev(Mean, Sd) UCL	8.679	
54						Assuming Gamma Distribution				99% Chebyshev(Mean, Sd) UCL	10.26	
55						95% Approximate Gamma UCL (Use when n >= 40)	7.006					

	A	B	C	D	E	F	G	H	I	J	K	L
56				95% Adjusted Gamma UCL (Use when n < 40)		7.129						
57												
58				Potential UCL to Use							Use 95% Student's-t UCL	6.768
59											or 95% Modified-t UCL	6.754
60												
61				Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.								
62				These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)								
63				and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.								
64												
65				Note: For highly negative-skewed data, confidence limits								
66				(e.g., Chen, Johnson, Lognormal, and Gamma) may not be								
67				reliable. Chen's and Johnson's methods provide								
68				adjustments for positvely skewed data sets.								
69												
70												
71	LEAD											
72												
73				General Statistics								
74				Number of Valid Observations		16				Number of Distinct Observations		15
75				Number of Missing Values		9						
76												
77				Raw Statistics						Log-transformed Statistics		
78				Minimum		2.7				Minimum of Log Data		0.993
79				Maximum		620				Maximum of Log Data		6.43
80				Mean		129.4				Mean of log Data		4.049
81				Geometric Mean		57.37				SD of log Data		1.386
82				Median		47.5						
83				SD		178.5						
84				Std. Error of Mean		44.63						
85				Coefficient of Variation		1.38						
86				Skewness		1.938						
87												
88				Relevant UCL Statistics								
89				Normal Distribution Test						Lognormal Distribution Test		
90				Shapiro Wilk Test Statistic		0.689				Shapiro Wilk Test Statistic		0.962
91				Shapiro Wilk Critical Value		0.887				Shapiro Wilk Critical Value		0.887
92				Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level		
93												
94				Assuming Normal Distribution						Assuming Lognormal Distribution		
95				95% Student's-t UCL		207.6				95% H-UCL		496.1
96				95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL		369.3
97				95% Adjusted-CLT UCL (Chen-1995)		225.9				97.5% Chebyshev (MVUE) UCL		470.5
98				95% Modified-t UCL (Johnson-1978)		211.2				99% Chebyshev (MVUE) UCL		669.4
99												
100				Gamma Distribution Test						Data Distribution		
101				k star (bias corrected)		0.641				Data Follow Appr. Gamma Distribution at 5% Significance Level		
102				Theta Star		201.7						
103				MLE of Mean		129.4						
104				MLE of Standard Deviation		161.5						
105				nu star		20.52						
106				Approximate Chi Square Value (.05)		11.23				Nonparametric Statistics		
107				Adjusted Level of Significance		0.0335				95% CLT UCL		202.8
108				Adjusted Chi Square Value		10.46				95% Jackknife UCL		207.6
109										95% Standard Bootstrap UCL		200.9
110				Anderson-Darling Test Statistic		0.706				95% Bootstrap-t UCL		273.7

	A	B	C	D	E	F	G	H	I	J	K	L
111					Anderson-Darling 5% Critical Value	0.776					95% Hall's Bootstrap UCL	216.8
112					Kolmogorov-Smirnov Test Statistic	0.232					95% Percentile Bootstrap UCL	207.9
113					Kolmogorov-Smirnov 5% Critical Value	0.223					95% BCA Bootstrap UCL	223.7
114			Data follow Appr. Gamma Distribution at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	323.9
115											97.5% Chebyshev(Mean, Sd) UCL	408.1
116			Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL	573.5
117				95% Approximate Gamma UCL (Use when n >= 40)		236.3						
118				95% Adjusted Gamma UCL (Use when n < 40)		253.8						
119												
120			Potential UCL to Use								Use 95% Approximate Gamma UCL	236.3
121												
122	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
123	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
124	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
125												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2		User Selected Options										
3			From File	0-2wo excav_sat_property.wst								
4			Full Precision	OFF								
5			Confidence Coefficient	95%								
6			Number of Bootstrap Operations	2000								
7												
8												
9	BAP EQUIVALENT-HALFND											
10												
11						General Statistics						
12						Number of Valid Data	16			Number of Detected Data		15
13						Number of Distinct Detected Data	15			Number of Non-Detect Data		1
14						Number of Missing Values	9			Percent Non-Detects		6.25%
15												
16						Raw Statistics				Log-transformed Statistics		
17						Minimum Detected	0.101			Minimum Detected		-2.29
18						Maximum Detected	1.046			Maximum Detected		0.0448
19						Mean of Detected	0.419			Mean of Detected		-1.055
20						SD of Detected	0.28			SD of Detected		0.623
21						Minimum Non-Detect	0.019			Minimum Non-Detect		-3.963
22						Maximum Non-Detect	0.019			Maximum Non-Detect		-3.963
23												
24												
25						UCL Statistics						
26						Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only		
27						Shapiro Wilk Test Statistic	0.822			Shapiro Wilk Test Statistic		0.939
28						5% Shapiro Wilk Critical Value	0.881			5% Shapiro Wilk Critical Value		0.881
29						Data not Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level		
30												
31						Assuming Normal Distribution				Assuming Lognormal Distribution		
32						DL/2 Substitution Method				DL/2 Substitution Method		
33						Mean	0.393			Mean		-1.28
34						SD	0.289			SD		1.083
35						95% DL/2 (t) UCL	0.52			95% H-Stat (DL/2) UCL		1.103
36												
37						Maximum Likelihood Estimate(MLE) Method				Log ROS Method		
38						Mean	0.385			Mean in Log Scale		-1.149
39						SD	0.294			SD in Log Scale		0.709
40						95% MLE (t) UCL	0.514			Mean in Original Scale		0.397
41						95% MLE (Tiku) UCL	0.512			SD in Original Scale		0.284
42										95% t UCL		0.522
43										95% Percentile Bootstrap UCL		0.516
44										95% BCA Bootstrap UCL		0.536
45										95% H UCL		0.62
46												
47						Gamma Distribution Test with Detected Values Only				Data Distribution Test with Detected Values Only		
48						k star (bias corrected)	2.331			Data appear Gamma Distributed at 5% Significance Level		
49						Theta Star	0.18					
50						nu star	69.94					
51												
52						A-D Test Statistic	0.672			Nonparametric Statistics		
53						5% A-D Critical Value	0.745			Kaplan-Meier (KM) Method		
54						K-S Test Statistic	0.745			Mean		0.399
55						5% K-S Critical Value	0.223			SD		0.273

	A	B	C	D	E	F	G	H	I	J	K	L
56	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.0706
57											95% KM (t) UCL	0.523
58	Assuming Gamma Distribution										95% KM (z) UCL	0.515
59	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.519
60					Minimum	0.000001					95% KM (bootstrap t) UCL	0.579
61					Maximum	1.046					95% KM (BCA) UCL	0.516
62					Mean	0.393					95% KM (Percentile Bootstrap) UCL	0.514
63					Median	0.291					95% KM (Chebyshev) UCL	0.707
64					SD	0.29					97.5% KM (Chebyshev) UCL	0.84
65					k star	0.581					99% KM (Chebyshev) UCL	1.102
66					Theta star	0.676						
67					Nu star	18.58	Potential UCLs to Use					
68					AppChi2	9.812					95% KM (BCA) UCL	0.516
69	95% Gamma Approximate UCL (Use when n >= 40)					0.744						
70	95% Adjusted Gamma UCL (Use when n < 40)					0.802						
71	Note: DL/2 is not a recommended method.											
72												
73	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
74	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
75	For additional insight, the user may want to consult a statistician.											
76												
77												
78	BAP EQUIVALENT-POS											
79												
80	General Statistics											
81					Number of Valid Data	16					Number of Detected Data	15
82					Number of Distinct Detected Data	15					Number of Non-Detect Data	1
83					Number of Missing Values	9					Percent Non-Detects	6.25%
84												
85	Raw Statistics						Log-transformed Statistics					
86					Minimum Detected	0.0538					Minimum Detected	-2.923
87					Maximum Detected	1.046					Maximum Detected	0.0448
88					Mean of Detected	0.37					Mean of Detected	-1.297
89					SD of Detected	0.3					SD of Detected	0.829
90					Minimum Non-Detect	0.019					Minimum Non-Detect	-3.963
91					Maximum Non-Detect	0.019					Maximum Non-Detect	-3.963
92												
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
96					Shapiro Wilk Test Statistic	0.833					Shapiro Wilk Test Statistic	0.967
97					5% Shapiro Wilk Critical Value	0.881					5% Shapiro Wilk Critical Value	0.881
98	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
99												
100	Assuming Normal Distribution						Assuming Lognormal Distribution					
101					DL/2 Substitution Method						DL/2 Substitution Method	
102					Mean	0.347					Mean	-1.507
103					SD	0.304					SD	1.161
104					95% DL/2 (t) UCL	0.48					95% H-Stat (DL/2) UCL	1.055
105												
106					Maximum Likelihood Estimate(MLE) Method						Log ROS Method	
107					Mean	0.338					Mean in Log Scale	-1.423
108					SD	0.309					SD in Log Scale	0.947
109					95% MLE (t) UCL	0.473					Mean in Original Scale	0.349
110					95% MLE (Tiku) UCL	0.469					SD in Original Scale	0.302

	A	B	C	D	E	F	G	H	I	J	K	L
111											95% t UCL	0.481
112											95% Percentile Bootstrap UCL	0.477
113											95% BCA Bootstrap UCL	0.494
114											95% H UCL	0.717
115												
116	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
117					k star (bias corrected)	1.49	Data appear Gamma Distributed at 5% Significance Level					
118					Theta Star	0.248						
119					nu star	44.71						
120												
121					A-D Test Statistic	0.38	**Nonparametric Statistics**					
122					5% A-D Critical Value	0.75					Kaplan-Meier (KM) Method	
123					K-S Test Statistic	0.75					Mean	0.35
124					5% K-S Critical Value	0.225					SD	0.291
125	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.0754
126											95% KM (t) UCL	0.482
127	**Assuming Gamma Distribution**										95% KM (z) UCL	0.474
128					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.481
129					Minimum	0.000001					95% KM (bootstrap t) UCL	0.561
130					Maximum	1.046					95% KM (BCA) UCL	0.468
131					Mean	0.347					95% KM (Percentile Bootstrap) UCL	0.48
132					Median	0.248					95% KM (Chebyshev) UCL	0.678
133					SD	0.305					97.5% KM (Chebyshev) UCL	0.821
134					k star	0.534					99% KM (Chebyshev) UCL	1.1
135					Theta star	0.65						
136					Nu star	17.07	**Potential UCLs to Use**					
137					AppChi2	8.724					95% KM (Chebyshev) UCL	0.678
138					95% Gamma Approximate UCL (Use when n >= 40)	0.678						
139					95% Adjusted Gamma UCL (Use when n < 40)	0.735						
140	Note: DL/2 is not a recommended method.											
141												
142	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
143	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
144	For additional insight, the user may want to consult a statistician.											
145												

ProUCL Subsurface Soil Output Files

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2		User Selected Options										
3			From File	greater 2 wo excav_satproperty.wst								
4			Full Precision	OFF								
5			Confidence Coefficient	95%								
6			Number of Bootstrap Operations	2000								
7												
8												
9	ARSENIC											
10												
11						General Statistics						
12						Number of Valid Observations	30			Number of Distinct Observations	25	
13						Number of Missing Values	4					
14												
15						Raw Statistics				Log-transformed Statistics		
16						Minimum	2.5			Minimum of Log Data	0.916	
17						Maximum	18			Maximum of Log Data	2.89	
18						Mean	6			Mean of log Data	1.722	
19						Geometric Mean	5.597			SD of log Data	0.364	
20						Median	5.65					
21						SD	2.69					
22						Std. Error of Mean	0.491					
23						Coefficient of Variation	0.448					
24						Skewness	3.122					
25												
26						Relevant UCL Statistics						
27						Normal Distribution Test				Lognormal Distribution Test		
28						Shapiro Wilk Test Statistic	0.707			Shapiro Wilk Test Statistic	0.914	
29						Shapiro Wilk Critical Value	0.927			Shapiro Wilk Critical Value	0.927	
30						Data not Normal at 5% Significance Level				Data not Lognormal at 5% Significance Level		
31												
32						Assuming Normal Distribution				Assuming Lognormal Distribution		
33						95% Student's-t UCL	6.835			95% H-UCL	6.777	
34						95% UCLs (Adjusted for Skewness)				95% Chebyshev (MVUE) UCL	7.737	
35						95% Adjusted-CLT UCL (Chen-1995)	7.107			97.5% Chebyshev (MVUE) UCL	8.503	
36						95% Modified-t UCL (Johnson-1978)	6.881			99% Chebyshev (MVUE) UCL	10.01	
37												
38						Gamma Distribution Test				Data Distribution		
39						k star (bias corrected)	6.637			Data do not follow a Discernable Distribution (0.05)		
40						Theta Star	0.904					
41						MLE of Mean	6					
42						MLE of Standard Deviation	2.329					
43						nu star	398.2					
44						Approximate Chi Square Value (.05)	353			Nonparametric Statistics		
45						Adjusted Level of Significance	0.041			95% CLT UCL	6.808	
46						Adjusted Chi Square Value	350.5			95% Jackknife UCL	6.835	
47										95% Standard Bootstrap UCL	6.77	
48						Anderson-Darling Test Statistic	1.115			95% Bootstrap-t UCL	7.34	
49						Anderson-Darling 5% Critical Value	0.746			95% Hall's Bootstrap UCL	10.82	
50						Kolmogorov-Smirnov Test Statistic	0.167			95% Percentile Bootstrap UCL	6.878	
51						Kolmogorov-Smirnov 5% Critical Value	0.16			95% BCA Bootstrap UCL	7.162	
52						Data not Gamma Distributed at 5% Significance Level				95% Chebyshev(Mean, Sd) UCL	8.141	
53										97.5% Chebyshev(Mean, Sd) UCL	9.067	
54						Assuming Gamma Distribution				99% Chebyshev(Mean, Sd) UCL	10.89	
55						95% Approximate Gamma UCL (Use when n >= 40)	6.769					

	A	B	C	D	E	F	G	H	I	J	K	L
56				95% Adjusted Gamma UCL (Use when n < 40)		6.817						
57												
58				Potential UCL to Use							Use 95% Student's-t UCL	6.835
59											or 95% Modified-t UCL	6.881
60												
61	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
62	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
63	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
64												
65												
66	LEAD											
67												
68				General Statistics								
69				Number of Valid Observations		32				Number of Distinct Observations		28
70				Number of Missing Values		2						
71												
72				Raw Statistics						Log-transformed Statistics		
73				Minimum		6.8				Minimum of Log Data		1.917
74				Maximum		595				Maximum of Log Data		6.389
75				Mean		93.87				Mean of log Data		3.721
76				Geometric Mean		41.3				SD of log Data		1.308
77				Median		35						
78				SD		134						
79				Std. Error of Mean		23.69						
80				Coefficient of Variation		1.428						
81				Skewness		2.366						
82												
83				Relevant UCL Statistics								
84				Normal Distribution Test						Lognormal Distribution Test		
85				Shapiro Wilk Test Statistic		0.681				Shapiro Wilk Test Statistic		0.946
86				Shapiro Wilk Critical Value		0.93				Shapiro Wilk Critical Value		0.93
87				Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level		
88												
89				Assuming Normal Distribution						Assuming Lognormal Distribution		
90				95% Student's-t UCL		134				95% H-UCL		188.7
91				95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL		207.6
92				95% Adjusted-CLT UCL (Chen-1995)		143.4				97.5% Chebyshev (MVUE) UCL		257.2
93				95% Modified-t UCL (Johnson-1978)		135.7				99% Chebyshev (MVUE) UCL		354.8
94												
95				Gamma Distribution Test						Data Distribution		
96				k star (bias corrected)		0.684				Data Follow Appr. Gamma Distribution at 5% Significance Level		
97				Theta Star		137.3						
98				MLE of Mean		93.87						
99				MLE of Standard Deviation		113.5						
100				nu star		43.77						
101				Approximate Chi Square Value (.05)		29.59				Nonparametric Statistics		
102				Adjusted Level of Significance		0.0416				95% CLT UCL		132.8
103				Adjusted Chi Square Value		28.97				95% Jackknife UCL		134
104										95% Standard Bootstrap UCL		133.4
105				Anderson-Darling Test Statistic		1.029				95% Bootstrap-t UCL		154.2
106				Anderson-Darling 5% Critical Value		0.789				95% Hall's Bootstrap UCL		157.1
107				Kolmogorov-Smirnov Test Statistic		0.153				95% Percentile Bootstrap UCL		136.5
108				Kolmogorov-Smirnov 5% Critical Value		0.162				95% BCA Bootstrap UCL		146.4
109				Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL		197.1
110										97.5% Chebyshev(Mean, Sd) UCL		241.8

	A	B	C	D	E	F	G	H	I	J	K	L
111	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					329.6
112	95% Approximate Gamma UCL (Use when n >= 40)					138.8						
113	95% Adjusted Gamma UCL (Use when n < 40)					141.8						
114												
115	Potential UCL to Use						Use 95% Approximate Gamma UCL					138.8
116												
117	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
118	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
119	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
120												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2		User Selected Options										
3			From File	greater 2 wo excav_satproperty.wst								
4			Full Precision	OFF								
5			Confidence Coefficient	95%								
6			Number of Bootstrap Operations	2000								
7												
8												
9	BAP EQUIVALENT-HALFND											
10												
11						General Statistics						
12						Number of Valid Data	34				Number of Detected Data	33
13						Number of Distinct Detected Data	33				Number of Non-Detect Data	1
14											Percent Non-Detects	2.94%
15												
16						Raw Statistics					Log-transformed Statistics	
17						Minimum Detected	0.0142				Minimum Detected	-4.257
18						Maximum Detected	7.873				Maximum Detected	2.063
19						Mean of Detected	0.661				Mean of Detected	-1.709
20						SD of Detected	1.415				SD of Detected	1.701
21						Minimum Non-Detect	0.02				Minimum Non-Detect	-3.912
22						Maximum Non-Detect	0.02				Maximum Non-Detect	-3.912
23												
24												
25						UCL Statistics						
26						Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only	
27						Shapiro Wilk Test Statistic	0.468				Shapiro Wilk Test Statistic	0.944
28						5% Shapiro Wilk Critical Value	0.931				5% Shapiro Wilk Critical Value	0.931
29						Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level	
30												
31						Assuming Normal Distribution					Assuming Lognormal Distribution	
32						DL/2 Substitution Method					DL/2 Substitution Method	
33						Mean	0.642				Mean	-1.794
34						SD	1.398				SD	1.747
35						95% DL/2 (t) UCL	1.048				95% H-Stat (DL/2) UCL	2.208
36												
37						Maximum Likelihood Estimate(MLE) Method					Log ROS Method	
38						Mean	0.521				Mean in Log Scale	-1.795
39						SD	1.495				SD in Log Scale	1.749
40						95% MLE (t) UCL	0.955				Mean in Original Scale	0.642
41						95% MLE (Tiku) UCL	0.927				SD in Original Scale	1.398
42											95% t UCL	1.048
43											95% Percentile Bootstrap UCL	1.063
44											95% BCA Bootstrap UCL	1.294
45											95% H UCL	2.217
46												
47						Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only	
48						k star (bias corrected)	0.467				Data Follow Appr. Gamma Distribution at 5% Significance Level	
49						Theta Star	1.414					
50						nu star	30.84					
51												
52						A-D Test Statistic	1.066				Nonparametric Statistics	
53						5% A-D Critical Value	0.813				Kaplan-Meier (KM) Method	
54						K-S Test Statistic	0.813				Mean	0.642
55						5% K-S Critical Value	0.162				SD	1.377

	A	B	C	D	E	F	G	H	I	J	K	L
56	Data follow Appr. Gamma Distribution at 5% Significance Level										SE of Mean	0.24
57											95% KM (t) UCL	1.048
58	Assuming Gamma Distribution										95% KM (z) UCL	1.036
59	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	1.048
60					Minimum	0.000001					95% KM (bootstrap t) UCL	1.599
61					Maximum	7.873					95% KM (BCA) UCL	1.06
62					Mean	0.641					95% KM (Percentile Bootstrap) UCL	1.069
63					Median	0.212					95% KM (Chebyshev) UCL	1.688
64					SD	1.398					97.5% KM (Chebyshev) UCL	2.14
65					k star	0.389					99% KM (Chebyshev) UCL	3.029
66					Theta star	1.649						
67					Nu star	26.45	Potential UCLs to Use					
68					AppChi2	15.73					95% KM (Chebyshev) UCL	1.688
69	95% Gamma Approximate UCL (Use when n >= 40)					1.079						
70	95% Adjusted Gamma UCL (Use when n < 40)					1.108						
71	Note: DL/2 is not a recommended method.											
72												
73	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
74	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
75	For additional insight, the user may want to consult a statistician.											
76												
77												
78	BAP EQUIVALENT-POS											
79												
80	General Statistics											
81	Number of Valid Data					34	Number of Detected Data					33
82	Number of Distinct Detected Data					33	Number of Non-Detect Data					1
83							Percent Non-Detects					2.94%
84												
85	Raw Statistics						Log-transformed Statistics					
86	Minimum Detected					0.00024	Minimum Detected					-8.335
87	Maximum Detected					7.873	Maximum Detected					2.063
88	Mean of Detected					0.637	Mean of Detected					-2.184
89	SD of Detected					1.421	SD of Detected					2.309
90	Minimum Non-Detect					0.02	Minimum Non-Detect					-3.912
91	Maximum Non-Detect					0.02	Maximum Non-Detect					-3.912
92												
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
96	Shapiro Wilk Test Statistic					0.464	Shapiro Wilk Test Statistic					0.969
97	5% Shapiro Wilk Critical Value					0.931	5% Shapiro Wilk Critical Value					0.931
98	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
99												
100	Assuming Normal Distribution						Assuming Lognormal Distribution					
101	DL/2 Substitution Method						DL/2 Substitution Method					
102	Mean					0.618	Mean					-2.255
103	SD					1.404	SD					2.311
104	95% DL/2 (t) UCL					1.026	95% H-Stat (DL/2) UCL					8.742
105												
106	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
107	Mean					0.288	Mean in Log Scale					-2.267
108	SD					1.694	SD in Log Scale					2.324
109	95% MLE (t) UCL					0.78	Mean in Original Scale					0.618
110	95% MLE (Tiku) UCL					0.787	SD in Original Scale					1.404

	A	B	C	D	E	F	G	H	I	J	K	L
111											95% t UCL	1.026
112											95% Percentile Bootstrap UCL	1.047
113											95% BCA Bootstrap UCL	1.348
114											95% H UCL	9.072
115												
116				Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only			
117					k star (bias corrected)	0.368			Data appear Gamma Distributed at 5% Significance Level			
118					Theta Star	1.73						
119					nu star	24.29						
120												
121					A-D Test Statistic	0.478			Nonparametric Statistics			
122					5% A-D Critical Value	0.837					Kaplan-Meier (KM) Method	
123					K-S Test Statistic	0.837					Mean	0.618
124					5% K-S Critical Value	0.164					SD	1.383
125				Data appear Gamma Distributed at 5% Significance Level							SE of Mean	0.241
126											95% KM (t) UCL	1.026
127				Assuming Gamma Distribution							95% KM (z) UCL	1.014
128					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	1.026
129					Minimum	0.000001					95% KM (bootstrap t) UCL	1.655
130					Maximum	7.873					95% KM (BCA) UCL	1.096
131					Mean	0.618					95% KM (Percentile Bootstrap) UCL	1.03
132					Median	0.153					95% KM (Chebyshev) UCL	1.668
133					SD	1.404					97.5% KM (Chebyshev) UCL	2.122
134					k star	0.322					99% KM (Chebyshev) UCL	3.015
135					Theta star	1.918						
136					Nu star	21.9			Potential UCLs to Use			
137					AppChi2	12.26					95% KM (Chebyshev) UCL	1.668
138					95% Gamma Approximate UCL (Use when n >= 40)	1.103						
139					95% Adjusted Gamma UCL (Use when n < 40)	1.137						
140	Note: DL/2 is not a recommended method.											
141												
142	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
143	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
144	For additional insight, the user may want to consult a statistician.											
145												