July 14, 2017 Reference No. 013932-130

Ms. Laura Fischer
Project Manager
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

Dear Ms. Fischer:

Re: December 2016 through May 2017 Groundwater Monitoring Report
Motorola 52nd Street Superfund Site Operable Unit 2 Area
Phoenix, Arizona

On behalf of NXP USA, Inc. (NXP) (formerly Freescale Semiconductor, Inc.) and Honeywell International Inc. (Honeywell) (collectively the Companies), GHD Services Inc. (GHD) is pleased to submit two copies of this groundwater monitoring report (GWMR) for the Motorola 52nd Street Superfund Site Operable Unit 2 (OU2) Area in Phoenix, Arizona (Site). The groundwater monitoring was conducted by GHD during the period of December 2016 through May 2017, in accordance with the revised Operations and Maintenance (O&M) Manual (Conestoga-Rovers & Associates [CRA], 2011). As agreed to with the United States Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ), (collectively the Agencies), groundwater quality monitoring is performed semi-annually (March and September). On April 6, 2017, NXP on behalf of the Companies requested the Hydraulic Groundwater Quality reporting frequency be changed from quarterly to semi-annual (December to May and June to November), and ADEQ approved this request in an April 12, 2017 letter.

The objectives of the groundwater monitoring program are as follows:

- Provide groundwater quality and hydraulic data to monitor trends in the groundwater levels and compounds of concern (COCs) concentrations associated with the OU2 groundwater extraction system (GES).
- Provide data to determine when OU2 GES operations should be modified or discontinued.
- In accordance with a March 22, 2002 letter submitted to the EPA by Motorola (now known as NXP) on behalf of the Companies, the objective of the groundwater monitoring report is to transmit the results of the groundwater monitoring activities to the Agencies. Evaluation of the effectiveness of the groundwater extraction, treatment, and discharge system is performed once a year and documented in the annual effectiveness report, as required by Section 7.4.2 of the revised O&M Manual.
- The monitor well network, presented in Section 7.1.1 of the revised O&M Manual, was selected utilizing existing monitor wells supplemented by monitor wells installed in the vicinity of the predicted capture zone. The network includes monitoring wells on either side of the predicted capture zone sufficient to demonstrate the effectiveness of capture, as well as additional monitor wells installed upgradient of the GES to evaluate regional groundwater concentrations. The groundwater monitor well network is presented in **Table 1**. **Table 1** is a reproduction of Table B.2.1 of Appendix B of the

revised O&M Manual, with the additional monitor wells added as appropriate. **Table 2** provides a summary of monitor well construction details.

- Groundwater monitoring is completed in accordance with Section 7.1.2, Section 7.1.3, Appendix A (Quality Assurance Project Plan [QAPP]), and Appendix D (Health and Safety Plan [HASP]) of the revised O&M Manual (CRA 2011).

The following figures are included with this report:

Figure 1	Groundwater Elevations May 2017 - Salt River Gravel
Figure 2	Groundwater Elevations May 2017 - Basin Fill
Figure 3	Locations of Geologic Cross-Sections
Figure 4	Geologic Cross-Section A-A’
Figure 5	Geologic Cross-Section B-B’
Figure 6	Geologic Cross-Section C-C’
Figure 7	Geologic Cross-Section D-D’
Figure 8	Select Monitor Well Datalogger Data
Figure 9	Groundwater Concentrations March and May - Salt River Gravel
Figure 10	Groundwater Concentrations March and May - Basin Fill

The following tables are included with this report:

Table 1	Groundwater Monitor Well Network
Table 2	Summary of Monitor Well Construction Details
Table 3A	Groundwater Sample Key – March and April 2017
Table 3B	Groundwater Sample Key – May 2017
Table 4A	Summary of Monitor Well Development Data - March and April 2017
Table 4B	Summary of Monitor Well Development Data - May 2017
Table 5A	Summary of Groundwater Quality Data - March and April 2017
Table 5B	Summary of Groundwater Quality Data - May 2017
Table 6	Comparison of Groundwater Quality Data - September 2016, March/April and May 2017

The following attachments are included in this report:

Attachment A	Groundwater Elevations and Hydrographs
Attachment B	Data Quality Assessment

Attachment C Laboratory Analytical Reports (CD included for the Agencies only)

1. Groundwater Hydraulic Monitoring

Groundwater levels in the monitor wells and piezometers, which were measured during the reporting period of December 2016 through May 2017, are presented in Table A.1 of **Attachment A**.

Water levels were collected on December 5 and 6, 2016, by GHD. A second hydraulic monitoring event was conducted on January 4 and 5, 2017, prior to the scheduled OU2 maintenance/Salt River Project (SRP) Grand Canal dry-up. A third hydraulic monitoring event was conducted on January 30 and 31, 2017, just prior to the OU2 GES restart after completion of the scheduled Grand Canal dry-up. After restart of the OU2 GES, an unscheduled shutdown occurred from February 10, 2017 to March 18, 2017, at the direction of SRP, due to excess storm flows/runoff through the Grand Canal and Salt River system. During this period, a fourth regularly scheduled hydraulic monitoring event was conducted on March 3 and 4, 2017; however, that routine monitoring occurred during non-pumping conditions due to the SRP directed shut-down. Therefore, a fifth round of hydraulic monitoring was conducted on May 19 and 20, 2017, approximately 1 month after the OU2 GES restart, to provide a representation of pumping conditions and a better indication of groundwater flow patterns during typical OU2 GES operations. Groundwater elevations and equipotential contours for the May 19 and 20, 2017 hydraulic monitoring event are presented on **Figures 1** and **2** for Salt River Gravel (SRG) and Basin Fill (BF), respectively, with the interpreted capture zone delineated.

During the March gauging event, water levels in wells NW05-S, NW06-D, NW07-D, and NW09-D2, were anomalously low compared to regional trends, so these wells were subsequently redeveloped and new water levels were collected between March 23 and March 28, 2017 (refer to Section 3 of this report for more details).

Figure 3 presents a map depicting the locations of four geologic cross-sections. **Figures 4** through **7** present the four geologic cross-sections (A-A' through D-D'), and include baseline (July/September 2001) and May 2017 water levels, where available, or March 2017 water levels (provided the well was installed at time of baseline sampling event). Hydrographs from select monitor wells with water level pressure transducers, showing daily trends, are shown on **Figure 8**. Monitor well hydrographs showing groundwater elevation trends from July 2001 through May 2017 are presented in **Attachment A**.

During the period from December 2016 through May 2017, water levels in both subunit wells downgradient of the OU2 GES (OU314-D, NW03, NW04-S, and EW22-D) west-northwest of the OU2 GES area increased due to seasonal fluctuations, consistent with historical data. Additionally, during the period from March 2017 to May 2017, groundwater elevations in this region (west-northwest of the OU2) decreased as regional pumping resumed. During the same period, water levels in the SRG subunit and BF subunit wells upgradient and downgradient of the OU2 GES area increased due to recharge, likely from minor Salt River flows.

2. Groundwater Quality Monitoring

As outlined above, groundwater quality monitoring and sampling were performed from March 6 through April 19 (March/April) and May 2017, on select wells in the OU2 GES groundwater monitor well network. During the March sampling event the OU2 GES was not operational. Therefore, the water quality data was reviewed and compared to historical data and several wells had slight increases; therefore, supplemental water quality sampling was conducted in April and May 2017. In March/April 2017, 23 groundwater samples were collected, along with three duplicates, two matrix spike/matrix spike duplicates (MS/MSDs), and three field blanks. Additionally, five rinse blanks were collected by GHD during this period. A summary of the GHD sample identification numbers for March 2017 is presented in **Table 3A**.

Wells NW04-S, NW05-S, and NW07-S could not be purged of three well volumes, even at a low pumping rate of <0.5 gallons per minute (gpm). Therefore, they were purged dry after one well volume. After approximately 12 hours, these wells had at least 80 percent recovery, and a sample was collected from each well with a disposable bailer.

Because several wells had anomalous water quality changes from the previous event (September 2016), and the fact that during the March event, the OU2 GES was not operational, the Companies decided to collect additional water quality samples in May 2017 (after the OU2 GES was operational) to verify the water quality results in the southern area of the OU2 groundwater plume. In May 2017, 20 groundwater samples were collected, along with one duplicate, one MS/MSD, three field blanks, and three rinse blanks, by GHD. A summary of the GHD sample identification numbers for May 2017 is presented in **Table 3B.**

Wells NW05-S and NW06-S could not be purged of three well volumes, even at a low pumping rate of <0.5 gpm. Therefore, they were purged dry after one well volume. After approximately 12 hours, wells NW05-S and NW06-S had at least 80 percent recovery, and a sample was collected from each well with a disposable bailer.

Prior to purging, a water level measurement was obtained from each monitor well using an electronic water level indicator. Groundwater quality sampling and hydraulic monitoring of the monitor wells were conducted in accordance with the procedures in the Revised O&M Manual (CRA, 2011). Water quality field parameters, including pH, temperature, and specific conductivity, along with color and clarity of the purged water were monitored during purging in accordance with the Revised O&M Manual, Field Sampling Plan (FSP), and QAPP. After approximately three well volumes were purged from the monitor well, a groundwater sample was collected for analysis of select volatile organic compounds (VOCs).

A summary of the monitor well development data for GHD sampled wells is presented in **Table 4A and Table 4B** for March/April and May 2017, respectively. Samples collected by GHD were analyzed by Accutest Laboratories (Arizona Department of Health Services [ADHS] Certificate #AZ0762) in Phoenix, Arizona for select VOCs using EPA Test Method 8260B. A data quality assessment and validation for March/April and May 2017 are included in **Attachment B**. All analytical data were found to exhibit acceptable levels of accuracy and precision.

Tables 5A and 5B present the VOC analytical results for the groundwater samples collected in March/April and May 2017, respectively. At the request of the Agencies, current reporting period analytical results were briefly compared to the previous reporting period (September through November 2016) groundwater quality monitoring results for the primary contaminant of concern, trichloroethene (TCE) (**Table 6**). In March, 23 of the 26 wells sampled had slight increases in TCE concentration from September 2016 to March 2017, and the remaining wells had either decreases or no change in concentration. Similar conditions were encountered in May 2017, with 15 of the 21 wells sampled exhibiting a slight increase. In general, March/April and May 2017 concentrations were relatively similar to September 2016 concentrations. Downgradient of the estimated OU2 GES capture zone (**Figures 1** and **2**), two wells sampled in May 2017 had minor TCE concentration increases with respect to the September 2016 round, including NW09-D (5.2 micrograms per liter [µg/L] to 6.4 µg/L) and NW13-D (3.0 µg/L to 3.9 µg/L). TCE was not detected above its Maximum Contaminant Level (MCL) of 5 µg/L downgradient of these BF screened wells.

Laboratory analytical reports are included as **Attachment C** (CD for the Agencies only). Further evaluation and discussion of these concentrations will be included with the 2017 Effectiveness Report, which will be submitted to the Agencies on March 31, 2018.

3. Additional Activities

As described in Section 1 above, GHD noted during the March 2017 water quality sampling event that the water levels in several monitoring wells appeared to be anomalously low compared to historical measurements, regional trends, and other wells in their vicinity when purged. To help rectify this situation, between March 23 and March 28, 2017, as part of the planned March hydraulic monitoring event, GHD retained Cascade Drilling to redevelop and acid-clean monitoring wells NW05-S, NW06-D, NW07-D, and NW09-D2. Subsequently, water levels for these wells were recorded after the cleaning. The redevelopment and acid-cleaning activity resulted in increased purge production of these monitoring wells, as well as more consistent water levels with surrounding wells and historical trends. For example, the water level in monitor well NW09-D2 was approximately 2 feet higher after redevelopment on May 19 2017, than on March 23, 2017. As noted previously, this is an ongoing issue in a limited number of wells as the water levels fluctuate, but there is little impact on the groundwater quality collected from these wells (managed through well maintenance), it does not have any impact on the annual effectiveness evaluation for the GES.

4. Conclusions

Based on the water level and water quality data collected for the period from December 2016 to May 2017, the Companies believe that the capture zone created by OU2 extraction wells does not extend across the observed southern plume boundary. The portion of the OU2 plume that is not contained (south of monitoring well NW11-M in the SRG and south of NW16-M in the BF) has only relatively low levels of

TCE. As a result, and as discussed in a July 7, 2017, conference call with the Agencies, the Companies are developing a Work Plan to evaluate potential contingent remedial actions.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned at (602) 216-7200.

Sincerely,

GHD

REGISTERED GEOLOGIST
CERTIFICATE NO.
30135
MANFRED
PLASCHKE
Date Signed 7/14/17
ARIZONA U.S.A.
EXPIRES 03/31/20

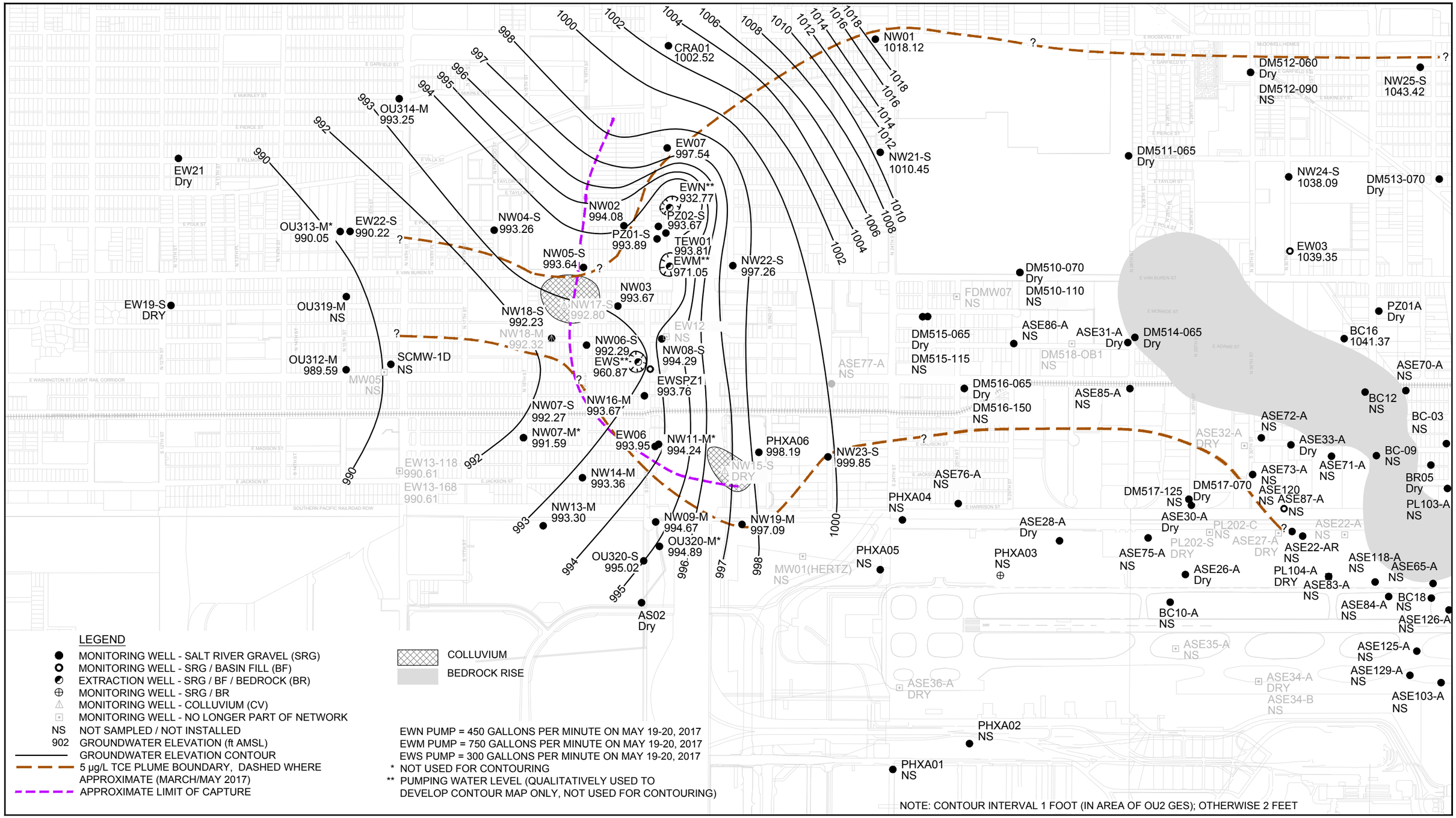
Manfred Plaschke, R.G.

KL/MP/trc/Fisc-013

Encl.

cc: Jenn McCall, NXP (1 hard copy, e-copy)
Tao Wu, Honeywell (e-copy)
Tom Suriano, Clear Creek (e-copy)
Rachel Loftin, EPA (e-copy)
Robert Frank, CH2M (e-copy)
Julie Riemenschneider, COP (e-copy)
Joe Giudice, COP (e-copy)
Jeff Menkin, Hargis (e-copy)
Sue Kraemer, CB&I (2 hard copies, e-copy, 2 CDs)
Steve Quigley, GHD (e-copy)
OU2 Facility Filing (1 hard copy)

Figures



0 500 1000ft

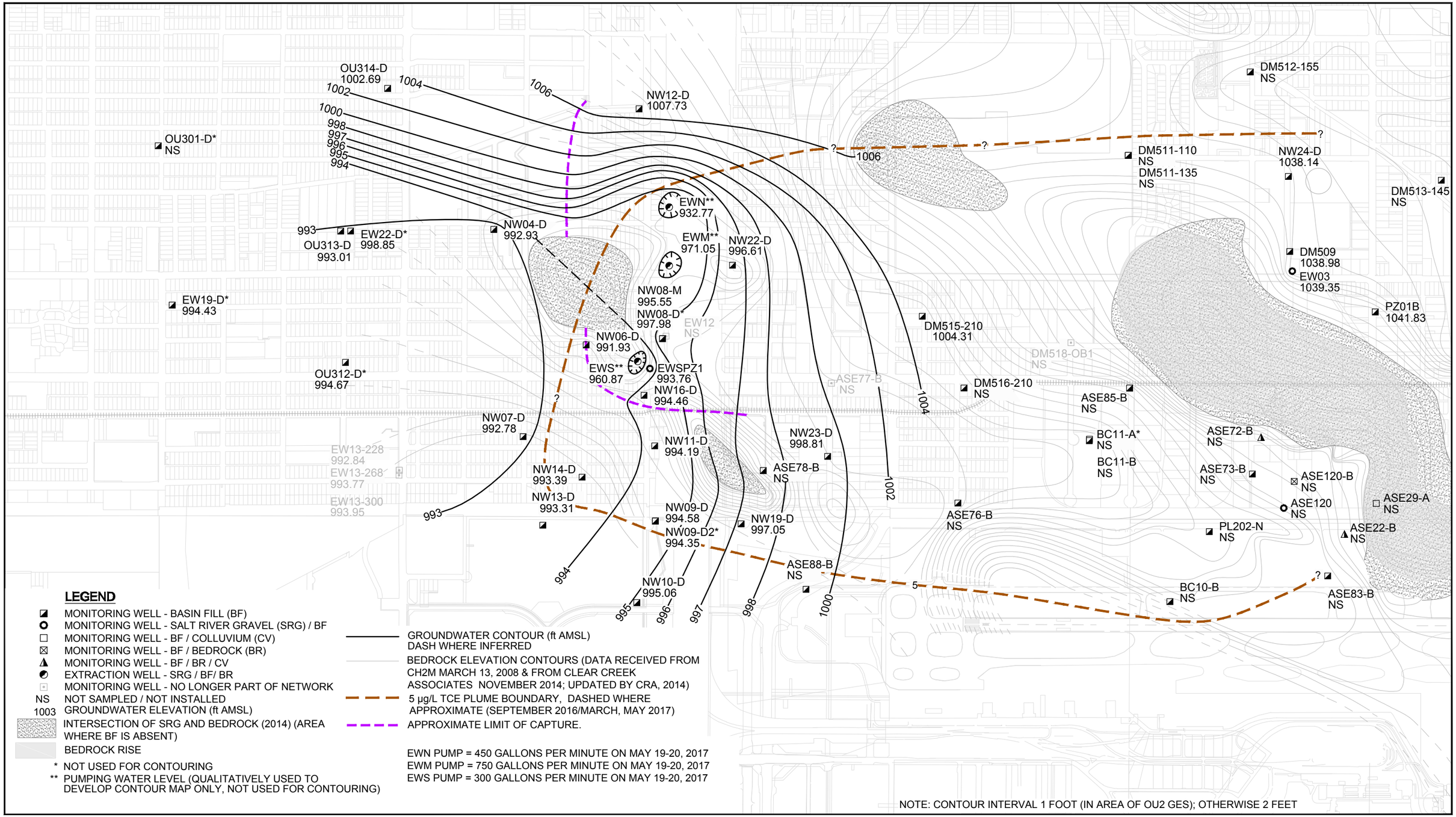
OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 6, 2017

GROUNDWATER ELEVATIONS - MAY 2017 - SRG

FIGURE 1

CAD File: I:\CAD\Drawings\013000s\13932\013932-CORR\013932-130(FISC013)\013932-130(FISC013)GN-PX001_Fig1.dwg



0 500Ft 1000Ft

N

GHD

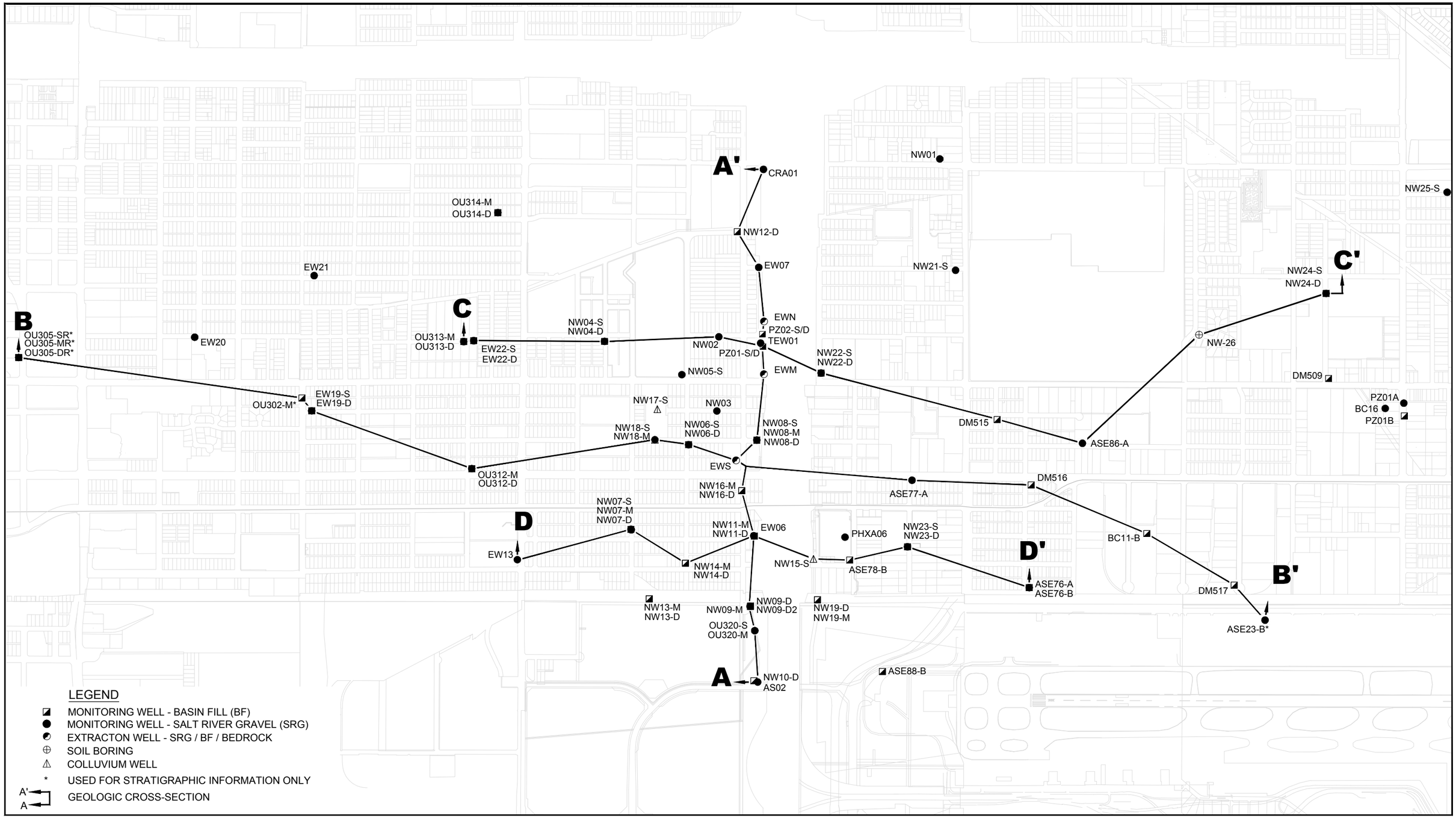
OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 5, 2017

GROUNDWATER ELEVATIONS - MAY 2017 - BF

FIGURE 2

CAD File: I:\CAD\Drawings\013000s\13932\013932-CORR\013932-130(FISC013)\013932-130(FISC013)GN-PX002_Fig2.dwg



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GHD

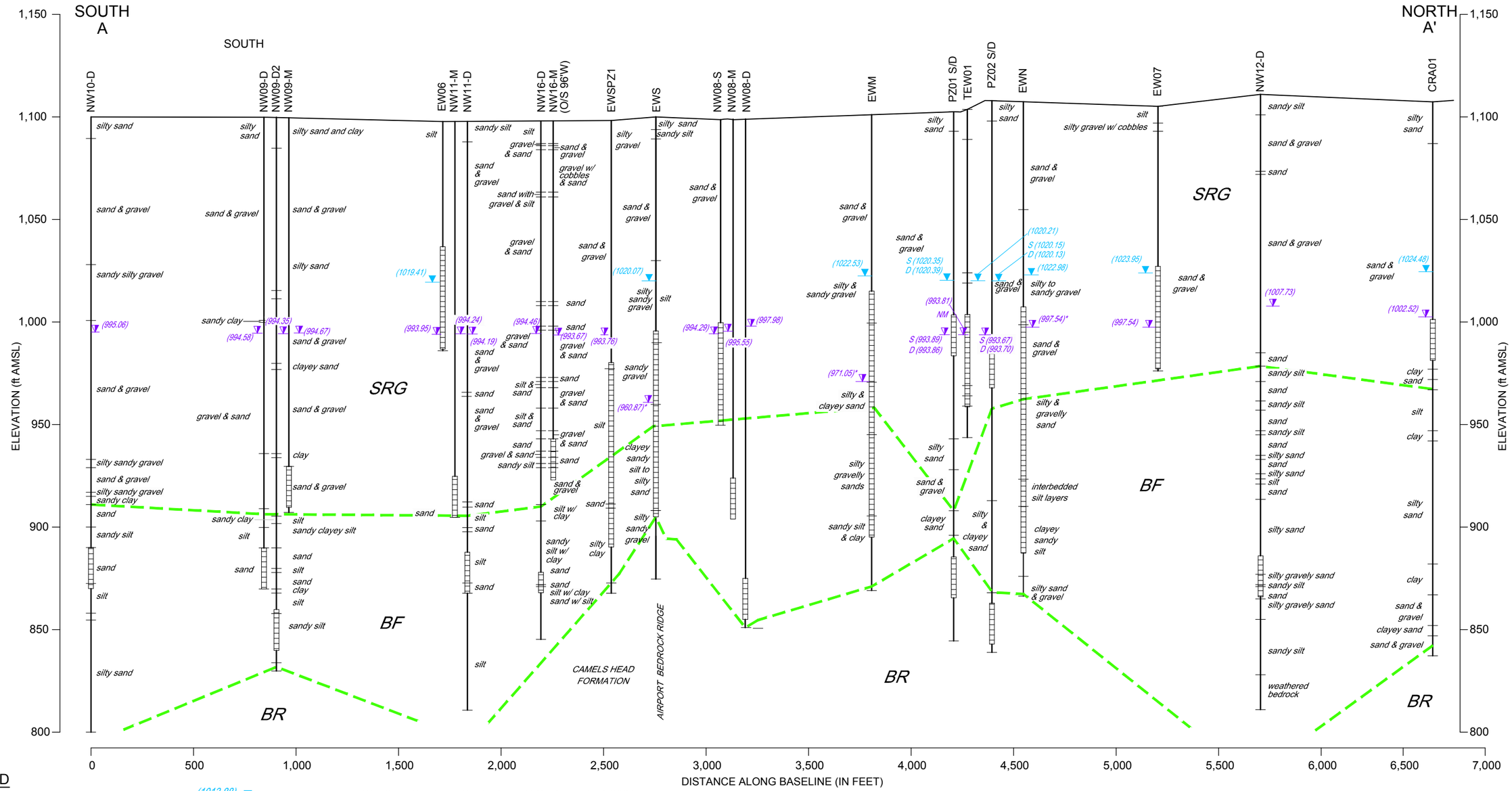
OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 6, 2017

LOCATIONS OF GEOLOGIC CROSS-SECTIONS

FIGURE 3

CAD File: I:\CAD\Drawings\013000s\13932\013932-CORR\013932-130(FISC013)\013932-130(FISC013)GN-PX003_Fig3.dwg



LEGEND

CRA-1 — WELL NAME
GROUND SURFACE
WELL
WELL SCREEN

(1013.88) WATER ELEVATION (ft AMSL) (MEASURED JULY/SEPTEMBER 2001)
(1019.55) WATER TABLE (ft AMSL) (MEASURED MAY 2017)
CONTACT BETWEEN HYDROSTRATIGRAPHIC UNITS
* PUMPING WATER LEVEL (QUALITATIVELY USED TO DEVELOP CONTOUR MAP ONLY)

BR - BEDROCK
BF - BASIN FILL
SRG - SALT RIVER GRAVEL

0 20 50ft
VERTICAL SCALE
0 200 500ft
HORIZONTAL SCALE

N

GHD

OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jun 15, 2017

GEOLOGIC CROSS-SECTION A-A'

FIGURE 4

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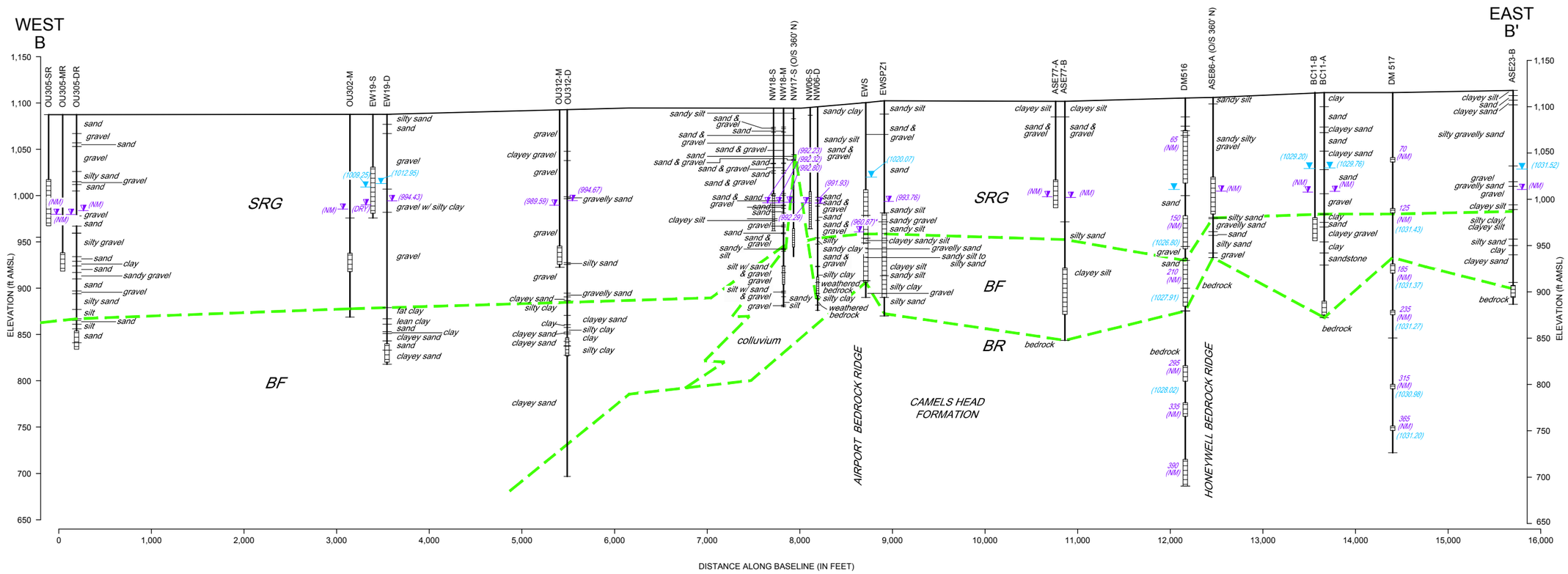

LEGEND

CRA-1 — WELL NAME

GROUND SURFACE

WELL

WELL SCREEN

(1013.88) WATER ELEVATION (ft AMSL) (MEASURED JULY/SEPTEMBER 2001)

(1019.55) WATER TABLE (ft AMSL) (MEASURED MAY 2017)

(NM) NOT MEASURED

CONTACT BETWEEN HYDROSTRATIGRAPHIC UNITS

* PUMPING WATER LEVEL (QUALITATIVELY USED TO DEVELOP CONTOUR MAP ONLY)

BR - BEDROCK

BF - BASIN FILL

SRG - SALT RIVER GRAVEL

0 40 120ft

VERTICAL SCALE

0 500 1000ft

HORIZONTAL SCALE

OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

GEOLOGIC CROSS-SECTION B-B'

013932-130

Jun 6, 2017

FIGURE 5

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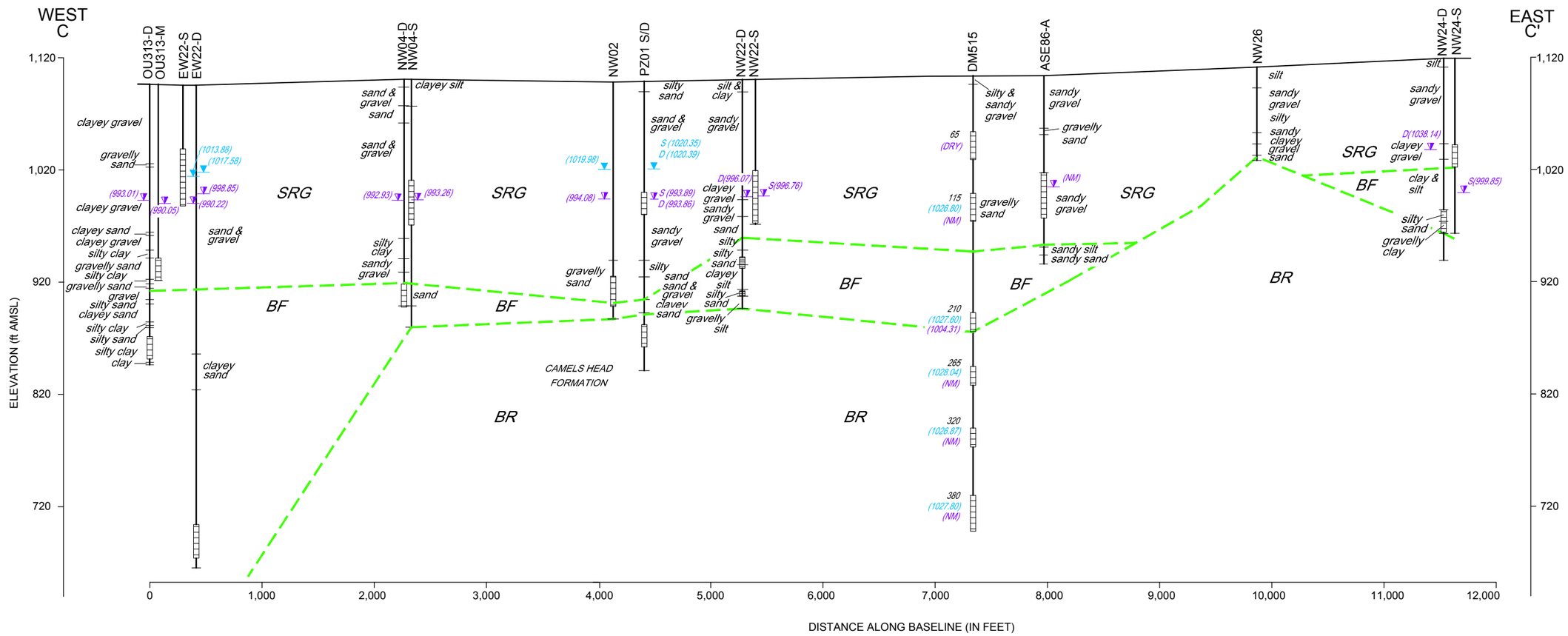

LEGEND

CRA-1 — WELL NAME
GROUND SURFACE
WELL
WELL SCREEN

(1013.88) WATER ELEVATION (ft AMSL) (MEASURED JULY/SEPTEMBER 2001)
(1019.55) WATER TABLE (ft AMSL) (MEASURED MAY 2017)
(NM) NOT MEASURED
CONTACT BETWEEN HYDROSTRATIGRAPHIC UNITS

BR - BEDROCK
BF - BASIN FILL
SRG - SALT RIVER GRAVEL

0 50 100ft
VERTICAL SCALE
0 500 1000ft
HORIZONTAL SCALE

OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

GEOLOGIC CROSS-SECTION C-C'

013932-130
Jun 15, 2017

FIGURE 6

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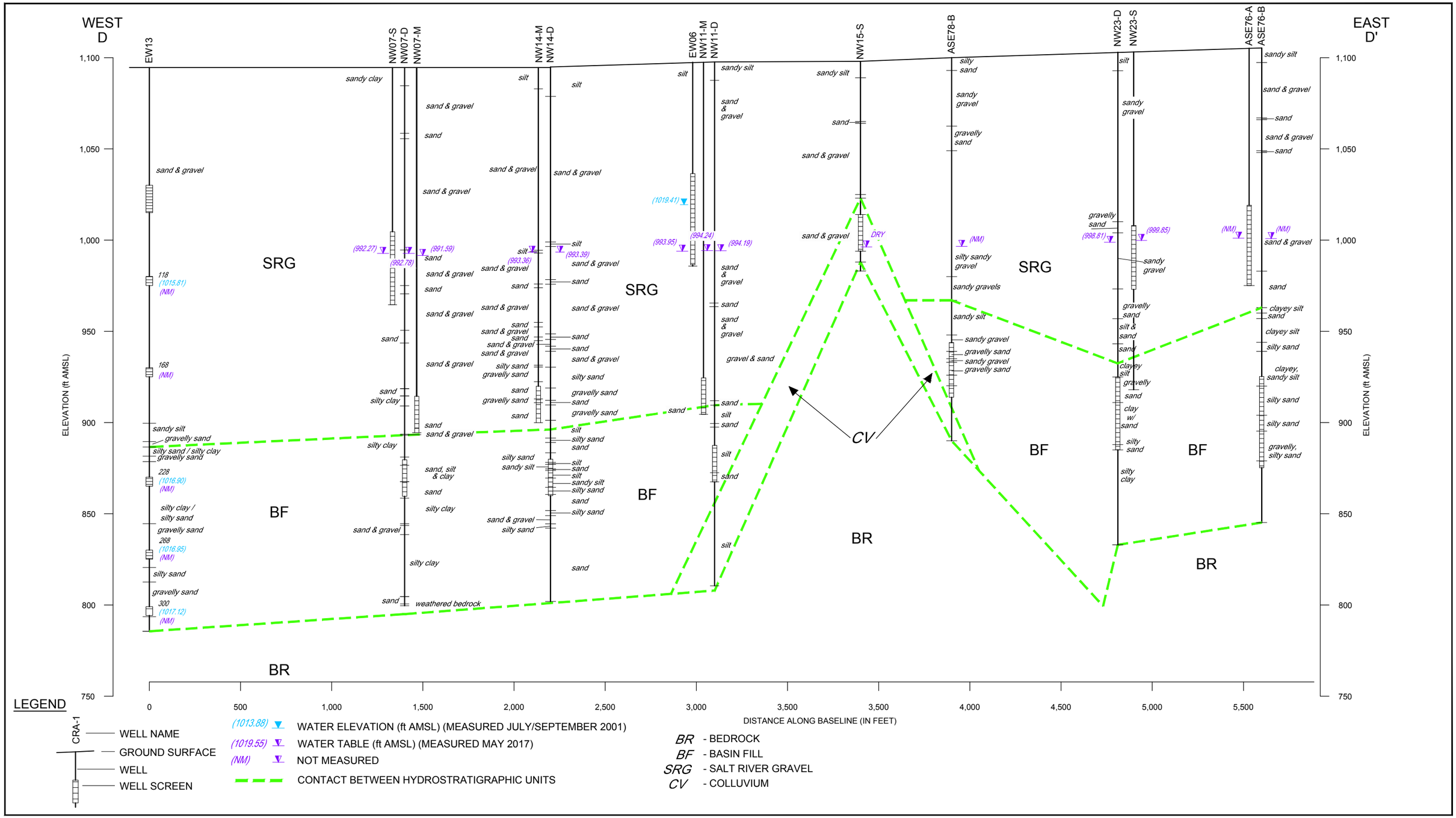

0 20 50ft
VERTICAL SCALE
0 200 500ft
HORIZONTAL SCALE

OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 6, 2017

GEOLOGIC CROSS-SECTION D-D'

FIGURE 7

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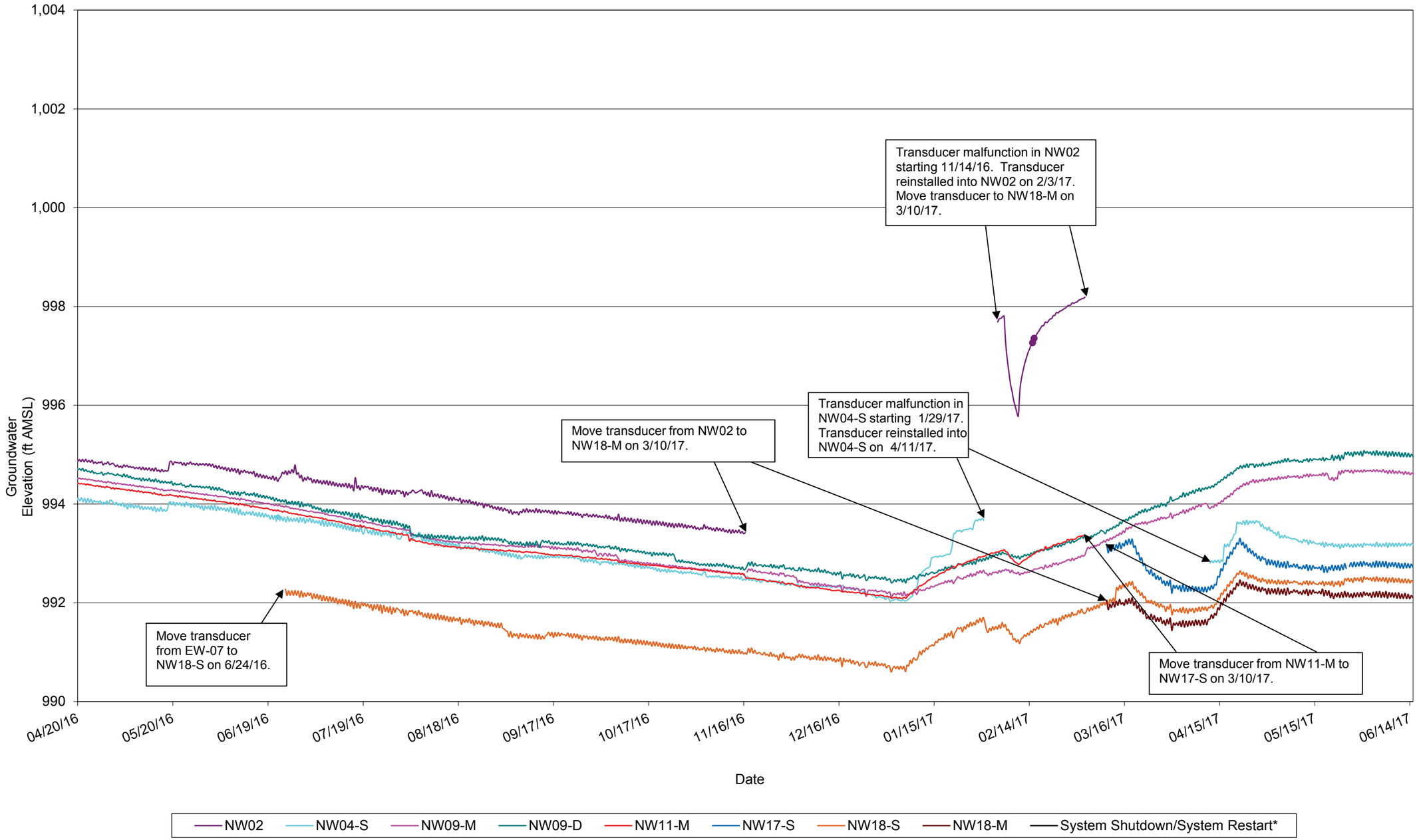
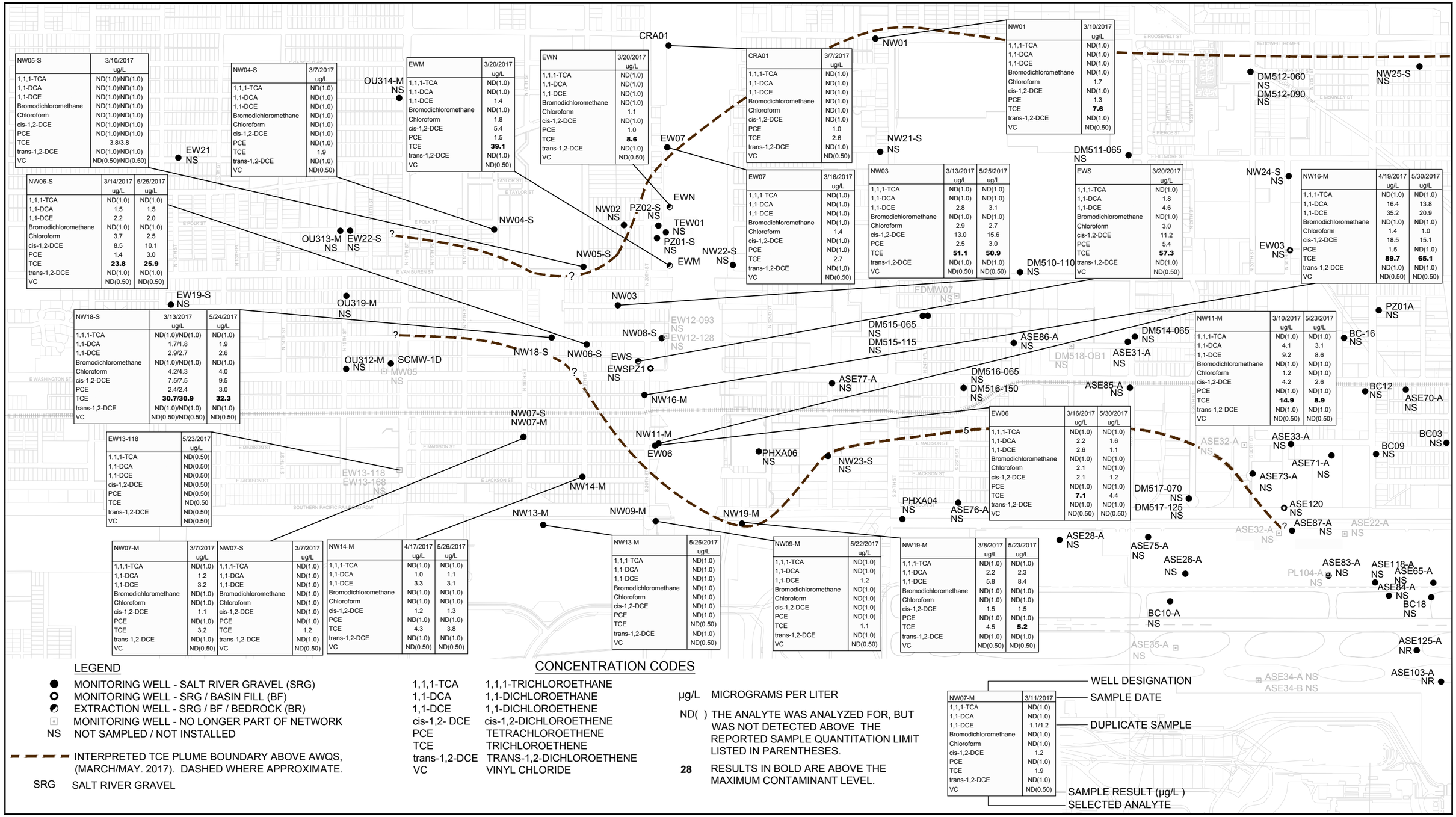


Notes:
* Full system shutdown or individual well shutdown or restart
See monthly progress reports for full description of shutdown/restart events
ft AMSL - feet Above Mean Sea Level

figure 8
SELECT MONITOR WELL DATALOGGER DATA
52nd STREET SUPERFUND SITE - OU2 AREA
Phoenix, Arizona



NW05-S	3/10/2017 ug/L
1,1,1-TCA	ND(1.0)/ND(1.0)
1,1-DCA	ND(1.0)/ND(1.0)
1,1-DCE	ND(1.0)/ND(1.0)
Bromodichloromethane	ND(1.0)/ND(1.0)
Chloroform	ND(1.0)/ND(1.0)
cis-1,2-DCE	ND(1.0)/ND(1.0)
PCE	ND(1.0)/ND(1.0)
TCE	3.8/3.8
trans-1,2-DCE	ND(1.0)/ND(1.0)
VC	ND(0.50)/ND(0.50)

NW06-S	3/14/2017 ug/L	5/25/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	1.5	1.5
1,1-DCE	2.2	2.0
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	3.7	2.5
cis-1,2-DCE	8.5	10.1
PCE	1.4	3.0
TCE	**23.8**	**25.9**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW04-S	3/7/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	ND(1.0)
TCE	1.9
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EWM	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	1.4
Bromodichloromethane	ND(1.0)
Chloroform	1.8
cis-1,2-DCE	5.4
PCE	1.5
TCE	**39.1**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EWN	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	1.1
cis-1,2-DCE	ND(1.0)
PCE	1.0
TCE	**8.6**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

CRA01	3/7/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	1.0
TCE	2.6
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW01	3/10/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	1.7
cis-1,2-DCE	ND(1.0)
PCE	1.3
TCE	**7.6**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EW07	3/16/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	1.4
cis-1,2-DCE	ND(1.0)
PCE	ND(1.0)
TCE	2.7
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW03	3/13/2017 ug/L	5/25/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	2.8	3.1
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	2.9	2.7
cis-1,2-DCE	13.0	15.6
PCE	2.5	3.0
TCE	**51.1**	**50.9**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

EWS	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	1.8
1,1-DCE	4.6
Bromodichloromethane	ND(1.0)
Chloroform	3.0
cis-1,2-DCE	11.2
PCE	5.4
TCE	**57.3**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW16-M	4/19/2017 ug/L	5/30/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	16.4	13.8
1,1-DCE	35.2	20.9
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	1.4	1.0
cis-1,2-DCE	18.5	15.1
PCE	1.5	ND(1.0)
TCE	**89.7**	**65.1**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW18-S	3/13/2017 ug/L	5/24/2017 ug/L
1,1,1-TCA	ND(1.0)/ND(1.0)	ND(1.0)
1,1-DCA	1.7/1.8	1.9
1,1-DCE	2.9/2.7	2.6
Bromodichloromethane	ND(1.0)/ND(1.0)	ND(1.0)
Chloroform	4.2/4.3	4.0
cis-1,2-DCE	7.5/7.5	9.5
PCE	2.4/2.4	3.0
TCE	**30.7/30.9**	**32.3**
trans-1,2-DCE	ND(1.0)/ND(1.0)	ND(1.0)
VC	ND(0.50)/ND(0.50)	ND(0.50)

NW11-M	3/10/2017 ug/L	5/23/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	4.1	3.1
1,1-DCE	9.2	8.6
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	1.2	ND(1.0)
cis-1,2-DCE	4.2	2.6
PCE	ND(1.0)	ND(1.0)
TCE	**14.9**	**8.9**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

EW06	3/16/2017 ug/L	5/30/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	2.2	1.6
1,1-DCE	2.6	1.1
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	2.1	ND(1.0)
cis-1,2-DCE	2.1	1.2
PCE	ND(1.0)	ND(1.0)
TCE	**7.1**	4.4
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

EW13-118	5/23/2017 ug/L
1,1,1-TCA	ND(0.50)
1,1-DCA	ND(0.50)
1,1-DCE	ND(0.50)
cis-1,2-DCE	ND(0.50)
PCE	ND(0.50)
TCE	ND(0.50
trans-1,2-DCE	ND(0.50)
VC	ND(0.50)

NW07-M	3/7/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	1.2
1,1-DCE	3.2
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	1.1
PCE	ND(1.0)
TCE	3.2
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW07-S	3/7/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	ND(1.0)
TCE	1.2
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW14-M	4/17/2017 ug/L	5/26/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	1.0	1.1
1,1-DCE	3.3	3.1
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	1.2	1.3
PCE	ND(1.0)	ND(1.0)
TCE	4.3	3.8
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW13-M	5/26/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	ND(1.0)
TCE	ND(0.50)
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW09-M	5/22/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	1.2
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	ND(1.0)
TCE	1.1
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW19-M	3/8/2017 ug/L	5/23/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	2.2	2.3
1,1-DCE	5.8	8.4
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	1.5	1.5
PCE	ND(1.0)	ND(1.0)
TCE	4.5	**5.2**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

LEGEND

- ● MONITORING WELL - SALT RIVER GRAVEL (SRG)
- ○ MONITORING WELL - SRG / BASIN FILL (BF)
- ◐ EXTRACTION WELL - SRG / BF / BEDROCK (BR)
- ▫ MONITORING WELL - NO LONGER PART OF NETWORK
- NS NOT SAMPLED / NOT INSTALLED
- — — — INTERPRETED TCE PLUME BOUNDARY ABOVE AWQS, (MARCH/MAY. 2017). DASHED WHERE APPROXIMATE.
- SRG SALT RIVER GRAVEL

CONCENTRATION CODES

1,1,1-TCA	1,1,1-TRICHLOROETHANE
1,1-DCA	1,1-DICHLOROETHANE
1,1-DCE	1,1-DICHLOROETHENE
cis-1,2- DCE	cis-1,2-DICHLOROETHENE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
trans-1,2-DCE	TRANS-1,2-DICHLOROETHENE
VC	VINYL CHLORIDE

µg/L MICROGRAMS PER LITER

ND( ) THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTITATION LIMIT LISTED IN PARENTHESES.

28 RESULTS IN BOLD ARE ABOVE THE MAXIMUM CONTAMINANT LEVEL.

NW07-M	3/11/2017
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	1.1/1.2
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	1.2
PCE	ND(1.0)
TCE	1.9
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

WELL DESIGNATION
SAMPLE DATE
DUPLICATE SAMPLE
SAMPLE RESULT (µg/L)
SELECTED ANALYTE

0 500 1000ft

N

GHD

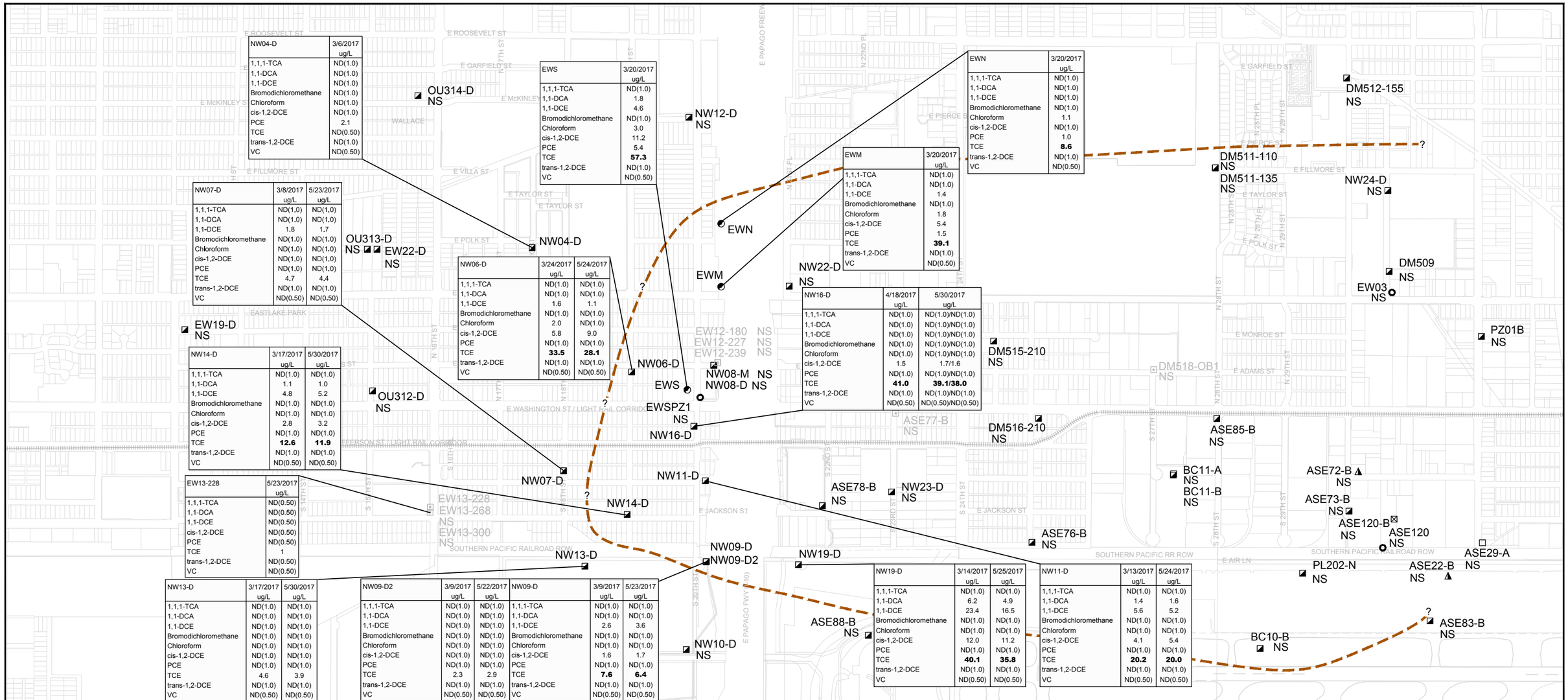
OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 6, 2017

GROUNDWATER CONCENTRATIONS - MARCH/MAY 2017 - SRG

FIGURE 9

CAD File: I:\CAD\Drawings\013000s\13932\013932-CORR\013932-130(FISC013)\013932-130(FISC013)GN-PX010_Fig9.dwg



NW04-D	3/6/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	ND(1.0)
PCE	2.1
TCE	ND(0.50)
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EWS	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	1.8
1,1-DCE	4.6
Bromodichloromethane	ND(1.0)
Chloroform	3.0
cis-1,2-DCE	11.2
PCE	5.4
TCE	**57.3**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EWN	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	ND(1.0)
Bromodichloromethane	ND(1.0)
Chloroform	1.1
cis-1,2-DCE	ND(1.0)
PCE	1.0
TCE	**8.6**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

EWM	3/20/2017 ug/L
1,1,1-TCA	ND(1.0)
1,1-DCA	ND(1.0)
1,1-DCE	1.4
Bromodichloromethane	ND(1.0)
Chloroform	1.8
cis-1,2-DCE	5.4
PCE	1.5
TCE	**39.1**
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

NW07-D	3/8/2017 ug/L	5/23/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	1.8	1.7
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	ND(1.0)	ND(1.0)
PCE	ND(1.0)	ND(1.0)
TCE	4.7	4.4
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW06-D	3/24/2017 ug/L	5/24/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	1.6	1.1
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	2.0	ND(1.0)
cis-1,2-DCE	5.8	9.0
PCE	ND(1.0)	ND(1.0)
TCE	**33.5**	**28.1**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW16-D	4/18/2017 ug/L	5/30/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)/ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)/ND(1.0)
1,1-DCE	ND(1.0)	ND(1.0)/ND(1.0)
Bromodichloromethane	ND(1.0)	ND(1.0)/ND(1.0)
Chloroform	ND(1.0)	ND(1.0)/ND(1.0)
cis-1,2-DCE	1.5	1.7/1.6
PCE	ND(1.0)	ND(1.0)/ND(1.0)
TCE	**41.0**	**39.1/38.0**
trans-1,2-DCE	ND(1.0)	ND(1.0)/ND(1.0)
VC	ND(0.50)	ND(0.50)/ND(0.50)

NW14-D	3/17/2017 ug/L	5/30/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	1.1	1.0
1,1-DCE	4.8	5.2
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	2.8	3.2
PCE	ND(1.0)	ND(1.0)
TCE	**12.6**	**11.9**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

EW13-228	5/23/2017 ug/L
1,1,1-TCA	ND(0.50)
1,1-DCA	ND(0.50)
1,1-DCE	ND(0.50)
cis-1,2-DCE	ND(0.50)
PCE	ND(0.50)
TCE	1
trans-1,2-DCE	ND(0.50)
VC	ND(0.50)

NW13-D	3/17/2017 ug/L	5/30/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	ND(1.0)	ND(1.0)
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	ND(1.0)	ND(1.0)
PCE	ND(1.0)	ND(1.0)
TCE	4.6	3.9
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW09-D2	3/9/2017 ug/L	5/22/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	ND(1.0)	ND(1.0)
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	ND(1.0)	ND(1.0)
PCE	ND(1.0)	ND(1.0)
TCE	2.3	2.9
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW09-D	3/9/2017 ug/L	5/23/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	ND(1.0)	ND(1.0)
1,1-DCE	2.6	3.6
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	1.6	1.7
PCE	ND(1.0)	ND(1.0)
TCE	**7.6**	**6.4**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW19-D	3/14/2017 ug/L	5/25/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	6.2	4.9
1,1-DCE	23.4	16.5
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	12.0	11.2
PCE	ND(1.0)	ND(1.0)
TCE	**40.1**	**35.8**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

NW11-D	3/13/2017 ug/L	5/24/2017 ug/L
1,1,1-TCA	ND(1.0)	ND(1.0)
1,1-DCA	1.4	1.6
1,1-DCE	5.6	5.2
Bromodichloromethane	ND(1.0)	ND(1.0)
Chloroform	ND(1.0)	ND(1.0)
cis-1,2-DCE	4.1	5.4
PCE	ND(1.0)	ND(1.0)
TCE	**20.2**	**20.0**
trans-1,2-DCE	ND(1.0)	ND(1.0)
VC	ND(0.50)	ND(0.50)

LEGEND

- MONITORING WELL - BASIN FILL (BF)
- MONITORING WELL - SALT RIVER GRAVEL (SRG) / BF
- MONITORING WELL - BF / COLLUVIUM (CV)
- MONITORING WELL - BF / BEDROCK (BR)
- MONITORING WELL - BF / BR / CV
- EXTRACTION WELL - SRG / BF/ BR
- MONITORING WELL - NO LONGER PART OF NETWORK
- NS NOT SAMPLED / NOT INSTALLED
- INTERPRETED TCE PLUME BOUNDARY ABOVE AWQS, (SEPTEMBER 2016). DASHED WHERE APPROXIMATE.

CONCENTRATION CODES

1,1,1-TCA	1,1,1-TRICHLOROETHANE
1,1-DCA	1,1-DICHLOROETHANE
1,1-DCE	1,1-DICHLOROETHENE
cis-1,2- DCE	cis-1,2-DICHLOROETHENE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
trans-1,2-DCE	TRANS-1,2-DICHLOROETHENE
VC	VINYL CHLORIDE

µg/L MICROGRAMS PER LITER

ND( ) THE ANALYTE WAS ANALYZED FOR, BUT WAS NOT DETECTED ABOVE THE REPORTED SAMPLE QUANTITATION LIMIT LISTED IN PARENTHESES.

28 RESULTS IN BOLD ARE ABOVE THE MAXIMUM CONTAMINANT LEVEL.

NW07-M	3/1/2017
1,1,1-TCA	ND(1.0)
1,1-DCA	1.1
1,1-DCE	2.6
Bromodichloromethane	ND(1.0)
Chloroform	ND(1.0)
cis-1,2-DCE	1.7
PCE	ND(1.0)
TCE	4.6
trans-1,2-DCE	ND(1.0)
VC	ND(0.50)

WELL DESIGNATION
SAMPLE DATE
ND(1.0)/ND(1.0) = DUPLICATE SAMPLE
SAMPLE RESULT (µg/L)
SELECTED ANALYTE

0 500 1000ft

N

GHD

OPERABLE UNIT 2 AREA
52ND STREET SUPERFUND SITE, PHOENIX, ARIZONA
GROUNDWATER MONITORING REPORT

013932-130
Jul 6, 2017

GROUNDWATER CONCENTRATIONS - MARCH/MAY 2017 - BF

FIGURE 10

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Tables

Table 1

Groundwater Well Monitor Network
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID Monitoring Wells/ Piezometers	Construction Type	Location	Monitoring	
			Hydraulic	Water Quality
BC-16	C	Streets	X	X
CRA01	C	I-10 and Roosevelt Street	X	X
DM509	C	N 30th Place and E Van Buren	X	X
DM515-210	C	N 24th Place and Monroe Street	X	
EW03	C	N 30th Place and E Van Buren	X	X
EW06	C	20th Street and Madison Street	X	X
EW07	C	20th Street and Fillmore Street	X	X
EW19-S	C	12th Street and Monroe Street	X	
EW21	C	12th Street and Fillmore Street	X	
EW22-D	C	15th Street and Polk Street	X	X
EW22-S	C	15th Street and Polk Street	X	X
EWSPZ1	C	20th Street north of Washington Street	X	
NW01	C	24th Street and Roosevelt Street	X	X
NW02	C	Between 19th and 20th Streets on Polk Street	X	X
NW03	C	Between 19th and 20th Streets on Monroe Street	X	X
NW04-S & D	C	Patricio, between Polk and Van Buren	X	X
NW05-S	C	19th Street, between Van Buren and Polk	X	X
NW06-S & D	C	19th Street, between Adams and Washington Streets	X	X
NW07-S, M, & D	C	18th Street, between Madison and Jefferson Streets	X	X
NW08-S, M, & D	C	20th Street and Adams Street	X	X
NW09-D, D2, & M	C	20th Street, south of UPRR track	X	X
NW10-D	C	20th Street and Sky Harbor Circle	X	X
NW11-M & D	C	20th Street and Madison Street	X	X
NW12-D	C	20th Street and Villa Street	X	X
NW13-M & D	N	South of UPRR track and west of 19th Street	X	X
NW14-M & D	N	19th Street and Jackson Street	X	X
NW15-S	C	Jackson Street east of 22nd Street	X	X
NW16-M & D	N	20th Street south of Washington Street	X	X
NW17-S	C	Monroe Street west of 19th Street	X	X
NW18-S & M	C	Adams Street east of 18th Street	X	X
NW19-M & D	C	24th Street and Harrison Street	X	X
NW21-S	C	24th Street and Fillmore Street	X	X
NW22-S & D	C	21st Place and Van Buren Street	X	X
NW23-S & D	C	23rd Street & Madison Street	X	X
NW24-S & D	C	28th Street south of Fillmore Street	X	X
NW25-S	C	33rd Street and Garfield Street	X	X
OU312-M & D	C	15th Street and Adams Street	X	

Table 1

Groundwater Well Monitor Network
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID Monitoring Wells/ Piezometers	Construction Type	Location	Monitoring	
			Hydraulic	Water Quality
OU313-M & D	C	15th Street and Polk Street	X	
OU314-M & D	C	16th Street and McKinley Street	X	
PZ01-S & D	N	I-10 and Polk Street	X	
PZ02-S & D	N	I-10 and Polk Street	X	
TEW01	C	I-10 and Polk Street	X	
PZ01-A & B	C	32nd Street between E Van Buren and Washington Streets	X	X

Notes:

S = Shallow
D = Deep
M = Middle
C = Conventional Well
N = Nested Well
UPRR = Union Pacific Railroad

Table 2

Summary of Monitor Well Construction Details
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID		X Coordinate	Y Coordinate	Hydrostratigraphic Unit of Well Screen	Reference Elevation (ft AMSL)	Ground Elevation (ft AMSL)	Screen Top Depth (ft bgs)	Screen Bottom Depth (ft bgs)	Screen Top Elevation (ft AMSL)
OU2 GES Network Wells									
BC16		470,549.00	891,043.00	SRG	1,116.02	NI	70.0	85.0	1,046.02
CRA01		463,136.23	894,253.99	SRG	1,106.43	1,107.29	105.5	125.5	1,000.93
DM509		469,954.81	891,992.81	BF	1,114.06	1,114.58	124.0	175.0	990.06
EW03		469,954.19	892,003.38	SRG/BF	1,114.75	1,114.60	57.0	107.0	1,057.75
EW06		463,030.97	889,882.84	SRG	1,097.75	1,097.75	61.0	111.0	1,036.75
EW07		463,123.11	893,133.29	SRG	1,104.96	1,105.20	78.0	128.0	1,026.96
EW19-D	(3)	457,697.83	891,405.06	BF	1,087.48	1,087.85	247.0	267.0	840.48
EW19-S	(3)	457,678.87	891,405.37	SRG	1,087.42	1,087.74	57.0	107.0	1,030.42
EW21	(3)	457,761.90	893,019.02	SRG	1,094.11	1,094.80	58.0	108.0	1,036.11
EW22-D		459,655.30	892,217.60	BF	1,095.75	1,096.33	407.0	427.0	688.75
EW22-S		459,644.28	892,218.24	SRG	1,095.72	1,096.39	58.0	108.0	1,037.72
EWM		463,149.81	891,836.24	SRG/BF	1,103.61	NI	86.0	206.0	1,017.61
EWN		463,150.06	892,478.65	SRG/BF	1,110.78	NI	100.0	220.0	1,010.78
EWS		462,804.97	890,786.77	SRG/BF/BR	1,100.37	NI	94.0	194.0	1,006.37
EWSPZ1		462,940.00	890,712.00	SRG/BF	1,098.26	NI	118.0	208.0	980.26
NW01		465,406.43	894,322.64	SRG	1,112.22	1,112.22	90.0	110.0	1,022.22
NW02		462,610.64	892,289.91	SRG	1,101.83	1,101.83	173.0	193.0	928.83
NW03		462,590.35	891,405.62	SRG	1,096.92	1,097.16	120.0	140.0	976.92
NW04-D		461,225.33	892,235.10	BF	1,098.93	1,100.39	183.0	203.0	915.93
NW04-S		461,225.30	892,231.81	SRG	1,098.86	1,100.37	90.0	130.0	1,008.86
NW05-S		462,214.74	891,833.81	SRG	1,098.84	1,100.37	88.0	128.0	1,010.84
NW06-D		462,238.65	890,968.88	BF	1,095.53	1,097.30	181.5	201.5	914.03
NW06-S		462,239.01	890,971.81	SRG	1,095.49	1,097.29	89.5	129.5	1,005.99
NW07-D		461,546.77	889,962.89	BF	1,094.03	1,094.45	215.0	235.0	879.03
NW07-M		461,546.79	889,956.83	SRG	1,093.89	1,094.40	180.0	200.0	913.89
NW07-S		461,546.74	889,966.35	SRG	1,094.12	1,094.44	90.0	130.0	1,004.12
NW08-D		463,071.52	891,034.69	BF	1,098.68	1,099.02	224.0	244.0	874.68
NW08-M		463,075.33	891,037.96	BF	1,097.55	1,098.94	175.0	195.0	922.55
NW08-S		463,071.95	891,042.29	SRG	1,097.39	1,098.80	100.0	150.0	997.39
NW09-D		463,002.21	889,027.40	BF	1,099.58	1,099.84	210.0	230.0	889.58
NW09-D2		462,997.99	889,026.62	BF	1,099.30	1,099.87	240.0	260.0	859.30
NW09-M		462,996.54	889,032.87	SRG	1,099.42	1,099.92	170.0	190.0	929.42
NW10-D		463,012.51	888,143.23	BF	1,098.91	1,099.47	210.0	230.0	888.91
NW11-D		463,035.91	889,880.93	BF	1,097.69	1,098.07	210.0	230.0	887.69
NW11-M		463,028.37	889,884.51	SRG	1,097.59	1,098.14	173.0	193.0	924.59
NW12-D		462,818.29	893,558.17	BF	1,104.23	1,104.55	225.0	245.0	879.23
NW13-D		461,903.18	889,018.75	BF	1,096.61	1,096.93	215.0	235.0	881.61
NW13-M		461,903.43	889,018.53	SRG	1,096.67	1,096.93	175.0	195.0	921.67
NW14-D		462,203.48	889,564.00	BF	1,096.12	1,096.35	215.0	235.0	881.12
NW14-M		462,203.25	889,563.85	SRG	1,096.11	1,096.35	175.0	195.0	921.11
NW15-S		463,755.88	889,597.93	Colluvium	1,098.96	1,099.31	84.0	104.0	1,014.96
NW16-D		462,882.12	890,437.08	BF	1,097.96	1,098.30	220.0	230.0	877.96
NW16-M		462,882.12	890,437.08	SRG	1,097.92	1,098.30	155.0	175.0	942.92
NW17-S		461,993.75	891,409.94	Colluvium	1,096.75	1,097.00	130.0	145.0	966.75
NW18-M		461,857.01	891,048.77	Colluvium	1,094.92	1,095.27	170.0	190.0	924.92
NW18-S		461,850.21	891,048.98	SRG	1,094.78	1,095.26	90.0	130.0	1,004.78

Table 2

Summary of Monitor Well Construction Details
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID		X Coordinate	Y Coordinate	Hydrostratigraphic Unit of Well Screen	Reference Elevation (ft AMSL)	Ground Elevation (ft AMSL)	Screen Top Depth (ft bgs)	Screen Bottom Depth (ft bgs)	Screen Top Elevation (ft AMSL)
OU2 GES Network Wells (con't)									
NW19-D		463,938.05	889,006.25	BF	1,100.50	1,101.06	205.0	220.0	895.50
NW19-M		463,943.91	889,005.87	SRG	1,100.69	1,101.28	165.0	185.0	935.69
NW21-S		465,460.68	893,086.29	SRG	1,106.65	1,107.24	91.0	106.0	1,015.65
NW22-S		463,843.81	891,848.19	SRG	1,099.36	1,100.09	95.0	130.0	1,004.36
NW22-D		463,843.61	891,843.41	BF	1,099.67	1,100.13	160.0 190.0	170.0 195.0	939.67 909.67
NW23-S		464,887.16	889,752.00	SRG	1,101.26	1,101.52	95.0	130.0	1,006.26
NW23-D		464,887.25	889,747.07	BF	1,101.13	1,101.49	178.0	218.0	923.13
NW24-S		469,941.18	892,811.22	SRG	1,116.54	1,116.94	77.0	97.0	1,039.54
NW24-D		469,941.04	892,816.84	BF	1,116.59	1,117.07	135.0	155.0	981.59
NW25-S		471,383.40	894,018.24	SRG	1,128.40	1,128.74	95.0	115.0	1,033.40
OU312-D	(3)	459,599.15	890,776.43	BF	1,090.77	NI	245.6	265.6	845.17
OU312-M	(3)	459,599.97	890,700.12	SRG	1,090.79	NI	146.7	166.7	944.09
OU313-D	(3)	459,546.09	892,217.30	BF	1,095.71	NI	224.7	244.7	871.01
OU313-M	(3)	459,536.02	892,217.15	SRG	1,095.75	NI	154.7	174.7	941.05
OU314-D	(3)	460,195.17	893,851.88	BF	1,099.14	NI	231.2	251.2	867.94
OU314-M	(3)	460,183.85	893,673.11	SRG	1,099.05	NI	145.7	165.7	953.35
PZ01A		470,929.00	891,345.00	SRG	1,117.04	NI	70.0	75.0	1,047.04
PZ01B		470,930.00	891,353.00	BF	1,117.05	NI	120.0	125.0	997.05
PZ01-D		463,124.48	892,169.75	BR	1,102.69	1,102.46	217.0	237.0	885.69
PZ01-S		463,124.48	892,169.75	SRG	1,102.69	1,102.46	99.0	119.0	1,003.69
PZ02-D		463,138.84	892,306.08	BR	1,107.95	1,108.25	245.0	265.0	862.95
PZ02-S		463,138.84	892,306.08	SRG	1,107.95	1,108.25	120.0	140.0	987.95
TEW01		463,111.30	892,203.14	SRG	1,103.56	1,103.85	100.0	145.0	1,003.56
OU2 GES Supplemental Wells									
AS02	(1)	463,059.52	888,148.52	SRG	1,099.75	1,098.90	50.0	90.0	1,049.75
ASE28-A	(1)	467,463.76	888,923.82	SRG	1,108.20	NI	68.0	88.0	1,040.20
ASE76-A	(1)	466,354.46	889,252.70	SRG	1,105.42	NI	80.0	130.0	1,025.42
ASE76-B	(1)	466,346.35	889,253.15	BF	1,105.34	NI	180.0	230.0	925.34
ASE77-A	(1)	464,925.48	890,548.28	SRG	1,101.86	NI	85.0	115.0	1,016.86
ASE77-B	(1)	464,927.37	890,548.37	BF	1,101.76	NI	180.0	230.0	921.76
ASE78-B	(1)	464,216.08	889,597.38	BF	1,099.97	NI	156.0	186.0	943.97
ASE86-A	(1)	466,982.30	890,992.82	SRG	1,106.07	NI	86.0	126.0	1,020.07
ASE88-B	(1)	464,805.79	888,313.43	BF	1,103.08	NI	175.0	215.0	928.08
BC11-A	(1)	467,741.10	889,919.54	Colluvium	1,111.21	NI	225.0	240.0	886.21
BC11-B	(1)	467,756.54	889,918.78	BF	1,111.25	NI	135.0	160.0	976.25
DM510-110	(2)	466,993.20	891,769.10	SRG	1,107.40	NI	110.00	NI	997.40
DM515-115	(2)	465,925.20	891,282.80	SRG	1,103.61	NI	115.0	NI	988.61
DM515-210	(2)	465,925.20	891,282.80	BF	1,103.61	NI	210.0	NI	893.61
DM515-265	(2)	465,925.20	891,282.80	BR	1,103.61	NI	265.0	NI	838.61
EW13-118	(3)	460,187.58	889,593.26	SRG	1,092.71	NI	114.5	119.5	980.11
EW13-168	(3)	460,187.58	889,593.26	SRG	1,092.71	NI	164.5	169.5	930.11
EW13-228	(3)	460,187.58	889,593.26	BF	1,092.71	NI	224.5	229.5	870.11
EW13-268	(3)	460,187.58	889,593.26	BF	1,092.71	NI	264.5	269.5	830.11
PHXA01		456,741.46	886,453.17	SRG	1,102.77	NI	50.0	140.0	1,052.77

Table 2

Summary of Monitor Well Construction Details
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID		X Coordinate	Y Coordinate	Hydrostratigraphic Unit of Well Screen	Reference Elevation (ft AMSL)	Ground Elevation (ft AMSL)	Screen Top Depth (ft bgs)	Screen Bottom Depth (ft bgs)	Screen Top Elevation (ft AMSL)
OU2 GES Supplemental Wells (con't)									
PHXA02		466,697.76	886,711.33	SRG	1,105.51	NI	50.0	140.0	1,055.51
PHXA03		466,920.55	888,579.21	SRG/BR	1,106.17	NI	53.0	106.5	1,053.17
PHXA04		465,703.16	889,055.62	SRG	1,104.58	NI	50.0	140.0	1,054.58
PHXA05		465,676.63	888,665.07	SRG	1,104.53	NI	50.0	140.0	1,054.53
PHXA06		464,128.81	889,796.69	SRG	1,100.41	NI	50.0	140.0	1,050.41
OU3 Supplemental Wells									
OU319-M	(3)	459,603.65	891,503.11	SRG	1,091.21	NI	150.0	170.0	941.21
OU320-M	(3)	463,037.94	888,765.34	SRG	1,100.12	NI	160.0	180.0	940.12
OU320-S	(3)	463,039.57	888,757.42	SRG	1,100.20	NI	65.0	115.0	1,035.20
Well Damaged/Abandoned - Removed from Network in 2003									
EW12-093		463114.54	891064.43	SRG	1,098.84	1,098.84	91.0	96.0	1,007.84
EW12-128		463114.54	891064.43	SRG	1,098.84	1,098.84	126.0	131.0	972.84
EW12-180		463114.54	891064.43	BF	1,098.84	1,098.84	179	184	919.84
EW12-227		463114.54	891064.43	BF	1,098.84	1,098.84	224	229	874.84
EW12-239		463114.54	891064.43	BF	1,098.84	1,098.84	239	244	859.84
Wells Dry - Removed from Network in 2003									
FDMW07		466,298.03	891,504.25	SRG	1,104.57	1,104.57	55.0	85.0	1,049.57
MW01 (Hertz)		464,611.89	888,658.59	SRG	1,101.33	1,101.33	64.0	89.0	1,037.33
MW05 (Shurgin)		460,018.76	890,674.99	SRG	1,091.80	1,091.80	52.0	92.0	1,039.80
Well no longer accessible, removed from Network in 2007									
EW23		460,419.10	895,405.49	SRG	1,101.51	1,101.84	57.0	107.0	1,044.51
Wells Dry - Removed from Network in 2010 - Honeywell discontinued monitoring with ADEQ approval									
ASE36-A	(1)	465,671.30	887,215.73	SRG	1,102.58	NI	69.0	99.0	1,033.58
ASE77-B	(1)	464,927.37	890,548.37	BF	1,101.76	NI	180.0	230.0	921.76
Well Destroyed/Abandoned - Removed from Network August 2012									
DM518-OB1	(2)	467,562.31	890,987.13	SRG/BF/BR	1,106.75	1,107.29	58.0	150.0	1,048.75

Notes:

ft AMSL - feet Above Mean Sea Level
ft bgs - feet below ground surface
SRG - Salt River Gravels
BF - Basin Fill
BR - Bedrock
NI - No Information
(1) Quality data collected by CH2MHILL on behalf of Honeywell
(2) Quality data collected by Clear Creek Associates on behalf of Freescale
(3) Sampled by ERM on behalf of OU3 Working Parties

Table 3A

Groundwater Sample Key - March & April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Sample ID *	Well ID	Date	Comments
GW-030617-PG-01	NW04-D	03/06/17	Rinse Blank
GW-030617-PG-02	NW04-D	03/06/17	
GW-030717-PG-03	NW07-S	03/07/17	Grab Sample (Bailer)
GW-030717-PG-04	NW04-S	03/07/17	Grab Sample (Bailer)
GW-030717-PG-05	CRA01	03/07/17	
GW-030717-PG-20	NW07-M	03/07/17	AMENDED COC
GW-030817-PG-06	NW19-M	03/08/17	
GW-030817-PG-07	NW07-D	03/08/17	
GW-030917-PG-08	NW09-D2	03/09/17	Field Blank
GW-030917-PG-09	NW09-D2	03/09/17	Grab Sample (Pump)
GW-030917-PG-10	NW09-D	03/09/17	
GW-031017-PG-11	NW01	03/10/17	Rinse Blank
GW-031017-PG-12	NW01	03/10/17	
GW-031017-PG-13	NW11-M	03/10/17	
GW-031017-PG-14	NW05-S	03/10/17	Grab Sample (Bailer)
GW-031017-PG-15	NW05-S	03/10/17	Duplicate
GW-031317-PG-16	NW18-S	03/13/17	
GW-031317-PG-17	NW18-S	03/13/17	Duplicate
GW-031317-PG-18	NW03	03/13/17	Rinse Blank
GW-031317-PG-19	NW03	03/13/17	
GW-031317-PG-21	NW11-D	03/13/17	MS/MSD
GW-031417-PG-22	NW06-S	03/14/17	
GW-031417-PG-23	NW19-D	03/14/17	Field Blank
GW-031417-PG-24	NW19-D	03/14/17	
GW-031417-PG-25	NW17-S	03/14/17	
GW-031417-PG-26	NW17-S	03/14/17	Duplicate
GW-031517-PG-27	NW18-M	03/15/17	
GW-031617-PG-28	EW06	03/16/17	Rinse Blank
GW-031617-PG-29	EW06	03/16/17	
GW-031617-PG-30	EW07	03/16/17	MS/MSD
GW-031717-PG-31	NW13-D	03/17/17	
GW-031717-PG-32	NW14-D	03/17/17	
GW-041717-PG-01	NW14-M	03/17/17	Field Blank
GW-041717-PG-02	NW14-M	04/17/17	
GW-041817-PG-03	NW16-D	04/18/17	
GW-041917-PG-04	NW16-M	04/19/17	Rinse Blank
GW-041917-PG-05	NW16-M	04/19/17	

Notes:

MS/MSD = Matrix Spike/ Matrix Spike Duplicate Sample
* Samples collected by GHD.

Table 3B

Groundwater Sample Key - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Sample ID *	Well ID	Date	Comments
GW-052217-PG-01	NW09-M	05/22/17	Rinse Blank
GW-052217-PG-02	NW09-M	05/22/17	
GW-052217-PG-03	NW09-D2	05/22/17	
GW-052317-PG-04	NW19-M	05/23/17	
GW-052317-PG-05	NW07-D	05/23/17	Field Blank
GW-052317-PG-06	NW07-D	05/23/17	
GW-052317-PG-07	NW09-D	05/23/17	
GW-052317-PG-08	NW11-M	05/23/17	MS/MSD
GW-052417-PG-09	NW11-D	05/24/17	
GW-052417-PG-10	NW18-S	05/24/17	
GW-052417-PG-11	NW06-D	05/24/17	Rinse Blank
GW-052417-PG-12	NW06-D	05/24/17	
GW-052517-PG-13	NW19-D	05/25/17	Field Blank
GW-052517-PG-14	NW19-D	05/25/17	
GW-052517-PG-15	NW03	05/25/17	
GW-052517-PG-16	NW17-S	05/25/17	
GW-052517-PG-17	NW17-S	05/25/17	Duplicate
GW-052517-PG-18	NW06-S	05/25/17	Bailer Sample
GW-052617-PG-19	NW18-M	05/26/17	
GW-052617-PG-20	NW13-M	05/26/17	Rinse Blank
GW-052617-PG-21	NW13-M	05/26/17	
GW-052617-PG-22	NW14-M	05/26/17	
GW-053017-PG-23	NW13-D	05/30/17	Field Blank
GW-053017-PG-24	NW13-D	05/30/17	
GW-053017-PG-25	NW14-D	05/30/17	
GW-053017-PG-26	EW06	05/30/17	Bailer Sample
GW-053017-PG-27	NW16-D	05/30/17	
GW-053017-PG-28	NW16-D	05/30/17	
GW-053017-PG-29	NW16-M	05/30/17	

Notes:

MS/MSD = Matrix Spike/ Matrix Spike Duplicate Sample

* Samples collected by GHD.

Table 4A

Summary of Monitor Well Development Area - March & April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
CRA-01	GW-030717-PG-05	SRG	03/07/17	124	50	7.13	75.6	2,110
						7.10	76.6	2,760
						7.14	76.7	2,173
						7.12	76.5	2,169
						7.10	76.7	2,163
EW06	GW-031617-PG-29	SRG	03/16/17	108	15	7.00	79.3	1,616
Rinse Blank	GW-031617-PG-28		03/16/17			7.09	80.8	1,624
						7.03	81.5	1,628
						7.05	81.7	1,622
						7.06	81.5	1,623
EW07	GW-031617-PG-30	SRG	03/16/17	127	50	7.12	80.4	2,233
MS/MSD						7.16	80.4	2,251
						7.17	80.6	2,246
						7.15	81.5	2,243
						7.22	82.2	2,259
NW01	GW-031017-PG-12	SRG	03/10/17	105	35	7.24	74.8	2,172
Rinse Blank	GW-031017-PG-11					7.31	75.9	2,237
						7.23	76.8	2,230
						7.24	76.8	2,239
						7.24	76.8	2,231
NW03	GW-031317-PG-19	SRG	03/13/17	140	80	7.07	80.4	1,787
Rinse Blank	GW-031317-PG-18					7.10	80.4	1,804
						7.06	80.6	1,793
						7.11	80.6	1,793
						7.11	80.6	1,784
NW04-S	GW-030717-PG-04	SRG	03/07/17	128	35	7.68	73.4	1,702
Well purged dry @ 35 gallons						7.85	74.9	1,578
						7.36	77.0	827
NW04-D	GW-030617-PG-02	BF	03/06/17	195	200	6.84	74.2	3,256
Rinse Blank	GW-030416-PG-01					6.80	76.5	3,256
						6.77	76.0	3,120
						6.78	75.8	3,054
						6.75	76.4	3,303
NW05-S	GW-031017-PG-14	SRG	03/10/17	126	24	6.36	72.7	1,920
Duplicate	GW-031017-PG-15		03/10/17			6.47	73.8	1,805
Well purged dry @ 24 gallons								

Table 4A

Summary of Monitor Well Development Area - March & April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
NW06-D	GW-032417-PG-34	BF	03/24/17	190	350	5.59	76.5	>3,999
Rinse Blank	GW-032417-PG-33		03/24/17			5.87	77.4	>3,999
						5.96	77.1	>3,999
						6.03	77.5	3,747
						6.21	77.4	3,425
NW06-S	GW-031417-PG-22	SRG	03/14/17	126	55	7.22	78.1	1,342
Well purged dry @ 12 gallons						7.17	80.6	1,583
						7.13	81.1	1,672
						7.13	81.9	1,681
						7.12	82.0	1,716
NW07-M	GW-030717-PG-20	SRG	03/07/17	190	120	9.06	76.1	7,795
						9.05	76.6	1,229
Well purged dry @ 120 gallons						8.72	79.0	1,265
NW07-S	GW-030717-PG-03	SRG	03/07/17	128	33	7.20	78.5	1,094
						7.06	79.9	1,064
Well purged dry @ 33 gallons						6.98	80.9	1,121
NW07-D	GW-030817-PG-07	BF	03/08/17	225	272.78	8.39	79.3	1,285
						7.78	79.7	1,365
						7.47	79.7	1,406
						7.37	78.8	1,446
						7.38	79.2	1,445
NW09-D	GW-030917-PG-10	BF	03/09/17	220	242.31	8.71	80.6	1,248
						8.34	79.9	1,321
						8.21	79.7	1,320
						7.67	80.4	1,390
						7.56	79.9	1,365
NW09-D2	GW-030917-PG-09	BF	03/09/17	250	100	8.89	79.9	1,139
Well purged dry @ 100 gallons								
Field Blank	GW-030917-PG-08		03/09/17					
NW11-M	GW-031017-PG-13	SRG	03/10/17	183	174.4	7.81	79.2	1,403
						7.70	79.7	1,425
						7.50	79.3	1,465
						7.44	80.8	1,513
						7.32	80.4	1,507

Table 4A

Summary of Monitor Well Development Area - March & April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
NW11-D	GW-031317-PG-21	BF	03/13/17	220	247.02	8.09	75.6	1,317
MS/MSD						7.84	80.4	1,368
						7.68	80.8	1,414
						7.49	80.1	1,495
						7.74	79.0	1,432
NW13-D	GW-031717-PG-31	BF	03/17/17	225	64.66	7.49	78.8	1,456
						7.50	79.2	1,467
						7.48	78.8	1,477
						7.43	79.0	1,476
						7.52	79.2	1,469
NW14-M	GW-041717-PG-02	BF	04/17/17	185	50	7.24	81.6	1,490
Field Blank	GW-041717-PG-01					7.27	81.7	1,507
						7.29	81.3	1,504
						7.30	81.4	1,501
						7.30	80.7	1,500
NW14-D	GW-031717-PG-32	BF	03/17/17	225	64.22	7.50	79.9	1,548
						7.51	79.9	1,539
						7.48	80.2	1,530
						7.53	80.1	1,516
						7.56	79.5	1,497
NW16-M	GW-041917-PG-05	BF	04/19/17	171	35	9.29	78.0	1,283
Rinse Blank	GW-041917-PG-04					8.47	78.7	1,390
						8.10	80.9	1,467
						8.23	81.5	1,475
						8.20	81.3	1,484
NW16-D	GW-041817-PG-03	BF	04/18/17	226	35	7.41	79.9	1,920
						7.42	80.3	1,997
						7.42	79.6	2,007
						7.41	79.8	2,005
						7.37	79.7	2,005
NW17-S	GW-031417-PG-25	Colluvium	03/14/17	185	82.6	7.16	81.0	2,576
Duplicate	GW-031417-PG-26		03/14/17			7.14	79.9	2,604
						7.17	79.7	2,610
						7.18	79.5	2,605
						7.20	79.7	2,613

Table 4A

Summary of Monitor Well Development Area - March & April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
NW18-M	GW-031517-PG-27	SRG	03/15/17	125	172.21	7.16	76.6	2,121
						7.17	77.7	2,144
						7.16	78.4	2,141
						7.19	77.9	2,139
						7.17	77.5	2,141
NW18-S	GW-031317-PG-16	BF	03/13/17	180	54.58	7.11	79.5	1,622
Duplicate	GW-031317-PG-17		03/13/17			7.11	80.1	1,640
						7.14	79.2	1,645
						7.15	80.1	1,644
						7.07	79.7	1,640
NW19-M	GW-030817-PG-06	BF	03/08/17	215	157.35	7.12	75.9	1,423
						7.24	78.3	1,451
						7.23	78.1	1,435
						7.25	78.4	1,459
						7.21	79.3	1,453
NW19-D	GW-031417-PG-24		03/14/17	215	227	7.45	79.2	1,466
Field Blank	GW-031417-PG-23		03/14/17			7.45	79.2	1,468
						7.42	79.3	1,473
						7.40	79.7	1,473
						7.40	79.5	1,474

Notes:

ft = feet
TOC = top of casing
s.u. = standard unit
°F = degrees Fahrenheit
µs/cm = microsiemens per centimeter
BF = Basin Fill
SRG = Salt River Gravels
MS/MSD = Matrix Spike/Matrix Spike Duplicate

Table 4B

Summary of Monitor Well Development Area - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
EW06	GW-053017-PG-26	SRG	05/30/17	108	6	7.03	84.0	1,719
						7.06	84.3	1,731
NW03	GW-052517-PG-15	SRG	05/25/17	140	75	7.20	79.0	1,712
						7.21	79.5	1,726
						7.25	79.2	1,723
						7.24	79.0	1,724
						7.30	79.1	1,714
NW06-D	GW-052417-PG-12	BF	05/24/17	190	195	7.02	80.8	3,335
Rinse Blank	GW-052417-PG-11					6.84	80.5	2,635
						6.83	79.5	2,412
						6.84	79.4	2,337
						6.86	79.9	2,302
NW06-S	GW-052517-PG-18	SRG	05/25/17	126	22	8.92	83.0	1,367
Well purged dry @ 22 gallons						8.69	84.2	1,398
NW07-D	GW-052317-PG-06	BF	05/23/17	225	265	6.86	77.9	1,617
Field Blank	GW-052317-PG-05					6.89	77.8	1,572
						6.93	77.8	1,541
						6.98	78.0	1,532
						7.03	78.0	1,521
NW09-D	GW-052317-PG-07	BF	05/23/17	220	250	8.73	81.6	1,261
						8.14	81.8	1,365
						8.27	81.6	1,327
						8.13	82.0	1,348
						7.92	82.0	1,369
NW09-D2	GW-052217-PG-03	BF	05/22/17	250		6.97	81.4	1,814
						6.89	80.0	1,858
						6.84	80.2	1,826
						6.86	79.8	1,815
						6.76	79.9	1,799

Table 4B

Summary of Monitor Well Development Area - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
NW09-M	GW-052217-PG-02	SRG	05/22/17	180	168	7.34	82.2	1,448
Rinse Blank	GW-052217-PG-01					7.32	82.2	1,548
						7.28	82.4	1,547
						7.34	82.2	1,534
						7.43	81.6	1,502
NW11-M	GW-0522317-PG-08	SRG	05/23/17	183	180	7.84	82.8	1,410
MS/MSD						7.61	82.0	1,459
						7.60	82.0	1,469
						7.37	82.0	1,536
						7.36	82.2	1,533
NW11-D	GW-052417-PG-09	BF	05/24/17	220	250	8.46	79.1	1,289
						7.77	79.7	1,363
						7.64	80.0	1,405
						7.69	80.0	1,407
						7.56	80.5	1,472
NW13-M	GW-052617-PG-21	BF	05/26/17	185	50	7.34	81.2	1,380
Rinse Blank	GW-052617-PG-20					7.37	80.7	1,368
						7.35	81.1	1,373
						7.37	80.7	1,377
						7.37	80.8	1,371
NW13-D	GW-053017-PG-24	BF	05/30/17	225	65	7.30	83.1	1,486
Field Blank	GW-053017-PG-23					7.42	81.0	1,457
						7.45	80.5	1,443
						7.48	80.1	1,435
						7.38	80.3	1,424
NW14-M	GW-052617-PG-22	BF	04/17/17	185	40	7.27	82.1	1,481
						7.31	81.6	1,485
						7.38	81.4	1,483
						7.26	81.3	1,485
NW14-D	GW-053017-PG-25	BF	05/30/17	225	65	7.44	81.4	1,424
						7.48	81.0	1,436
						7.48	80.7	1,428
						7.52	80.9	1,437
						7.59	81.4	1,443

Table 4B

Summary of Monitor Well Development Area - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)
NW16-M	GW-053017-PG-29	BF	05/30/17	171	55	8.76	83.5	1,360
						8.54	82.4	1,402
						8.45	82.6	1,415
						8.40	82.3	1,442
						8.18	83.1	1,447
NW16-D	GW-053017-PG-27	BF	05/30/17	226	65	7.33	81.6	1,966
						7.42	80.6	1,982
						7.37	80.6	1,976
						7.42	80.3	1,976
						7.31	80.2	1,978
NW17-S	GW-052517-PG-16	Colluvium	05/25/17	185	85	7.25	78.7	2,474
Duplicate	GW-052517-PG-17		05/25/17			7.32	78.7	2,532
						7.31	78.6	2,528
						7.25	78.6	2,541
						7.35	78.6	2,553
NW18-M	GW-052617-PG-19	SRG	05/26/17	125	175	7.42	77.7	2,021
						7.28	77.9	2,012
						7.30	77.9	2,006
						7.33	77.8	2,010
						7.35	77.9	2,008
NW18-S	GW-052417-PG-10	BF	05/24/17	180	48	7.22	82.1	1,625
						7.19	81.0	1,635
						7.27	80.8	1,635
						7.22	80.6	1,639
Well purged dry @ 48 gallons								
NW19-M	GW-052317-PG-04	BF	05/23/17	215	165	7.30	78.8	1,483
						7.29	79.1	1,466
						7.30	79.0	1,469
						7.32	78.9	1,470
						7.27	79.5	1,473
NW19-D	GW-052517-PG-14	BF	05/25/17	215	230	7.78	78.4	1,421
Field Blank	GW-052517-PG-13		05/25/17			7.65	78.2	1,432
						7.55	78.2	1,438
						7.53	78.1	1,443
						7.56	78.2	1,446

Table 4B

Summary of Monitor Well Development Area - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Sample ID	Hydrogeologic Unit Sampled	Date Purged/ Sampled	Pump Inlet Depth (ft below TOC)	Total Purged Volume (Gallons)	pH (s.u.)	Temperature (°F)	Conductivity (µs/cm)

Notes:

ft = feet
TOC = top of casing
s.u. = standard unit
°F = degrees Fahrenheit
µs/cm = microsiemens per centimeter
BF = Basin Fill
SRG = Salt River Gravels
MS/MSD = Matrix Spike/Matrix Spike Duplicate
- = Not measured
data yet to be entered

Table 5A

Summary of Groundwater Quality Data - March and April 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Hydrogeologic Unit Screened	Sample Date	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Benzene	Bromodichloro-methane	Bromomethane	Chloroform (Trichloro-methane)	Chloromethane	cis-1,2-Dichloroethene	Tetra-chloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichloro-fluoromethane (CFC-11)	Vinyl chloride	Xylene (total)
CRA01	SRG	3/7/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	1.0	ND(1.0)	ND(1.0)	2.6	ND(4.0)	ND(0.50)	ND(1.0)
EW06	SRG	3/16/2017	ND(1.0)	2.2	2.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	2.1	ND(2.0)	2.1	ND(1.0)	ND(1.0)	ND(1.0)	**7.1**	ND(4.0)	ND(0.50)	ND(1.0)
EW07	SRG	3/16/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.4	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.7	ND(4.0)	ND(0.50)	ND(1.0)
EWM	SRG/BF	3/20/2017	ND(1.0)	ND(1.0)	1.4	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.8	ND(2.0)	5.4	1.5	ND(1.0)	ND(1.0)	**39.1**	ND(4.0)	ND(0.50)	ND(1.0)
EWN	SRG/BF	3/20/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.1	2.1	ND(1.0)	1.0	ND(1.0)	ND(1.0)	**8.6**	ND(4.0)	ND(0.50)	ND(1.0)
EWS	SRG/BF/BR	3/20/2017	ND(1.0)	1.8	4.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	3.0	ND(2.0)	11.2	**5.4**	ND(1.0)	ND(1.0)	**57.3**	ND(4.0)	ND(0.50)	ND(1.0)
NW01	SRG	3/10/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.7	ND(2.0)	ND(1.0)	1.3	ND(1.0)	ND(1.0)	**7.6**	ND(4.0)	ND(0.50)	ND(1.0)
NW03	SRG	3/13/2017	ND(1.0)	ND(1.0)	2.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	2.9	ND(2.0)	13.0	2.5	ND(1.0)	ND(1.0)	**51.1**	ND(4.0)	ND(0.50)	ND(1.0)
NW04-D	BF	3/6/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	2.1	ND(1.0)	ND(1.0)	ND(0.50)	ND(4.0)	ND(0.50)	ND(1.0)
NW04-S	SRG	3/7/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.9	ND(4.0)	ND(0.50)	ND(1.0)
NW05-S	SRG	3/10/2017	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(2.0) /ND(2.0)	ND(1.0) / ND(1.0)	ND(2.0) /ND(2.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	3.8 / 3.8	ND(4.0) / ND(4.0)	ND(0.50) /ND(0.50)	ND(1.0) / ND(1.0)
NW06-D	BF	3/24/2017	ND(1.0)	ND(1.0)	1.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	2.0	ND(2.0)	5.8	ND(1.0)	ND(1.0)	ND(1.0)	**33.5**	ND(4.0)	ND(0.50)	ND(1.0)
NW06-S	SRG	3/14/2017	ND(1.0)	1.5	2.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	3.7	ND(2.0)	8.5	1.4	ND(1.0)	ND(1.0)	**23.8**	ND(4.0)	ND(0.50)	ND(1.0)
NW07-D	BF	3/8/2017	ND(1.0)	ND(1.0)	1.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	4.7	ND(4.0)	ND(0.50)	ND(1.0)
NW07-M	SRG	3/7/2017	ND(1.0)	1.2	3.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.1	ND(1.0)	ND(1.0)	ND(1.0)	3.2	ND(4.0)	ND(0.50)	ND(1.0)
NW07-S	SRG	3/7/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.2	ND(4.0)	ND(0.50)	ND(1.0)
NW09-D	BF	3/9/2017	ND(1.0)	ND(1.0)	2.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.6	ND(1.0)	ND(1.0)	ND(1.0)	**7.6**	ND(4.0)	ND(0.50)	ND(1.0)
NW09-D2	BF	3/9/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.3	ND(4.0)	ND(0.50)	ND(1.0)
NW11-D	BF	3/13/2017	ND(1.0)	1.4	5.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	4.1	ND(1.0)	ND(1.0)	ND(1.0)	**20.2**	ND(4.0)	ND(0.50)	ND(1.0)
NW11-M	SRG	3/10/2017	ND(1.0)	4.1	**9.2**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.2	ND(2.0)	4.2	ND(1.0)	ND(1.0)	ND(1.0)	**14.9**	ND(4.0)	ND(0.50)	ND(1.0)
NW13-D	BF	3/17/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	4.6	ND(4.0)	ND(0.50)	ND(1.0)
NW14-D	BF	3/17/2017	ND(1.0)	1.1	4.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	2.8	ND(1.0)	ND(1.0)	ND(1.0)	**12.6**	ND(4.0)	ND(0.50)	ND(1.0)
NW14-M	SRG	4/17/2017	ND(1.0)	1.0	3.3	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.2	ND(1.0)	ND(1.0)	ND(1.0)	4.3	ND(4.0)	ND(0.50)	ND(1.0)
NW16-D	BF	4/18/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.5	ND(1.0)	ND(1.0)	ND(1.0)	**41.0**	ND(4.0)	ND(0.50)	ND(1.0)
NW16-M	SRG	4/19/2017	ND(1.0)	16.4	**35.2**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.4	ND(2.0)	18.5	1.5	ND(1.0)	ND(1.0)	**89.7**	ND(4.0)	ND(0.50)	ND(1.0)
NW17-S	CV	3/14/2017	ND(1.0) / ND(1.0)	1.1 / 1.0	2.0 / 1.9	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(2.0) /ND(2.0)	1.1 / 1.0	ND(2.0) /ND(2.0)	10.7 / 10.2	1.6 / 1.6	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	**50.3 / 51.3**	ND(4.0) / ND(4.0)	ND(0.50) /ND(0.50)	ND(1.0) / ND(1.0)
NW18-M	CV	3/14/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	3.5	ND(1.0)	ND(1.0)	ND(1.0)	**57.2**	ND(4.0)	ND(0.50)	ND(1.0)
NW18-S	SRG	3/13/2017	ND(1.0) / ND(1.0)	1.8 / 1.7	2.7 / 2.9	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(2.0) /ND(2.0)	4.2 / 4.3	ND(2.0) /ND(2.0)	7.5 / 7.5	2.4 / 2.4	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	**30.9 /30.7**	ND(4.0) / ND(4.0)	ND(0.50) /ND(0.50)	ND(1.0) / ND(1.0)
NW19-D	BF	3/14/2017	ND(1.0)	6.2	**23.4**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	12.0	ND(1.0)	ND(1.0)	ND(1.0)	40.1	ND(4.0)	ND(0.50)	ND(1.0)
NW19-M	SRG	3/8/2017	ND(1.0)	2.2	5.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.5	ND(1.0)	ND(1.0)	ND(1.0)	4.5	ND(4.0)	ND(0.50)	ND(1.0)
Federal Maximum Contaminant Level [(1)]			*200*	*NA*	*7*	*5*	*5*	*80* [(3)]	*NA*	*80* [(3)]	*NA*	*70*	*5*	*1,000*	*100*	*5*	*NA*	*2*	*10,000*
State Aquifer Water Quality Standard [(2)]			*200*	*NA*	*7*	*5*	*5*	*100* [(3)]	*NA*	*100* [(3)]	*NA*	*70*	*5*	*1,000*	*100*	*5*	*NA*	*2*	*10,000*

Notes:

All concentrations are in micrograms per liter (µg

All samples analyzed by USEPA Method 8260B.

Results in **Bold** are above the Maximum Contaminant Level.

SRG = Salt River Gravel

BF = Basin Fill

BR = Bedrock

CV = Colluvium

ND( ) = Qualified as not detected at or above value in parenthesis

(1) United States Environmental Protection Agency (USEPA),
40 Code of Federal Regulations 141.11 et seq. (December 2000)

(2) Arizona Administrative Code, R18-11-406

(3) Standard is for total trihalomethanes.

Only water quality samples collected by GHD are presented in Tables 3 through 6. Data collected by others posted on Figures.

Table 5B

Summary of Groundwater Quality Data - May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Hydrogeologic Unit Screened	Sample Date	1,1,1-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Benzene	Bromodichloro-methane	Bromomethane	Chloroform (Trichloro-methane)	Chloromethane	cis-1,2-Dichloroethene	Tetra-chloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichloro-fluoromethane (CFC-11)	Vinyl chloride	Xylene (total)
EW06	SRG	5/30/2017	ND(1.0)	1.6	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(4.4)U	ND(4.0)	ND(0.50)	ND(1.0)
NW03	SRG	5/25/2017	ND(1.0)	ND(1.0)	3.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	2.7	ND(2.0)	15.6	3.0	ND(1.0)	ND(1.0)	**50.9**	ND(4.0)	ND(0.50)	ND(1.0)
NW06-D	BF	5/24/2017	ND(1.0)	ND(1.0)	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	9.0	ND(1.0)	ND(1.0)	ND(1.0)	**28.1**	ND(4.0)	ND(0.50)	ND(1.0)
NW06-S	SRG	5/25/2017	ND(1.0)	1.5	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	2.5	ND(2.0)	10.1	3.0	ND(1.0)	ND(1.0)	**25.9**	ND(4.0)	ND(0.50)	ND(1.0)
NW07-D	BF	5/23/2017	ND(1.0)	ND(1.0)	1.7	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	4.4	ND(4.0)	ND(0.50)	ND(1.0)
NW09-D	BF	5/23/2017	ND(1.0)	ND(1.0)	3.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.7	ND(1.0)	ND(1.0)	ND(1.0)	**6.4**	ND(4.0)	ND(0.50)	ND(1.0)
NW09-D2	BF	5/22/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.9	ND(4.0)	ND(0.50)	ND(1.0)
NW09-M	SRG	5/22/2017	ND(1.0)	ND(1.0)	1.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.1	ND(4.0)	ND(0.50)	ND(1.0)
NW11-D	BF	5/24/2017	ND(1.0)	1.6	5.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	5.4	ND(1.0)	ND(1.0)	ND(1.0)	**20.0**	ND(4.0)	ND(0.50)	ND(1.0)
NW11-M	SRG	5/23/2017	ND(1.0)	3.1	**8.6**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	2.6	ND(1.0)	ND(1.0)	ND(1.0)	**8.9**	ND(4.0)	ND(0.50)	ND(1.0)
NW13-D	BF	5/30/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.9	ND(4.0)	ND(0.50)	ND(1.0)
NW13-M	SRG	5/26/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(4.0)	ND(0.50)	ND(1.0)
NW14-D	BF	5/30/2017	ND(1.0)	1.0	5.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	3.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(11.9)U	ND(4.0)	ND(0.50)	ND(1.0)
NW14-M	SRG	5/26/2017	ND(1.0)	1.1	3.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.3	ND(1.0)	ND(1.0)	ND(1.0)	3.8	ND(4.0)	ND(0.50)	ND(1.0)
NW16-D	BF	5/30/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.7	ND(1.0)	ND(1.0)	ND(1.0)	**38.0**	ND(4.0)	ND(0.50)	ND(1.0)
NW16-D	BF	5/30/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.6	ND(1.0)	ND(1.0)	ND(1.0)	**39.1**	ND(4.0)	ND(0.50)	ND(1.0)
NW16-M	SRG	5/30/2017	ND(1.0)	13.8	**20.9**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.0	ND(2.0)	15.1	ND(1.0)	ND(1.0)	ND(1.0)	**65.1**	ND(4.0)	ND(0.50)	ND(1.0)
NW17-S	CV	5/25/2017	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	1.8 / 1.8	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(2.0) / ND(2.0)	ND(1.0) / ND(1.0)	ND(2.0) / ND(2.0)	11.9 / 11.8	2.3 / 2.2	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	**50.3 / 50.4**	ND(4.0) / ND(4.0)	ND(0.5) / ND(0.5)	ND(1.0) / ND(1.0)
NW18-M	CV	5/26/2017	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	4.4	ND(1.0)	ND(1.0)	ND(1.0)	**57.6**	ND(4.0)	ND(0.50)	ND(1.0)
NW18-S	SRG	5/24/2017	ND(1.0)	1.9	2.6	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	4.0	ND(2.0)	9.5	3.0	ND(1.0)	ND(1.0)	**32.3**	ND(4.0)	ND(0.50)	ND(1.0)
NW19-D	BF	5/25/2017	ND(1.0)	4.9	**16.5**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	11.2	ND(1.0)	ND(1.0)	ND(1.0)	**35.8**	ND(4.0)	ND(0.50)	ND(1.0)
NW19-M	SRG	5/23/2017	ND(1.0)	2.3	**8.4**	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	1.5	ND(1.0)	ND(1.0)	ND(1.0)	**5.2**	ND(4.0)	ND(0.50)	ND(1.0)
Federal Maximum Contaminant Level [(1)]			*200*	*NA*	*7*	*5*	*5*	*80* [(3)]	*NA*	*80* [(3)]	*NA*	*70*	*5*	*1,000*	*100*	*5*	*NA*	*2*	*10,000*
State Aquifer Water Quality Standard [(2)]			*200*	*NA*	*7*	*5*	*5*	*100* [(3)]	*NA*	*100* [(3)]	*NA*	*70*	*5*	*1,000*	*100*	*5*	*NA*	*2*	*10,000*

Notes:

All concentrations are in micrograms per liter (µg
-- = No data
All samples analyzed by USEPA Method 8260B.
Results in **Bold** are above the Maximum Contaminant Level.
SRG = Salt River Gravel
BF = Basin Fill
BR = Bedrock
CV = Colluvium
ND = Non-detect at associated value.
NA = Not analyzed for particular constituent.
J = The associated value is an estimated quantity.
ND( ) = Qualified as not detected at or above value in parenthesis
(1) United States Environmental Protection Agency (USEPA),
40 Code of Federal Regulations 141.11 et seq. (December 2000)
(2) Arizona Administrative Code, R18-11-406
(3) Standard is for total trihalomethanes.
Only water quality samples collected by GHD are presented in Tables 3 through 6. Data collected by others posted on Figures.

Table 6

Comparison of Groundwater Quality Data - September 2016 & March- May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

Well ID	Hydrogeologic Unit Screened	TCE Concentration			Change in Concentration September 2016 to March/April 2017	March 2017 TCE Concentration Relative to September 2016	Change in TCE Concentration September 2016 to May 2017	May 2017 TCE Concentration Relative to September 2016
		September 2016	March/April 2017	May 2017				
CRA01	SRG	2.0	2.6	NS	0.6	↑	NS	NS
EW06	SRG	2.0	**7.1**	ND(4.4)U	5.1	↑	-2.0	↓
EW07	SRG	2.6 J	2.7	NS	0.1	↑	NS	NS
EWM	SRG/BF	**39.6**	**39.1**	NS	-0.5	↓	NS	NS
EWN	SRG/BF	**6.9**	**8.6**	NS	1.7	↑	NS	NS
EWS	SRG/BF/BR	**37.2**	**57.3**	NS	20.1	↑	NS	NS
NW01	SRG	**6.3**	**7.6**	NS	2.1	↑	NS	NS
NW03	SRG	**15.0**	**51.1**	**50.9**	36.1	↑	35.9	↑
NW04-D	BF	ND(0.50)	ND(0.50)	NS	0	↔	NS	NS
NW04-S	SRG	0.50	1.9	NS	1.4	↑	NS	NS
NW05-S	SRG	2.5	3.8 / 3.8	NS	1.8	↑	NS	NS
NW06-D	BF	4.6	**33.5**	**28.1**	28.9	↑	23.5	↑
NW06-S	SRG	**17.7**	**23.8**	**25.9**	6.1	↑	8.2	↑
NW07-D	BF	4.3 / 4.4	4.7	4.4	0.0	↔	0.0	↔
NW07-M	BF	0.65	3.2	NS	2.55	↑	NS	NS
NW07-S	SRG	ND(0.50)	1.2	NS	1.2	↑	NS	NS
NW09-D	BF	**5.2**	**7.6**	**6.4**	2.4	↑	1.2	↑
NW09-D2	BF	2.2	2.3	2.9	0.1	↑	0.7	↑
NW09-M	SRG	1.2 / 1.4	NS	1.1	NS	NS	-0.1	↓
NW11-D	BF	**16.1**	**20.2**	**20.0**	4.1	↑	3.9	↑
NW11-M	SRG	**7.1**	**14.9**	**8.9**	7.8	↑	1.8	↑
NW13-D	BF	3.0 J	4.6	3.9.	1.6	↑	0.9	↑
NW13-M	SRG	ND(0.50)	NS	ND(0.50)	NS	NS	0	↔
NW14-D	BF	**13.1 J**	**12.6**	11.9	-0.5	↓	-1.2	↓
NW14-M	SRG	2	4.3	3.8	2.3	↑	1.8	↑
NW16-D	BF	**72.9 J**	**41**	**38/39.1**	-31.9	↓	-34.9	↓
NW16-M	BF	**102 J /101 J**	**89.7**	**65.1**	-11.3	↓	-36.9	↓
NW17-S	BF	**47.6**	**50.3 / 51.3**	**50.3/50.4**	3.7	↑	2.7	↑
NW18-S	SRG	**14.7**	**30.9 / 30.7**	**32.3**	16	↑	17.6	↓
NW18-M	CV	**70.3 J /67.7 J**	**57.2**	**57.6**	-12.7	↓	-12.7	↓
NW19-D	BF	**33.8**	**40.1**	**35.8**	6.3	↑	2	↑
NW19-M	SRG	4.5	4.5	5.2	0	↔	0.7	↑
Federal Maximum Contaminant Level [(1)]			*5*	*5*				
State Aquifer Water Quality Standard [(2)]			*5*	*5*				

Notes:

All concentrations are in micrograms per liter (µg/L)
All samples analyzed by USEPA Method 8260B.
Results in **Bold** are above the Maximum Contaminant Level.
SRG = Salt River Gravel
BF = Basin Fill
BR = Bedrock
CV = Colluvium
ND( ) = Qualified as not detected at or above value in parenthesis
U - Not detected at the associated reporting limit.

↑ = Increase in concentration
↓ Decrease in concentration
↔ = No change in concentration
NA = Resample (Not available for comparison)
NS = Not Sampled
(1) United States Environmental Protection Agency (USEPA), 40 Code of Federal Regulations 141.11 et seq. (December 2000)
(2) Arizona Administrative Code, R18-11-406

Attachments

Attachment A
Hydrographs

Table A.1

Groundwater Elevations - December 2016 through May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

			Monitoring Date December 5 and 6, 2016		Monitoring Date January 4 and 5, 2017		Monitoring Date January 30 and 31, 2017		Monitoring Date March 3 and 4, 2017		Monitoring Date May 19 through 23, 2017	
Well ID	**Hydrogeologic Unit Sampled**	**Reference Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**
AS02	SRG	1,099.75	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
ASE22-AR [(2)]	SRG	1,115.17	-	-	-	-	-	-	105.42	1009.75	-	-
ASE22-B [(2)]	BF/CV/BR	1,115.13	-	-	-	-	-	-	105.22	1009.91	-	-
ASE23-B [(2)]	CV/BR	1,113.53	-	-	-	-	-	-	107.1	1006.43	-	-
ASE26-A [(2)]	SRG	1,113.52	-	-	-	-	-	-	Dry	Dry	-	-
ASE27-A [(2)]	SRG	1,113.80	-	-	-	-	-	-	Dry	Dry	-	-
ASE28-A [(2)]	SRG	1,108.20	-	-	-	-	-	-	Dry	Dry	-	-
ASE29-A [(2)]	BF/CV	1,116.13	-	-	-	-	-	-	Dry	Dry	-	-
ASE30-A [(2)]	SRG	1,110.73	-	-	-	-	-	-	Dry	Dry	-	-
ASE31-A [(2)]	SRG	1,107.74	-	-	-	-	-	-	Dry	Dry	-	-
ASE32-A [(2)]	SRG	1,112.05	-	-	-	-	-	-	Dry	Dry	-	-
ASE33-A [(2)]	SRG	1,112.91	-	-	-	-	-	-	Dry	Dry	-	-
ASE34-A [(2)]	SRG	1,109.60	-	-	-	-	-	-	Dry	Dry	-	-
ASE34-B [(2)]	SRG	1,109.63	-	-	-	-	-	-	101.79	1007.84	-	-
ASE35-A [(2)]	SRG	1,108.64	-	-	-	-	-	-	94.74	1013.9	-	-
ASE36-A [(2)]	SRG	1,102.58	-	-	-	-	-	-	Dry	Dry	-	-
ASE65-A [(2)]	SRG	1,116.47	95.51	1020.96	-	-	-	-	95.25	1021.22	-	-
ASE70-A [(2)]	SRG	1,116.39	-	-	-	-	-	-	74.44	1041.95	-	-
ASE71-A [(2)]	SRG	1,114.49	-	-	-	-	-	-	97.67	1016.82	-	-
ASE72-A [(2)]	SRG	1,113.19	-	-	-	-	-	-	Dry	Dry	-	-
ASE72-B [(2)]	BF/CV/BR	1,113.03	-	-	-	-	-	-	105.02	1008.01	-	-
ASE73-A [(2)]	SRG	1,112.59	-	-	-	-	-	-	105.34	1007.25	-	-
ASE73-B [(2)]	BF	1,112.31	-	-	-	-	-	-	Well inaccessible		-	-
ASE75-A [(2)]	SRG	1,111.05	-	-	-	-	-	-	106.38	1004.67	-	-
ASE76-A [(2)]	SRG	1,105.42	-	-	-	-	-	-	104.35	1001.07	-	-
ASE76-B [(2)]	BF	1,105.34	-	-	-	-	-	-	104.55	1000.79	-	-
ASE77-A [(2)]	SRG	1,101.86	-	-	-	-	-	-	102.02	999.84	-	-
ASE77-B [(2)]	BF	1,101.76	-	-	-	-	-	-	102.82	998.94	-	-
ASE78-B [(2)]	BF	1,099.97	-	-	-	-	-	-	102.8	997.17	-	-
ASE83-A [(2)]	SRG	1,115.14	-	-	-	-	-	-	104.55	1010.59	-	-
ASE83-B [(2)]	BF	1,115.03	-	-	-	-	-	-	104.46	1010.57	-	-
ASE84-A [(2)]	SRG	1,114.80	-	-	-	-	-	-	100.98	1013.82	-	-
ASE85-A [(2)]	SRG	1,109.04	-	-	-	-	-	-	103.32	1005.72	-	-
ASE85-B [(2)]	BF	1,109.11	-	-	-	-	-	-	103.35	1005.76	-	-
ASE86-A [(2)]	SRG	1,106.07	-	-	-	-	-	-	100.82	1005.25	-	-
ASE87-A [(2)]	SRG	1,113.84	-	-	-	-	-	-	105.21	1008.63	-	-
ASE88-B [(2)]	BF	1,103.08	-	-	-	-	-	-	106.16	996.92	-	-
ASE103A [(2)]	SRG		-	-	-	-	-	-	97.6	1017.38	-	-
ASE125-A [(2)]	SRG	1,114.80	98.97	1015.83	-	-	-	-	99.06	1015.74	-	-
ASE126-A [(2)]	SRG		96.98	1017.68	-	-	-	-	97.03	1017.63	-	-
ASE129-A [(2)]	SRG	1,113.96	97.51	1016.45	-	-	-	-	97.56	1016.4	-	-
BC03 [(2)]	SRG		-	-	-	-	-	-	75.66	1041.38	-	-
BC09 [(2)]	SRG	1,115.59	-	-	-	-	-	-	90.58	1025.01	-	-

Table A.1

Groundwater Elevations - December 2016 through May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

			Monitoring Date December 5 and 6, 2016		Monitoring Date January 4 and 5, 2017		Monitoring Date January 30 and 31, 2017		Monitoring Date March 3 and 4, 2017		Monitoring Date May 19 through 23, 2017	
Well ID	Hydrogeologic Unit Sampled	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
BC10-A (2)	SRG	1,112.49	-	-	-	-	-	-	Dry	Dry	-	-
BC10-B (2)	BF	1,112.83	-	-	-	-	-	-	106.87	1006.09	-	-
BC11-A (2)	BF/CV	1,110.98	-	-	-	-	-	-	106.48	1004.5	-	-
BC11-B (2)	BF	1,111.20	-	-	-	-	-	-	107.38	1003.82	-	-
BC12 (2)	SRG	1,115.75	-	-	-	-	-	-	64.64	1051.11	-	-
BC16	SRG	1,116.02	75.80	1040.22	75.45	1040.57	75.16	1040.86	74.78	1041.24	74.65	1041.37
BC18 (2)	SRG	1,116.01	-	-	-	-	-	-	-	-	-	-
CRA01	SRG	1,106.43	104.62	1001.81	104.80	1001.63	103.90	1002.53	103.4	1003.03	103.91	1002.52
DM509	BF	1,114.06	76.40	1037.66	75.92	1038.14	75.66	1038.40	75.15	1038.91	75.08	1038.98
DM515-210	BF	1,103.61	100.49	1003.12	100.90	1002.71	100.19	1003.42	99.78	1003.83	99.30	1004.31
EW03	SRG / BF	1,114.60	76.65	1037.95	76.15	1038.45	75.80	1038.80	75.3	1039.3	75.25	1039.35
EW06	SRG	1,097.75	105.75	992.00	106.05	991.70	105.32	992.43	104.7	993.05	103.80	993.95
EW07	SRG	1,104.96	108.23	996.73	108.40	996.56	105.95	999.01	105.35	999.61	107.42	997.54
EW13-118 (4)	SRG	1,092.71	-	-	-	-	-	-	-	-	102.10	990.61
EW13-168 (4)	SRG	1,092.71	-	-	-	-	-	-	-	-	102.10	990.61
EW13-228 (4)	BF	1,092.71	-	-	-	-	-	-	-	-	99.87	992.84
EW13-268 (4)	BF	1,092.71	-	-	-	-	-	-	-	-	98.94	993.77
EW13-300 (4)	BF	1,092.71	-	-	-	-	-	-	-	-	98.76	993.95
EW19-D	BF	1,087.48	94.20	993.28	94.02	993.46	93.50	993.98	92.91	994.57	93.05	994.43
EW19-S	SRG	1,087.42	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
EW20	SRG	1,091.38	-	-	-	-	-	-	-	-	-	-
EW21	SRG	1,094.11	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
EW22-D	BF	1,095.75	100.12	995.63	97.50	998.25	96.85	998.90	96.15	999.6	96.90	998.85
EW22-S	SRG	1,095.72	106.90	988.82	107.10	988.62	106.65	989.07	106.25	989.47	105.50	990.22
EWM	SRG/BF	1,103.61	132.10	971.51	131.55	972.06	107.40	996.21	107.04	996.57	132.56	971.05
EWN	SRG/BF	1,110.78	146.70	964.08	172.55	938.23	113.95	996.83	113.25	997.53	178.01	932.77
EWS	SRG/BF/BR	1,100.37	147.80	952.57	149.20	951.17	102.15	998.22	105.9	994.47	139.50	960.87
EWSPZ1	SRG/BF	1,098.26	105.65	992.61	105.81	992.45	103.40	994.86	102.91	995.35	104.50	993.76
NW01	SRG	1,112.22	95.20	1017.02	95.08	1017.14	95.80	1016.42	95.4	1016.82	94.10	1018.12
NW02	SRG	1,101.83	108.55	993.28	108.65	993.18	105.35	996.48	104.8	997.03	107.75	994.08
NW03	SRG	1,096.92	104.15	992.77	104.45	992.47	100.95	995.97	100.38	996.54	103.25	993.67
NW04-D	BF	1,098.93	107.55	991.38	107.60	991.33	106.50	992.43	105.8	993.13	106.00	992.93
NW04-S	SRG	1,098.86	106.70	992.16	107.00	991.86	105.35	993.51	104.75	994.11	105.60	993.26
NW05-S	SRG	1,098.84	106.08	992.76	106.15	992.69	102.90	995.94	102.45	996.39	105.20	993.64
NW06-D	BF	1,095.53	104.40	991.13	104.48	991.05	104.01	991.52	103.65	991.88	103.60	991.93
NW06-S	SRG	1,095.49	104.71	990.78	104.96	990.53	103.80	991.69	103.35	992.14	103.20	992.29
NW07-D	BF	1,094.03	102.71	991.32	102.05	991.98	101.50	992.53	102.05	991.98*	101.25	992.78
NW07-M	SRG	1,093.89	103.05	990.84	103.05	990.84	103.00	990.89	103.6	990.29	102.30	991.59
NW07-S	SRG	1,094.12	103.80	990.32	104.05	990.07	103.50	990.62	103.05	991.07	101.85	992.27
NW08-D	BF	1,098.68	102.75	995.93	102.72	995.96	100.90	997.78	100.55	998.13	100.70	997.98
NW08-M	BF	1,097.55	104.50	993.05	104.45	993.10	103.05	994.50	102.4	995.15	102.00	995.55
NW08-S	SRG	1,097.39	104.15	993.24	104.40	992.99	101.40	995.99	100.85	996.54	103.10	994.29
NW09-D	BF	1,099.58	107.30	992.28	107.50	992.08	107.05	992.53	106.65	992.93	105.00	994.58

Table A.1

Groundwater Elevations - December 2016 through May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

			Monitoring Date December 5 and 6, 2016		Monitoring Date January 4 and 5, 2017		Monitoring Date January 30 and 31, 2017		Monitoring Date March 3 and 4, 2017		Monitoring Date May 19 through 23, 2017	
Well ID	Hydrogeologic Unit Sampled	Reference Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)	Depth to Water (ft)	Groundwater Elevation (ft AMSL)
NW09-D2	BF	1,099.30	106.90	992.40	107.10	992.20	107.15	992.15	106.6	992.7	104.95	994.35
NW09-M	SRG	1,099.42	106.95	992.47	107.25	992.17	106.75	992.67	106.35	993.07	104.75	994.67
NW10-D	BF	1,098.91	106.45	992.46	106.85	992.06	106.35	992.56	106	992.91	103.85	995.06
NW11-D	BF	1,097.69	105.52	992.17	105.75	991.94	104.80	992.89	104.35	993.34	103.50	994.19
NW11-M	SRG	1,097.59	105.35	992.24	105.60	991.99	104.75	992.84	104.35	993.24	103.35	994.24
NW12-D	BF	1,104.23	96.70	1007.53	96.88	1007.35	96.65	1007.58	96.6	1007.63	96.50	1007.73
NW13-D	BF	1,096.61	105.55	991.06	105.78	990.83	105.54	991.07	104.95	991.66	103.30	993.31
NW13-M	SRG	1,096.67	105.80	990.87	106.03	990.64	105.54	991.13	105.02	991.65	103.37	993.30
NW14-D	BF	1,096.12	104.70	991.42	104.91	991.21	104.50	991.62	103.98	992.14	102.73	993.39
NW14-M	SRG	1,096.11	104.85	991.26	105.08	991.03	104.55	991.56	104.02	992.09	102.75	993.36
NW15-S	CV	1,098.96	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
NW16-D	BF	1,097.96	105.20	992.76	105.40	992.56	103.50	994.46	103.05	994.91	103.50	994.46
NW16-M	SRG	1,097.92	105.95	991.97	106.22	991.70	104.90	993.02	104.51	993.41	104.25	993.67
NW17-S	CV	1,096.75	105.25	991.50	105.50	991.25	104.10	992.65	103.65	993.1	103.95	992.80
NW18-M	CV	1,094.92	104.13	990.79	104.35	990.57	103.40	991.52	103	991.92	102.60	992.32
NW18-S	SRG	1,094.78	104.10	990.68	104.30	990.48	103.30	991.48	102.9	991.88	102.55	992.23
NW19-D	BF	1,100.50	105.80	994.70	105.98	994.52	105.60	994.90	105.22	995.28	103.45	997.05
NW19-M	SRG	1,100.69	105.90	994.79	106.10	994.59	105.75	994.94	105.35	995.34	103.60	997.09
NW21-S	SRG	1,106.65	97.29	1009.36	97.20	1009.45	96.80	1009.85	96.4	1010.25	96.20	1010.45
NW22-D	BF	1,099.36	103.60	995.76	103.83	995.53	100.70	998.66	100.19	999.17	102.75	996.61
NW22-S	SRG	1,099.67	103.40	996.27	103.60	996.07	100.85	998.82	100.3	999.37	102.41	997.26
NW23-D	BF	1,101.26	104.60	996.66	104.75	996.51	103.85	997.41	103.55	997.71	102.45	998.81
NW23-S	SRG	1,101.13	103.25	997.88	103.45	997.68	102.75	998.38	102.44	998.69	101.28	999.85
NW24-D	BF	1,116.54	79.65	1036.89	79.14	1037.40	78.70	1037.84	78.3	1038.24	78.40	1038.14
NW24-S	SRG	1,116.59	79.80	1036.79	79.25	1037.34	78.90	1037.69	78.41	1038.18	78.50	1038.09
NW25-S	SRG	1,128.40	86.10	1042.30	85.30	1043.10	84.10	1044.30	84.3	1044.1	84.98	1043.42
OU312-D	BF	1,090.77	97.45	993.32	97.40	993.37	96.90	993.87	96.25	994.52	96.10	994.67
OU312-M	SRG	1,090.79	103.10	987.69	103.25	987.54	102.90	987.89	102.51	988.28	101.20	989.59
OU313-D	BF	1,095.71	103.06	992.65	104.30	991.41	103.80	991.91	103.11	992.6	102.70	993.01
OU313-M	SRG	1,095.75	107.13	988.62	107.35	988.40	106.90	988.85	106.5	989.25	105.70	990.05
OU314-D	BF	1,099.14	96.75	1002.39	96.90	1002.24	95.80	1003.34	95.3	1003.84	96.45	1002.69
OU314-M	SRG	1,099.05	106.75	992.30	106.87	992.18	106.05	993.00	105.65	993.4	105.80	993.25
OU320-M	SRG	1,100.12	107.40	992.72	107.65	992.47	107.25	992.87	106.81	993.31	105.23	994.89
OU320-S	SRG	1,100.20	107.30	992.90	107.60	992.60	107.19	993.01	106.75	993.45	105.18	995.02
PHXA06	SRG	1,100.44	104.16	996.28	104.38	996.06	103.45	996.99	103.05	997.39	102.25	998.19
PL103-A (2)	SRG	1,117.32	-	-	-	-	-	-	-	-	-	-
PL104-A (2)	SRG	1,115.11	-	-	-	-	-	-	-	-	-	-
PL202-C (2)	SRG	1,112.32	-	-	-	-	-	-	-	-	-	-
PL202-N (2)	BF	1,112.23	-	-	-	-	-	-	-	-	-	-
PL202-S (2)	SRG	1,112.54	-	-	-	-	-	-	-	-	-	-
PZ01-A	SRG	1,117.04	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
PZ01-B	BF	1,117.05	76.50	1040.55	76.00	1041.05	75.70	1041.35	75.4	1041.65	75.22	1041.83
PZ01-D	BR	1,102.69	109.45	993.24	109.80	992.89	105.20	997.49	104.65	998.04	108.83	993.86

Table A.1

Groundwater Elevations - December 2016 through May 2017
52nd Street Superfund Site, OU2 Area
Phoenix, Arizona

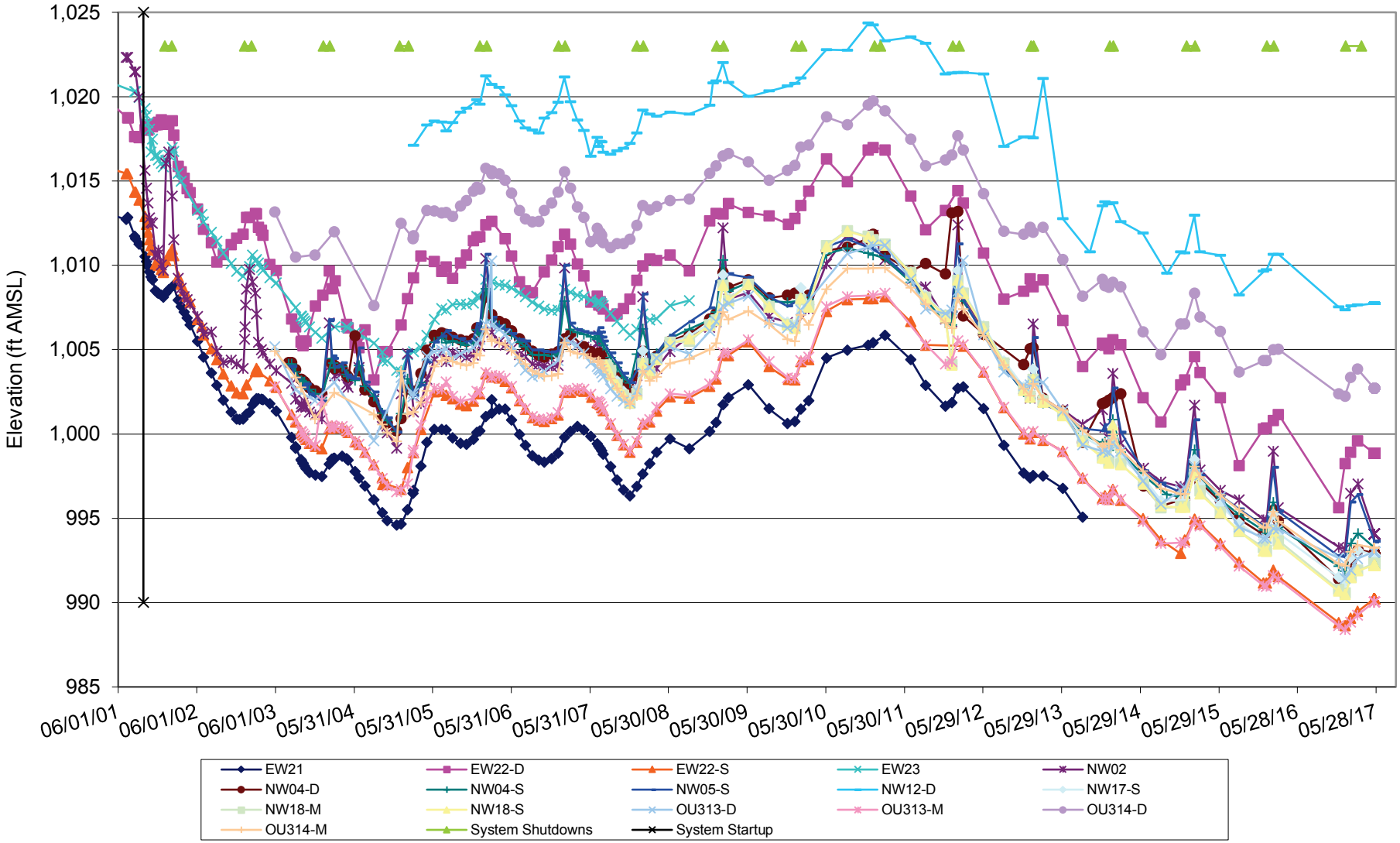
			Monitoring Date December 5 and 6, 2016		Monitoring Date January 4 and 5, 2017		Monitoring Date January 30 and 31, 2017		Monitoring Date March 3 and 4, 2017		Monitoring Date May 19 through 23, 2017	
Well ID	**Hydrogeologic Unit Sampled**	**Reference Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**	**Depth to Water (ft)**	**Groundwater Elevation (ft AMSL)**
PZ01-S	SRG	1,102.69	109.42	993.27	109.77	992.92	105.21	997.48	104.62	998.07	108.80	993.89
PZ02-D	BR	1,107.95	114.75	993.20	115.15	992.80	110.60	997.35	110.05	997.9	114.25	993.70
PZ02-S	SRG	1,107.95	114.77	993.18	115.16	992.79	110.63	997.32	110.07	997.88	114.28	993.67
TEW01	SRG	1,103.56	110.23	993.33	110.41	993.15	106.21	997.35	105.65	997.91	109.75	993.81

Notes:

-- = Not Measured
* = Water level collected on March 9, 2017
SRG = Salt River Gravels
BF = Basin Fill
CV = Colluvium
BR = Bedrock
ft AMSL = feet above mean sea level
NA = Not Applicable
(1) Resurvey 9/2010 or 12/2010 (not pertinent to this reporting period)
(2) Measured by CH2M
(3) Measured by ERM
(4) Measured by Clear Creek
OU2 GES Network Monitoring well water level data is displayed on Figures 1 and 2 - Supplemental monitoring well data will be used and displayed as provided. Some wells are only plotted on Figure 4 through Figure 7.

Attachment A

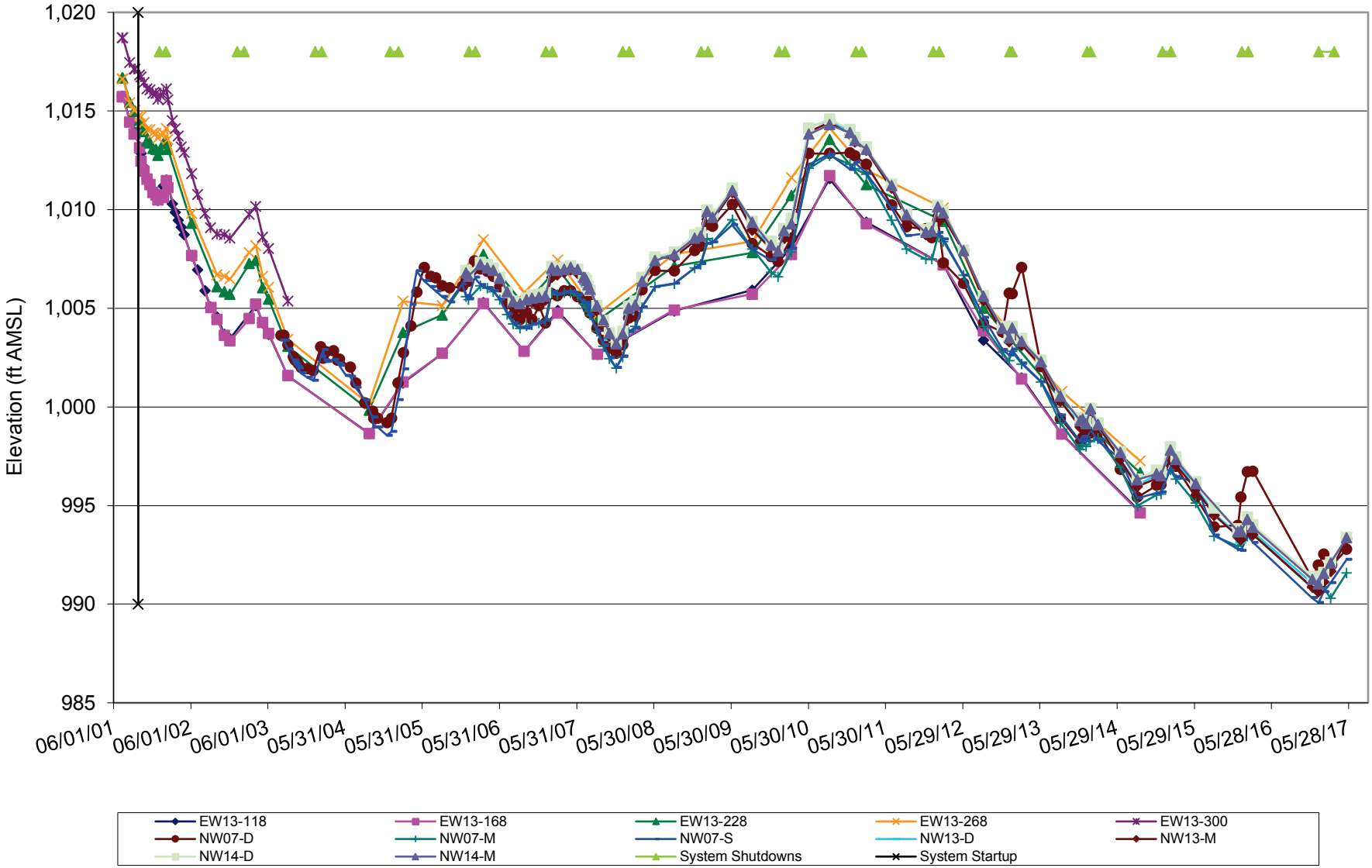
Hydrographs for Wells North and West of GES
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment A

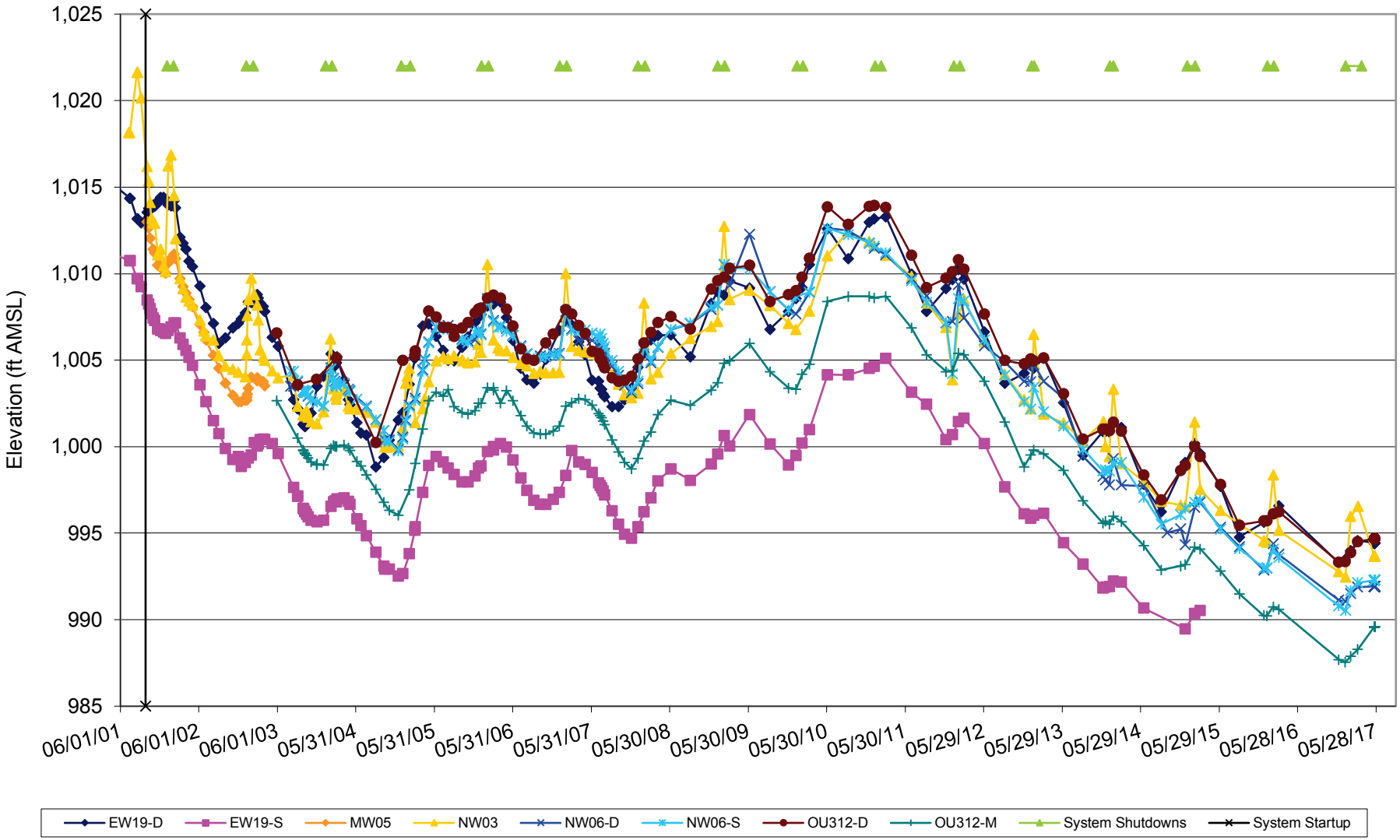
Hydrographs for Wells South and West of GES
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment A

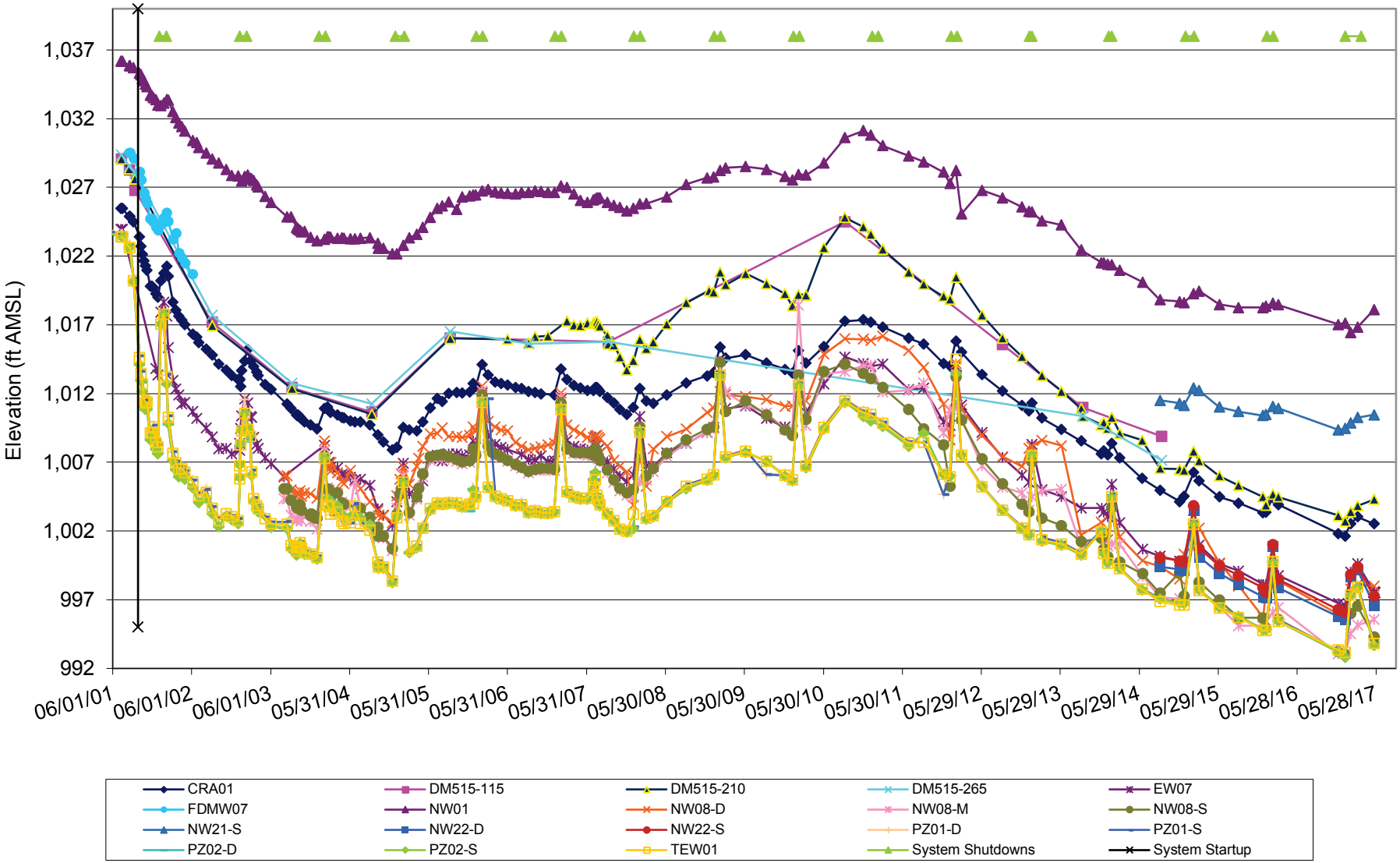
Hydrographs for Wells West of GES
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment A

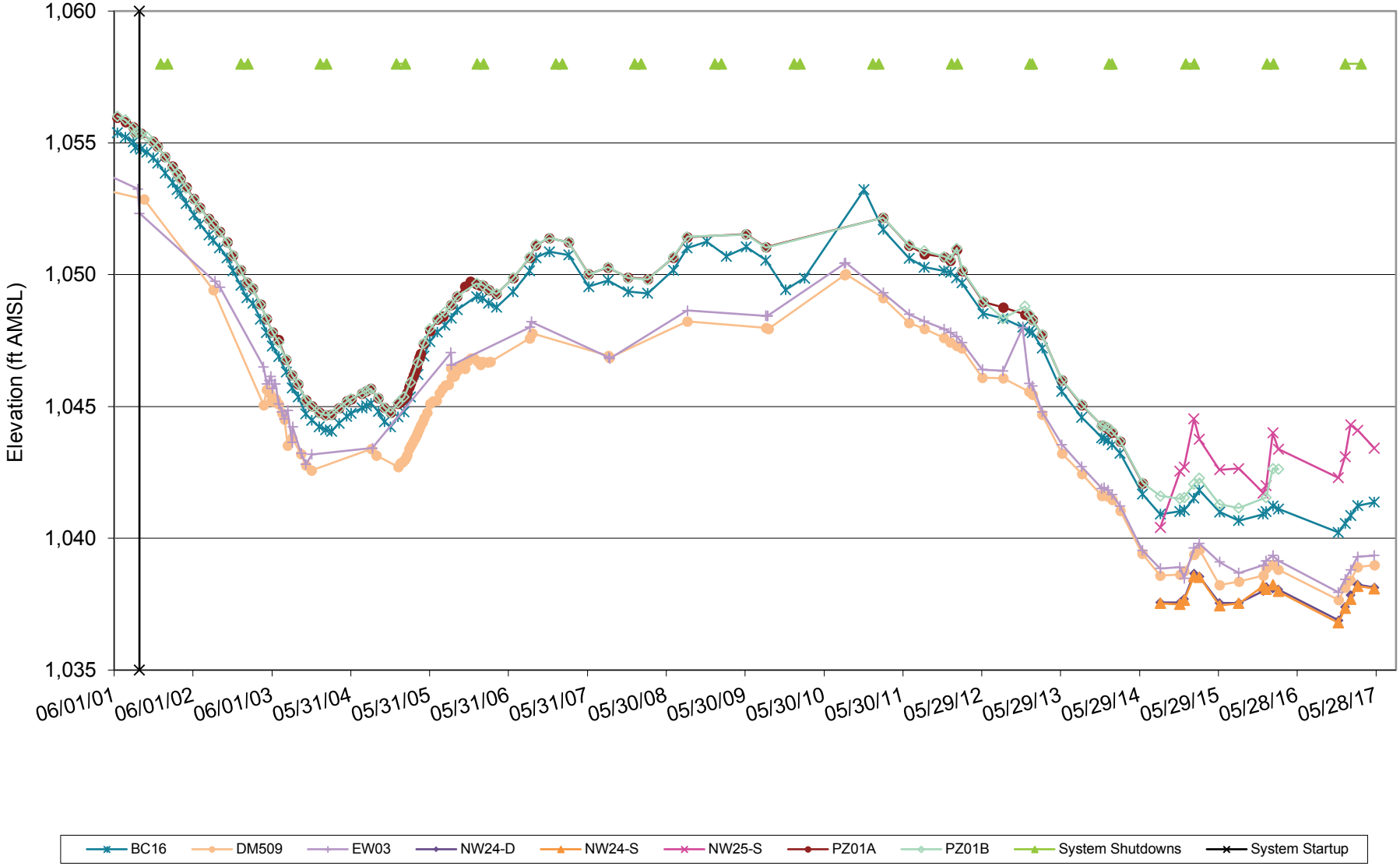
Hydrographs for Wells North and East of GES
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment A

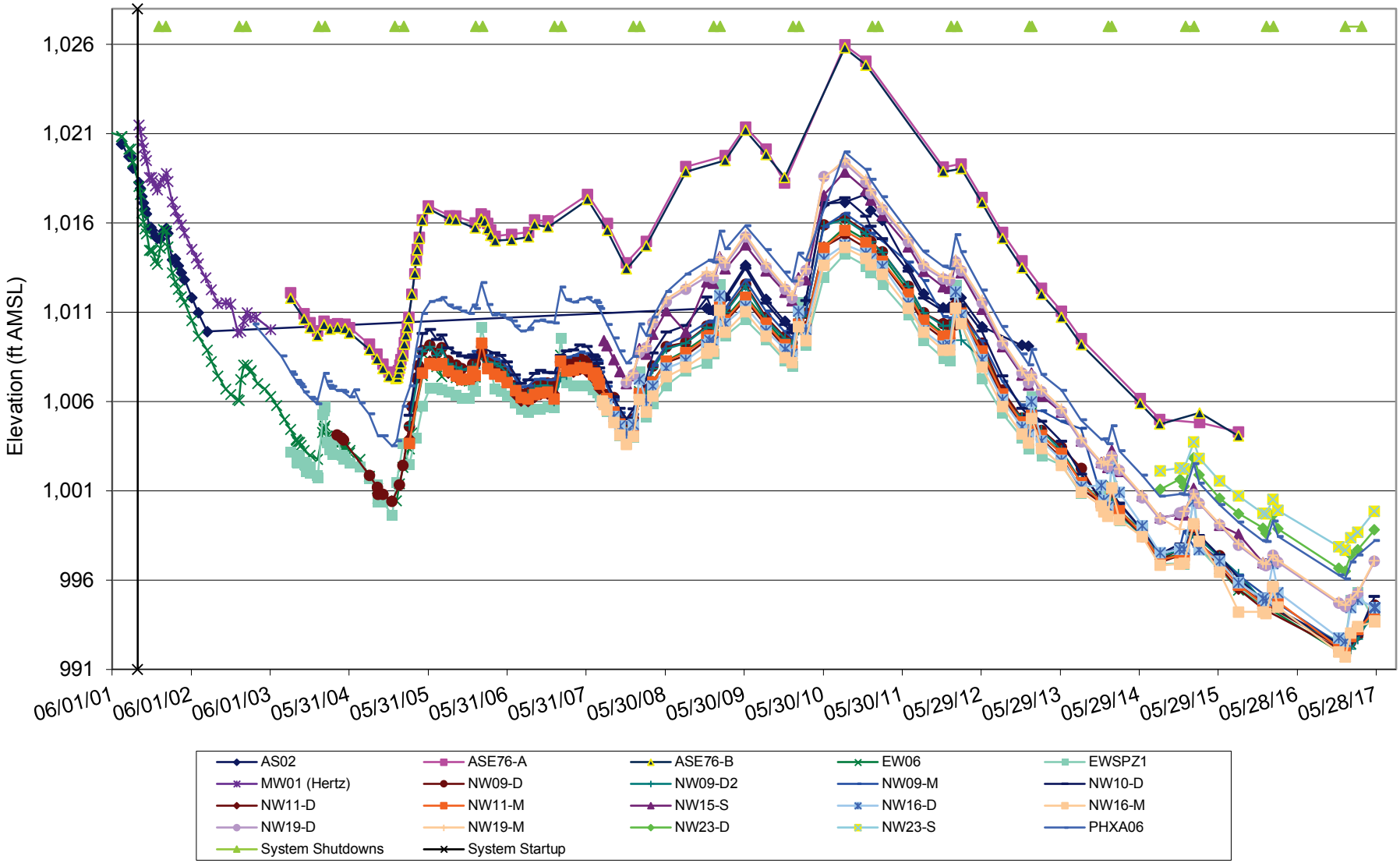
Hydrographs for Wells North and East of GES (Continued)
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment A

Hydrographs for Wells South and East of GES
52nd Street Superfund Site - OU2 Area
Phoenix, Arizona



Note:
ft AMSL - feet Above Mean Sea Level

Attachment B
Validation Memos

Memorandum

April 28, 2017

To:	Manfred Plaschke	Ref. No.:	013932-130
From:	Sheri Finn/adh/52	Tel:	716-205-1977
cc:	Eric Mannlein		

Subject: **Analytical Results and Reduced Validation**
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

1. Introduction

This document details a reduced validation of analytical results for water samples collected in support of the semiannual groundwater sampling at the Motorola 52nd Street Superfund Site in Phoenix, Arizona during March and April 2017. The samples were submitted to SGS Accutest, located in Houston, Texas. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spike/matrix spike duplicates (MS/MSD), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "QAPP", 013932 Report 4, Revision 5, February 2011

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion for the analysis is summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding time.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries met those limits.

5. Laboratory Control Sample Analyses

LCS or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the method employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS or LCS/LCSD contained the compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision where applicable.

6. Matrix Spike/Matrix Spike Duplicate Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with known concentrations of the compounds of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess

analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed internally by the laboratory.

The MS/MSD samples were spiked with the compounds of interest for VOC analysis. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

7. Field QA/QC Samples

The field QA/QC consisted of six trip blank samples, seven rinse blanks, two field blank samples, and three field duplicate sample sets.

7.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, six trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

7.2 Rinse Blank and Field Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, seven rinse blanks and two field blanks were submitted for analysis, as identified in Table 1. Results were non-detect for the analytes of interest.

7.3 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's RL for each analyte. Non-detect results were reported as non-detect at the RL in Table 2.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Table 1

Sample Collection and Analysis Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time	Analysis/ Parameters VOC	Comments
GW-030717-PG-05	CRA01	Water	03/07/2017	11:55:00	X	
GW-031617-PG-29	EW06	Water	03/16/2017	10:15:00	X	
GW-031617-PG-30	EW07	Water	03/16/2017	12:40:00	X	Matrix Spike/Matrix Spike Duplicate
GW-031017-PG-12	NW01	Water	03/10/2017	08:30:00	X	
GW-031317-PG-19	NW03	Water	03/13/2017	12:10:00	X	
GW-030617-PG-02	NW04-D	Water	03/06/2017	10:10:00	X	
GW-030717-PG-04	NW04-S	Water	03/07/2017	11:00:00	X	
GW-031017-PG-14	NW05-S	Water	03/10/2017	13:30:00	X	
GW-031017-PG-15	NW05-S	Water	03/10/2017	13:35:00	X	Field Duplicate of GW-031017-PG-14
GW-032417-PG-34	NW06-D	Water	03/24/2017	12:30:00	X	
GW-031417-PG-22	NW06-S	Water	03/14/2017	09:25:00	X	
GW-030817-PG-07	NW07-D	Water	03/08/2017	15:30:00	X	
GW-030717-PG-20	NW07-M	Water	03/07/2017	13:35:00	X	
GW-030717-PG-03	NW07-S	Water	03/07/2017	08:45:00	X	
GW-030917-PG-10	NW09-D	Water	03/09/2017	13:45:00	X	
GW-030917-PG-09	NW09-D2	Water	03/09/2017	08:10:00	X	
GW-031317-PG-21	NW11-D	Water	03/13/2017	15:50:00	X	Matrix Spike/Matrix Spike Duplicate
GW-031017-PG-13	NW11-M	Water	03/10/2017	12:25:00	X	
GW-031717-PG-32	NW13-D	Water	03/17/2017	12:00:00	X	
GW-031717-PG-31	NW14-D	Water	03/17/2017	09:50:00	X	
GW-031417-PG-25	NW17-S	Water	03/14/2017	14:25:00	X	
GW-031417-PG-26	NW17-S	Water	03/14/2017	14:30:00	X	Field Duplicate of GW-031417-PG-25
GW-031517-PG-27	NW18-M	Water	03/14/2017	08:15:00	X	
GW-031317-PG-16	NW18-S	Water	03/13/2017	09:45:00	X	
GW-031317-PG-17	NW18-S	Water	03/13/2017	09:50:00	X	Field Duplicate of GW-031317-PG-16
GW-031417-PG-24	NW19-D	Water	03/14/2017	11:45:00	X	
GW-030817-PG-06	NW19-M	Water	03/08/2017	09:20:00	X	
GW-030917-PG-08	Field Blank	Water	03/09/2017	07:50:00	X	Field Blank
GW-031417-PG-23	Field Blank	Water	03/14/2017	11:15:00	X	Field Blank
GW-030617-PG-01	Rinse Blank	Water	03/06/2017	08:15:00	X	Rinse Blank
GW-031017-PG-11	Rinse Blank	Water	03/10/2017	07:45:00	X	Rinse Blank
GW-031317-PG-18	Rinse Blank	Water	03/13/2017	11:00:00	X	Rinse Blank
GW-031617-PG-28	Rinse Blank	Water	03/16/2017	08:30:00	X	Rinse Blank
GW-032417-PG-33	Rinse Blank	Water	03/24/2017	08:30:00	X	Rinse Blank
TRIP BLANK 01	Trip Blank	Water	03/09/2017	00:00:00	X	Trip Blank
TRIP BLANK 02	Trip Blank	Water	03/10/2017	00:00:00	X	Trip Blank
TRIP BLANK 03	Trip Blank	Water	03/14/2017	00:00:00	X	Trip Blank
TRIP BLANK	Trip Blank	Water	03/17/2017	00:00:00	X	Trip Blank
TRIP BLANK	Trip Blank	Water	03/24/2017	00:00:00	X	Trip Blank
GW-041717-PG-02	NW14-M	Water	04/17/2017	17:20:00	X	
GW-041817-PG-03	NW16-D	Water	04/18/2017	15:45:00	X	
GW-041917-PG-05	NW16-M	Water	04/19/2017	08:35:00	X	
GW-041717-PG-01	Rinse Blank	Water	04/17/2017	16:20:00	X	Rinse Blank
GW-041917-PG-04	Rinse Blank	Water	04/19/2017	07:40:00	X	Rinse Blank
TRIP BLANK	Trip Blank	Water	04/17/2017	00:00:00	X	Trip Blank

Notes:

VOC - Volatile Organic Compounds

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		**CRA01**	**EW06**	**EW07**	**NW01**	**NW03**	**NW04-D**
Sample Name:		**GW-030717-PG-05**	**GW-031617-PG-29**	**GW-031617-PG-30**	**GW-031017-PG-12**	**GW-031317-PG-19**	**GW-030617-PG-02**
Sample Date:		**03/07/2017**	**03/16/2017**	**03/16/2017**	**03/10/2017**	**03/13/2017**	**03/06/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	2.2	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	2.6	ND(1.0)	ND(1.0)	2.8	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	2.1	1.4	1.7	2.9	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	2.1	ND(1.0)	ND(1.0)	13.0	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	1.0	ND(1.0)	ND(1.0)	1.3	2.5	2.1
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	2.6	7.1	2.7	7.6	51.1	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		**NW04-S**	**NW05-S**	**NW05-S**	**NW06-D**	**NW06-S**	**NW07-D**
Sample Name:		**GW-030717-PG-04**	**GW-031017-PG-14**	**GW-031017-PG-15**	**GW-032417-PG-34**	**GW-031417-PG-22**	**GW-030817-PG-07**
Sample Date:		**03/07/2017**	**03/10/2017**	**03/10/2017**	**03/24/2017**	**03/14/2017**	**03/08/2017**
				Duplicate			
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.5	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	1.6	2.2	1.8
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	2.0	3.7	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	5.8	8.5	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.4	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	1.9	3.8	3.8	33.5	23.8	4.7
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		**NW07-M**	**NW07-S**	**NW09-D**	**NW09-D2**	**NW11-D**	**NW11-M**
Sample Name:		**GW-030717-PG-20**	**GW-030717-PG-03**	**GW-030917-PG-10**	**GW-030917-PG-09**	**GW-031317-PG-21**	**GW-031017-PG-13**
Sample Date:		**03/07/2017**	**03/07/2017**	**03/09/2017**	**03/09/2017**	**03/13/2017**	**03/10/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	1.2	ND(1.0)	ND(1.0)	ND(1.0)	1.4	4.1
1,1-Dichloroethene	µg/L	3.2	ND(1.0)	2.6	ND(1.0)	5.6	9.2
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.2
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	1.1	ND(1.0)	1.6	ND(1.0)	4.1	4.2
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	3.2	1.2	7.6	2.3	20.2	14.9
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		**NW13-D**	**NW14-D**	**NW14-M**	**NW16-D**	**NW16-M**	**NW17-S**
Sample Name:		**GW-031717-PG-32**	**GW-031717-PG-31**	**GW-041717-PG-02**	**GW-041817-PG-03**	**GW-041917-PG-05**	**GW-031417-PG-25**
Sample Date:		**03/17/2017**	**03/17/2017**	**04/17/2017**	**04/18/2017**	**04/19/2017**	**03/14/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	1.1	1.0	ND(1.0)	16.4	1.1
1,1-Dichloroethene	µg/L	ND(1.0)	4.8	3.3	ND(1.0)	35.2	2.0
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.4	1.1
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	2.8	1.2	1.5	18.5	10.7
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.5	1.6
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	4.6	12.6	4.3	41.0	89.7	50.3
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		NW17-S	NW18-M	NW18-S	NW18-S	NW19-D	NW19-M
Sample Name:		GW-031417-PG-26	GW-031517-PG-27	GW-031317-PG-16	GW-031317-PG-17	GW-031417-PG-24	GW-030817-PG-06
Sample Date:		03/14/2017	03/14/2017	03/13/2017	03/13/2017	03/14/2017	03/08/2017
		Duplicate			Duplicate		
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	1.0	ND(1.0)	1.8	1.7	6.2	2.2
1,1-Dichloroethene	µg/L	1.9	ND(1.0)	2.7	2.9	23.4	5.8
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	1.0	ND(1.0)	4.2	4.3	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	10.2	3.5	7.5	7.5	12.0	1.5
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	1.6	ND(1.0)	2.4	2.4	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	51.3	57.2	30.9	30.7	40.1	4.5
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

	Location ID:	**Field Blank**	**Field Blank**	**Rinse Blank**	**Rinse Blank**	**Rinse Blank**
	Sample Name:	**GW-030917-PG-08**	**GW-031417-PG-23**	**GW-030617-PG-01**	**GW-031017-PG-11**	**GW-031317-PG-18**
	Sample Date:	**03/09/2017**	**03/14/2017**	**03/06/2017**	**03/10/2017**	**03/13/2017**
Parameters	**Unit**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		Rinse Blank	Rinse Blank	Rinse Blank	Rinse Blank	Trip Blank
Sample Name:		GW-031617-PG-28	GW-032417-PG-33	GW-041717-PG-01	GW-041917-PG-04	TRIP BLANK 01
Sample Date:		03/16/2017	03/24/2017	04/17/2017	04/19/2017	03/09/2017
Parameters	**Unit**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Location ID:		**Trip Blank**	**Trip Blank**	**Trip Blank**	**Trip Blank**	**Trip Blank**
Sample Name:		**TRIP BLANK 02**	**TRIP BLANK 03**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK**
Sample Date:		**03/10/2017**	**03/14/2017**	**03/17/2017**	**03/24/2017**	**04/17/2017**
Parameters	**Unit**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Notes:

ND( ) - Not detected at the associated reporting limit

Table 3

Analytical Methods
Semiannual Groundwater Sampling
Motorola-52nd Street Superfund Site-OU2 Area
Phoenix, Arizona
March and April 2017

Analyte	Methods	Matrix	Holding Time Collection to Analysis (Days)
Volatile Organic Compounds	SW8260	Water	14

Notes:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Memorandum

June 9, 2017

To:	Manfred Plaschke	Ref. No.:	013932-130
From:	Sheri Finn/adh/55	Tel:	716-205-1977
cc:	Eric Mannlein		

Subject: **Analytical Results and Reduced Validation**
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

1. Introduction

This document details a reduced validation of analytical results for water samples collected in support of the groundwater sampling event at the Motorola 52nd Street Superfund Site in Phoenix, Arizona during May 2017. The samples were submitted to SGS Accutest, located in Houston, Texas. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, and recovery data from surrogate spikes, laboratory control samples (LCS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "QAPP", 013932 Report 4, Revision 5, February 2011

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

Item ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion for the analysis is summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding time.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the method employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries met those limits.

5. Laboratory Control Sample Analyses

LCS or LCS/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the method employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS or LCS/LCSD contained the compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision where applicable.

6. Field QA/QC Samples

The field QA/QC consisted of three trip blank samples, three equipment blanks, three field blank samples, and one field duplicate sample set.

6.1 Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, three trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

6.2 Equipment Blank and Field Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, three equipment blanks and three field blanks were submitted for analysis, as identified in Table 1. Results were non-detect for the analytes of interest with the exception of trichloroethene detected in two of the blanks. Sample results with concentrations similar to those found in the blanks were qualified as non-detect (see Table 4).

6.3 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with the duplicate sample must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the laboratory's RL for each analyte. Non-detect results were reported as non-detect at the RL in Table 2.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications noted.

Table 1

Sample Collection and Analysis Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time	Analysis/ Parameters: VOC	Comments
GW-053017-PG-26	EW06	Water	05/30/2017	12:45:00	X	
GW-052517-PG-15	NW03	Water	05/25/2017	08:50:00	X	
GW-052417-PG-12	NW06-D	Water	05/24/2017	13:00:00	X	
GW-052517-PG-18	NW06-S	Water	05/25/2017	13:00:00	X	
GW-052317-PG-06	NW07-D	Water	05/23/2017	07:30:00	X	
GW-052317-PG-07	NW09-D	Water	05/23/2017	10:20:00	X	
GW-052217-PG-03	NW09-D2	Water	05/22/2017	13:30:00	X	
GW-052217-PG-02	NW09-M	Water	05/22/2017	10:45:00	X	
GW-052417-PG-09	NW11-D	Water	05/24/2017	07:45:00	X	
GW-052317-PG-08	NW11-M	Water	05/23/2017	13:20:00	X	
GW-053017-PG-23	NW13-D	Water	05/30/2017	09:05:00	X	
GW-052617-PG-21	NW13-M	Water	05/26/2017	10:15:00	X	
GW-053017-PG-25	NW14-D	Water	05/30/2017	11:45:00	X	
GW-052617-PG-22	NW14-M	Water	05/26/2017	12:10:00	X	
GW-053017-PG-27	NW16-D	Water	05/30/2017	13:50:00	X	
GW-053017-PG-28	NW16-D	Water	05/30/2017	13:55:00	X	
GW-053017-PG-29	NW16-M	Water	05/30/2017	15:15:00	X	
GW-052517-PG-16	NW17-S	Water	05/25/2017	10:40:00	X	
GW-052517-PG-17	NW17-S	Water	05/25/2017	10:45:00	X	Field Duplicate of GW-052517-PG-16
GW-052617-PG-19	NW18-M	Water	05/26/2017	07:10:00	X	
GW-052417-PG-10	NW18-S	Water	05/24/2017	10:45:00	X	
GW-052517-PG-14	NW19-D	Water	05/25/2017	07:20:00	X	
GW-052317-PG-04	NW19-M	Water	05/23/2017	05:25:00	X	
GW-052217-PG-01	Equipment Blank	Water	05/22/2017	08:55:00	X	Equipment Blank
GW-052417-PG-11	Equipment Blank	Water	05/24/2017	11:35:00	X	Equipment Blank
GW-052617-PG-20	Equipment Blank	Water	05/26/2017	08:55:00	X	Equipment Blank
GW-052317-PG-05	Field Blank	Water	05/23/2017	06:50:00	X	Field Blank
GW-052517-PG-13	Field Blank	Water	05/25/2017	06:40:00	X	Field Blank
GW-053017-PG-24	Field Blank	Water	05/30/2017	10:00:00	X	Field Blank
TRIP BLANK	Trip Blank	Water	05/23/2017	00:00:00	X	Trip Blank
TRIP BLANK	Trip Blank	Water	05/24/2017	00:00:00	X	Trip Blank
TRIP BLANK	Trip Blank	Water	05/30/2017	00:00:00	X	Trip Blank

Notes:

VOC - Volatile Organic Compounds

Table 2

Analytical Results Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

Location ID:		EW06	NW03	NW06-D	NW06-S	NW07-D	NW09-D	NW09-D2
Sample Name:		GW-053017-PG-26	GW-052517-PG-15	GW-052417-PG-12	GW-052517-PG-18	GW-052317-PG-06	GW-052317-PG-07	GW-052217-PG-03
Sample Date:		05/30/2017	05/25/2017	05/24/2017	05/25/2017	05/23/2017	05/23/2017	05/22/2017
Parameters	**Unit**							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	1.6	ND(1.0)	ND(1.0)	1.5	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	1.1	3.1	1.1	2.0	1.7	3.6	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	2.7	ND(1.0)	2.5	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	1.2	15.6	9.0	10.1	ND(1.0)	1.7	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	3.0	ND(1.0)	3.0	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	ND(4.4)	50.9	28.1	25.9	4.4	6.4	2.9
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

	Location ID:	**NW09-M**	**NW11-D**	**NW11-M**	**NW13-D**	**NW13-M**	**NW14-D**
	Sample Name:	**GW-052217-PG-02**	**GW-052417-PG-09**	**GW-052317-PG-08**	**GW-053017-PG-23**	**GW-052617-PG-21**	**GW-053017-PG-25**
	Sample Date:	**05/22/2017**	**05/24/2017**	**05/23/2017**	**05/30/2017**	**05/26/2017**	**05/30/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	1.6	3.1	ND(1.0)	ND(1.0)	1.0
1,1-Dichloroethene	µg/L	1.2	5.2	8.6	ND(1.0)	ND(1.0)	5.2
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	5.4	2.6	ND(1.0)	ND(1.0)	3.2
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	1.1	20.0	8.9	ND(0.50)	ND(0.50)	ND(11.9)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

	Location ID:	**NW14-M**	**NW16-D**	**NW16-D**	**NW16-M**	**NW17-S**	**NW17-S**
	Sample Name:	**GW-052617-PG-22**	**GW-053017-PG-27**	**GW-053017-PG-28**	**GW-053017-PG-29**	**GW-052517-PG-16**	**GW-052517-PG-17**
	Sample Date:	**05/26/2017**	**05/30/2017**	**05/30/2017**	**05/30/2017**	**05/25/2017**	**05/25/2017**
							Duplicate
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	1.1	ND(1.0)	ND(1.0)	13.8	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	3.1	ND(1.0)	ND(1.0)	20.9	1.8	1.8
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	1.0	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	1.3	1.7	1.6	15.1	11.9	11.8
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	2.3	2.2
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	3.8	38.0	39.1	65.1	50.3	50.4
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

	Location ID:	**NW18-M**	**NW18-S**	**NW19-D**	**NW19-M**	**Equipment Blank**	**Equipment Blank**
	Sample Name:	**GW-052617-PG-19**	**GW-052417-PG-10**	**GW-052517-PG-14**	**GW-052317-PG-04**	**GW-052217-PG-01**	**GW-052417-PG-11**
	Sample Date:	**05/26/2017**	**05/24/2017**	**05/25/2017**	**05/23/2017**	**05/22/2017**	**05/24/2017**
Parameters	**Unit**						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	1.9	4.9	2.3	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	2.6	16.5	8.4	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	4.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	4.4	9.5	11.2	1.5	ND(1.0)	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	3.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	57.6	32.3	35.8	5.2	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Table 2

Analytical Results Summary
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

Location ID:		**Equipment Blank**	**Field Blank**	**Field Blank**	**Field Blank**	**Trip Blank**	**Trip Blank**	**Trip Blank**
Sample Name:		**GW-052617-PG-20**	**GW-052317-PG-05**	**GW-052517-PG-13**	**GW-053017-PG-24**	**TRIP BLANK**	**TRIP BLANK**	**TRIP BLANK**
Sample Date:		**05/26/2017**	**05/23/2017**	**05/25/2017**	**05/30/2017**	**05/23/2017**	**05/24/2017**	**05/30/2017**
Parameters	**Unit**							
Volatile Organic Compounds								
1,1,1-Trichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,1-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
1,2-Dichloroethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromodichloromethane	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Chloroform (Trichloromethane)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Chloromethane (Methyl chloride)	µg/L	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
cis-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Tetrachloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Toluene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
trans-1,2-Dichloroethene	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Trichloroethene	µg/L	0.56	ND(0.50)	ND(0.50)	3.9	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	µg/L	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)
Vinyl chloride	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)

Notes:

ND( ) - Not detected at the associated reporting limit

Table 3

Analytical Methods
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

Analyte	Methods	Matrix	Holding Time Collection to Analysis (Days)
Volatile Organic Compounds	SW8260	Water	14

Notes:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 4

Qualified Sample Data Due to Analyte Concentrations in the Field Blanks
Groundwater Sampling Event
Motorola-52nd Street Superfund Site
Phoenix, Arizona
May 2017

Parameter	Field Blank ID	Blank Date (dd/mm/yyyy)	Analyte	Blank Result	Associated Sample ID	Original Result	Qualified Result	Units
VOCs	GW-053017-PG-24	05/30/2017	Trichloroethene	3.9	GW-053017-PG-25	11.9	ND(11.9)	µg/L
			Trichloroethene	3.9	GW-053017-PG-26	4.4	ND(4.4)	µg/L

Notes:

ND( ) - Not detected at the associated reporting limit
VOCs -Volatile Organic Compounds

Attachment C
Analytical Data
(CD for Agencies only)

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e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD1158

Sampling Date: 03/24/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: 17

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628)
KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD1158

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD1158-1	03/24/17	08:30	PG	03/29/17	AQ	Ground Water	GW-032417-PG-33
TD1158-2	03/24/17	12:30	PG	03/29/17	AQ	Ground Water	GW-032417-PG-34
TD1158-3	03/24/17	00:00	PG	03/29/17	AQ	Trip Blank Water	TRIP BLANK

Summary of Hits

Job Number: TD1158
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/24/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD1158-1	**GW-032417-PG-33**					
No hits reported in this sample.						
TD1158-2	**GW-032417-PG-34**					
Chloroform		2.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		5.8	1.0		ug/l	SW846 8260C
Trichloroethylene		33.5	0.50		ug/l	SW846 8260C
TD1158-3	**TRIP BLANK**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-032417-PG-33		
Lab Sample ID:	TD1158-1	**Date Sampled:**	03/24/17
Matrix:	AQ - Ground Water	**Date Received:**	03/29/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55649.D	1	04/05/17	EM	n/a	n/a	VZ5283
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	111%		68-124%
2037-26-5	Toluene-D8	98%		80-119%
460-00-4	4-Bromofluorobenzene	95%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-032417-PG-34		
Lab Sample ID:	TD1158-2	**Date Sampled:**	03/24/17
Matrix:	AQ - Ground Water	**Date Received:**	03/29/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55650.D	1	04/05/17	EM	n/a	n/a	VZ5283
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	33.5	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	111%		68-124%
2037-26-5	Toluene-D8	96%		80-119%
460-00-4	4-Bromofluorobenzene	95%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD1158-3	**Date Sampled:**	03/24/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/29/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55648.D	1	04/05/17	EM	n/a	n/a	VZ5283
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-122%
17060-07-0	1,2-Dichloroethane-D4	110%		68-124%
2037-26-5	Toluene-D8	98%		80-119%
460-00-4	4-Bromofluorobenzene	96%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD1158
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
Q9	Insufficient sample received to meet method QC requirements.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7787 6546 1771
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest NC Job #: C TD1158

Client / Reporting Information

Company Name: GHD
Address:
City: State: Zip:
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: 042
Street:
City: State:
Project #: 013932-130
EMAIL: manfred.plaschke@ghd.com
Client Purchase Order #:

Requested Analysis

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260	LAB USE ONLY
1	GW-032417-PG-33	3/24	0830	PG	GW	3	X								X	
2	⊥ ⊥ ⊥ 34	3/24	1230	PG	GW	3	X								X	
3	TRIP BLANK			—	WQ	2	X								X	

TAC...

VERIFIED BY:

Turnaround Time (Business days)

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	3/24/17 1255	1 [signature]	2 [signature]	3-24-17 1700	2 Fed-EX
Relinquished by: 3 [signature]	Date Time:	Received By: 3 [signature] 3/24/17 1002	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #		

Appropriate Bottle / Pres. Y / N Headspace Y / N On Ice Y / N Cooler Temp. 4.4 oC
Labels match Coc? Y / N Separate Receiving Check List used: Y / N

4.2 4

TD1158: Chain of Custody
Page 1 of 4

SGS ACCUTEST

COOLER TEMP FORM

TC# TD 1158

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 3/22/17

Client: GHD

Cooler Number: 1

Thermometer ID: IR5 CF, °C 0 Corrected Temp, °C 4.4

SAMPLES CONTAINED IN COOLER

ORIGIN ID:MSGA (480) 275-6931
ROSE NOGALES
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 28MAR17
ACTWGT: 7.00 LB
CAD: 104695527/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W

HOUSTON TX 77071
(713) 271-4700 REF: GHD
INV:
PO: DEPT:

546J3/1ADB53C1

FedEx Express

TRK# 0201 7 787 6546 1771

WED - 29 MAR HOLD
PRIORITY OVERNIGHT
HLD

AB SGRA

SGRA
IAH
TX-US

SGS ACCUTEST GULF COA
TE/TIME SEALED 3/22/17

Form: SM027-06 Rev 10/24/2016

TD1158: Chain of Custody
Page 2 of 4

4.2 4

SGS Accutest Sample Receipt Summary

Job Number: TD1158 **Client:** GHD **Project:** OU2

Date / Time Received: **Delivery Method:** **Airbill #'s:** 778765461771

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (4.4/4.4);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD1158 **Date / Time Received:** 3/29/2017 10:05:00 AM **Initials:** bg

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD1158-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4
1	TD1158-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	4.4	0	4.4

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD1158
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5283-MB	Z55647.D	1	04/05/17	EM	n/a	n/a	VZ5283

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1158-1, TD1158-2, TD1158-3

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	72-122%
17060-07-0	1,2-Dichloroethane-D4	109%	68-124%
2037-26-5	Toluene-D8	98%	80-119%
460-00-4	4-Bromofluorobenzene	95%	72-126%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD1158
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5283-BS	Z55645.D	1	04/05/17	EM	n/a	n/a	VZ5283
VZ5283-BSD [a]	Z55651.D	1	04/05/17	EM	n/a	n/a	VZ5283

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1158-1, TD1158-2, TD1158-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	21.9	88	21.4	86	2	68-119/30
75-27-4	Bromodichloromethane	25	25.8	103	25.8	103	0	72-118/30
67-66-3	Chloroform	25	21.9	88	22.9	92	4	73-122/30
75-34-3	1,1-Dichloroethane	25	22.5	90	22.1	88	2	72-121/30
75-35-4	1,1-Dichloroethylene	25	26.5	106	25.9	104	2	67-140/30
107-06-2	1,2-Dichloroethane	25	24.8	99	25.9	104	4	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	21.2	85	20.8	83	2	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	24.9	100	27.3	109	9	68-124/30
74-83-9	Methyl bromide	25	26.4	106	26.1	104	1	53-138/30
74-87-3	Methyl chloride	25	19.6	78	19.2	77	2	50-145/30
71-55-6	1,1,1-Trichloroethane	25	23.5	94	24.3	97	3	72-129/30
127-18-4	Tetrachloroethylene	25	27.6	110	27.8	111	1	72-132/30
108-88-3	Toluene	25	23.8	95	25.8	103	8	73-119/30
79-01-6	Trichloroethylene	25	25.0	100	24.9	100	0	73-121/30
75-69-4	Trichlorofluoromethane	25	30.6	122	30.1	120	2	46-152/30
75-01-4	Vinyl chloride	25	24.4	98	23.9	96	2	54-126/30
1330-20-7	Xylene (total)	75	81.7	109	83.8	112	3	74-119/30
	m,p-Xylene	50	54.6	109	56.0	112	3	74-119/30
95-47-6	o-Xylene	25	27.1	108	27.8	111	3	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	97%	72-122%
17060-07-0	1,2-Dichloroethane-D4	104%	107%	68-124%
2037-26-5	Toluene-D8	100%	97%	80-119%
460-00-4	4-Bromofluorobenzene	92%	93%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

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e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932-130

SGS Accutest Job Number: TD293

Sampling Dates: 03/06/17 - 03/09/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: **28**

NELAP ACCREDITED TNI LABORATORY

Richard Rodriguez
Laboratory Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD293

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-130

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD293-1	03/06/17	08:15	PG	03/10/17	AQ	Ground Water	GW-030617-PG-01
TD293-2	03/06/17	10:10	PG	03/10/17	AQ	Ground Water	GW-030617-PG-02
TD293-3	03/07/17	08:45	PG	03/10/17	AQ	Ground Water	GW-030717-PG-03
TD293-4	03/07/17	11:00	PG	03/10/17	AQ	Ground Water	GW-030717-PG-04
TD293-5	03/07/17	11:55	PG	03/10/17	AQ	Ground Water	GW-030717-PG-05
TD293-6	03/08/17	09:20	PG	03/10/17	AQ	Ground Water	GW-030817-PG-06
TD293-7	03/08/17	15:30	PG	03/10/17	AQ	Ground Water	GW-030817-PG-07
TD293-8	03/09/17	07:50	PG	03/10/17	AQ	Ground Water	GW-030917-PG-08
TD293-9	03/09/17	08:10	PG	03/10/17	AQ	Ground Water	GW-030917-PG-09
TD293-10	03/09/17	00:00	PG	03/10/17	AQ	Trip Blank Water	TRIP BLANK 01
TD293-11	03/07/17	13:35	PG	03/10/17	AQ	Ground Water	GW-030717-PG-20

Summary of Hits

Job Number: TD293
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/06/17 thru 03/09/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD293-1	**GW-030617-PG-01**					
No hits reported in this sample.						
TD293-2	**GW-030617-PG-02**					
Tetrachloroethylene		2.1	1.0		ug/l	SW846 8260C
TD293-3	**GW-030717-PG-03**					
Trichloroethylene		1.2	0.50		ug/l	SW846 8260C
TD293-4	**GW-030717-PG-04**					
Trichloroethylene		1.9	0.50		ug/l	SW846 8260C
TD293-5	**GW-030717-PG-05**					
Tetrachloroethylene		1.0	1.0		ug/l	SW846 8260C
Trichloroethylene		2.6	0.50		ug/l	SW846 8260C
TD293-6	**GW-030817-PG-06**					
1,1-Dichloroethane		2.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		5.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.5	1.0		ug/l	SW846 8260C
Trichloroethylene		4.5	0.50		ug/l	SW846 8260C
TD293-7	**GW-030817-PG-07**					
1,1-Dichloroethylene		1.8	1.0		ug/l	SW846 8260C
Trichloroethylene		4.7	0.50		ug/l	SW846 8260C
TD293-8	**GW-030917-PG-08**					
No hits reported in this sample.						
TD293-9	**GW-030917-PG-09**					
Trichloroethylene		2.3	0.50		ug/l	SW846 8260C
TD293-10	**TRIP BLANK 01**					
No hits reported in this sample.						

Summary of Hits

Job Number: TD293
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/06/17 thru 03/09/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD293-11	**GW-030717-PG-20**					
1,1-Dichloroethane		1.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		3.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.1	1.0		ug/l	SW846 8260C
Trichloroethylene		3.2	0.50		ug/l	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-030617-PG-01		
Lab Sample ID:	TD293-1	**Date Sampled:**	03/06/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122984.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030617-PG-02		
Lab Sample ID:	TD293-2	**Date Sampled:**	03/06/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122985.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.1	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	95%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	105%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030717-PG-03		
Lab Sample ID:	TD293-3	**Date Sampled:**	03/07/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122986.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	1.2	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	99%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030717-PG-04		
Lab Sample ID:	TD293-4	**Date Sampled:**	03/07/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122987.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	1.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		72-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030717-PG-05		
Lab Sample ID:	TD293-5	**Date Sampled:**	03/07/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122988.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	2.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	90%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030817-PG-06		
Lab Sample ID:	TD293-6	**Date Sampled:**	03/08/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0123055.D	1	03/15/17	SC	n/a	n/a	VX3201
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	2.2	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	5.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.5	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		72-122%
17060-07-0	1,2-Dichloroethane-D4	107%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	110%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030817-PG-07		
Lab Sample ID:	TD293-7	**Date Sampled:**	03/08/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0123056.D	1	03/15/17	SC	n/a	n/a	VX3201
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.7	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	109%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030917-PG-08		
Lab Sample ID:	TD293-8	**Date Sampled:**	03/09/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122991.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	105%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030917-PG-09		
Lab Sample ID:	TD293-9	**Date Sampled:**	03/09/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122992.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	2.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	105%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK 01		
Lab Sample ID:	TD293-10	**Date Sampled:**	03/09/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0122983.D	1	03/12/17	SC	n/a	n/a	VX3196
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene [a]	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	94%		68-124%
2037-26-5	Toluene-D8	99%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-030717-PG-20		
Lab Sample ID:	TD293-11	**Date Sampled:**	03/07/17
Matrix:	AQ - Ground Water	**Date Received:**	03/10/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0123057.D	1	03/15/17	SC	n/a	n/a	VX3201
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.2	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	3.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	3.2	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	111%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	109%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD293
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
N1	See case narrative.
Q9	Insufficient sample received to meet method QC requirements.
V9	CCV recovery was below method acceptance limits.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #: 7786 7908 2365
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest NC Job #: TD 293

Client / Reporting Information

Company Name: GHD
Address:
City / State / Zip:
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: 042
Street: 12 N 20th ST
City / State: PHX
Project #: 013932 - 130
EMAIL: MANFRED.PLASCHKE@GHD.COM
Client Purchase Order #:

Requested Analysis: 8260

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260									LAB USE ONLY
1	GW-030617-PG-01	3/6/17	0815	PG	GW	3	X								X									
2	" " " 02	"	1010	PG	GW	3	X								X									
3	GW-030717-PG-03	3/7/17	0845	PG	GW	3	X								X									
4	" " " 04	"	1100	PG	"	3	X								X									
5	" " " 05	"	1155	PG	"	3	X								X									
6	GW-030817-PG 06	3/8/17	0920	PG	"	3	X								X									
7	" " " 07	"	1530	PG	"	3	X								X									
8	GW-030917-PG-08	3/9	0750	PG	"	3	X								X									
9	" " " 09	"	0810	PG	"	3	X								X									
10	TRIP BLANK 01	—	—	—		2	X								X									

Preserved? HCl? VOAs? Received by: Received by:
Y N Y N

Turnaround Time (Business days)

Approved By:/ Date:

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Patrick Greene	3/9/17 1152	1	2	3/9/17 1700	2 FedEx
3	FedEx		3 3/10/17 9:55	4		4
5			5			

Custody Seal #: Appropriate Bottle / Pres. Y / N Headspace Y / N Ice Y / N
Labels match Coc? Y / N Separate Receiving Check List used: Y / N

4.2 4

TD293: Chain of Custody
Page 1 of 5

SGS ACCUTEST

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #
Bottle Order Control # TD293
SGS Accutest Quote #
SGS Accutest NC Job #: C

Client / Reporting Information

Company Name: GHD
Address:
City: State: Zip:
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: OU2
Street: 12 N 20th ST
City: PHX State:
Project #: 013932-130
EMAIL: MANFRED.PLASCHKE@GHD.COM
Client Purchase Order #:

Requested Analysis

REVISED 3/13/17 AP

8260

Matrix Codes

WW- Wastewater
GW- Ground Water
SW- Surface Water
SO- Soil
OI/OI WP-Wipe
LIQ - Non-aqueous Liquid
AIR
DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	8260								8260	LAB USE ONLY
	GW-030617-PG-01	3/6/17	0815	PG	GW	3	X								X	
	02		1010	PG	GW	3	X								X	
	GW-030717-PG-03	3/7/17	0845	PG	GW	3	X								X	
	04		~~1100~~	PG		3	X								X	
	05		1155	PG		3	X								X	
	GW-030817-PG 06	3/8/17	0920	PG		3	X								X	
	07		1530	PG		3	X								X	
	GW-030917-PG-08	3/9	0750	PG		3	X								X	
	09		0840	PG		3	X								X	
	TRIP BLANK 01					2	X								X	
	GW-030717-PG-20	3/7	1335	PG	GW	3	X								X	

Number of preserved Bottles: 2 | NaOH | HNO3 | H2SO4 | NONE | NaHSO4 | MeOH | ENCORE

AMENDED BY PATRICK GREENE 3/13/17 @ 1230

Comments / Remarks

Turnaround Time (Business days)

Approved By / Date:

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Emergency T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/9/17 1152	1	2		2
3	Relinquished By:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp: oC

TD293: Chain of Custody
Page 2 of 5

SGS Accutest Sample Receipt Summary

Job Number: TD293 **Client:** GHD **Project:** OU2

Date / Time Received: **Delivery Method:** **Airbill #'s:** 778619082490

No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (3.7/3.7);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments Added sample GW 03-P7-PG-06 to the end of job not lised on COC, although lab did receive a -6 and this is -6 time and collection ID is different

Sample Receipt Log

Job #: TD293 **Date / Time Received:** 3/10/2017 9:55:00 AM **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD293-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7

Sample Receipt Log

Job #: TD293 **Date / Time Received:** 3/10/2017 9:55:00 AM **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD293-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
1	TD293-9	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	3.7	0	3.7
	TD293-10	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD293-10	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD293-11	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD293-11	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD293-11	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD293
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX3196-MB	X0122982.D	1	03/12/17	SC	n/a	n/a	VX3196

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD293-1, TD293-2, TD293-3, TD293-4, TD293-5, TD293-8, TD293-9, TD293-10

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	72-122%
17060-07-0	1,2-Dichloroethane-D4	93%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	102%	72-126%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD293
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX3196-BS	X0122978.D	1	03/12/17	SC	n/a	n/a	VX3196
VX3196-BSD [a]	X0122980.D	1	03/12/17	SC	n/a	n/a	VX3196

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD293-1, TD293-2, TD293-3, TD293-4, TD293-5, TD293-8, TD293-9, TD293-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	22.6	90	23.5	94	4	68-119/30
75-27-4	Bromodichloromethane	25	22.7	91	23.5	94	3	72-118/30
67-66-3	Chloroform	25	21.1	84	21.8	87	3	73-122/30
75-34-3	1,1-Dichloroethane	25	22.9	92	23.7	95	3	72-121/30
75-35-4	1,1-Dichloroethylene	25	22.8	91	24.3	97	6	67-140/30
107-06-2	1,2-Dichloroethane	25	19.9	80	20.6	82	3	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	20.9	84	21.6	86	3	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	24.8	99	25.3	101	2	68-124/30
74-83-9	Methyl bromide	25	18.2	73	15.5	62	16	53-138/30
74-87-3	Methyl chloride	25	20.8	83	17.6	70	17	50-145/30
71-55-6	1,1,1-Trichloroethane	25	22.2	89	22.9	92	3	72-129/30
127-18-4	Tetrachloroethylene	25	24.5	98	25.2	101	3	72-132/30
108-88-3	Toluene	25	22.6	90	23.5	94	4	73-119/30
79-01-6	Trichloroethylene	25	21.4	86	21.9	88	2	73-121/30
75-69-4	Trichlorofluoromethane	25	22.5	90	19.4	78	15	46-152/30
75-01-4	Vinyl chloride	25	21.5	86	18.4	74	16	54-126/30
1330-20-7	Xylene (total)	75	69.0	92	71.1	95	3	74-119/30
	m,p-Xylene	50	46.6	93	48.0	96	3	74-119/30
95-47-6	o-Xylene	25	22.4	90	23.1	92	3	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	96%	72-122%
17060-07-0	1,2-Dichloroethane-D4	94%	94%	68-124%
2037-26-5	Toluene-D8	99%	100%	80-119%
460-00-4	4-Bromofluorobenzene	98%	98%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD293
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX3201-BS	X0123052.D	1	03/15/17	SC	n/a	n/a	VX3201
VX3201-BSD [a]	X0123060.D	1	03/15/17	SC	n/a	n/a	VX3201

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD293-6, TD293-7, TD293-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	23.1	92	22.2	89	4	68-119/30
75-27-4	Bromodichloromethane	25	24.6	98	23.5	94	5	72-118/30
67-66-3	Chloroform	25	23.8	95	22.8	91	4	73-122/30
75-34-3	1,1-Dichloroethane	25	25.4	102	24.4	98	4	72-121/30
75-35-4	1,1-Dichloroethylene	25	25.3	101	26.8	107	6	67-140/30
107-06-2	1,2-Dichloroethane	25	22.2	89	22.1	88	0	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	23.1	92	22.3	89	4	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	27.4	110	26.7	107	3	68-124/30
74-83-9	Methyl bromide	25	20.2	81	23.7	95	16	53-138/30
74-87-3	Methyl chloride	25	21.7	87	23.5	94	8	50-145/30
71-55-6	1,1,1-Trichloroethane	25	24.1	96	23.1	92	4	72-129/30
127-18-4	Tetrachloroethylene	25	23.8	95	21.4	86	11	72-132/30
108-88-3	Toluene	25	23.4	94	21.9	88	7	73-119/30
79-01-6	Trichloroethylene	25	21.9	88	20.9	84	5	73-121/30
75-69-4	Trichlorofluoromethane	25	24.9	100	27.8	111	11	46-152/30
75-01-4	Vinyl chloride	25	22.1	88	24.3	97	9	54-126/30
1330-20-7	Xylene (total)	75	70.4	94	68.5	91	3	74-119/30
	m,p-Xylene	50	47.2	94	46.3	93	2	74-119/30
95-47-6	o-Xylene	25	23.2	93	22.1	88	5	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	103%	104%	72-122%
17060-07-0	1,2-Dichloroethane-D4	104%	108%	68-124%
2037-26-5	Toluene-D8	101%	101%	80-119%
460-00-4	4-Bromofluorobenzene	103%	104%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD389

Sampling Dates: 03/09/17 - 03/10/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: 21

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD389

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD389-1	03/09/17	13:45	PG	03/11/17	AQ	Ground Water	GW-030917-PG-10
TD389-2	03/10/17	07:45	PG	03/11/17	AQ	Ground Water	GW-031017-PG-11
TD389-3	03/10/17	08:30	PG	03/11/17	AQ	Ground Water	GW-031017-PG-12
TD389-4	03/10/17	12:25	PG	03/11/17	AQ	Ground Water	GW-031017-PG-13
TD389-5	03/10/17	13:30	PG	03/11/17	AQ	Ground Water	GW-031017-PG-14
TD389-6	03/10/17	00:00	PG	03/11/17	AQ	Trip Blank Water	TRIP BLANK 02
TD389-7	03/10/17	13:35	PG	03/11/17	AQ	Ground Water	GW-031017-PG-15

2

Summary of Hits

Job Number: TD389
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/09/17 thru 03/10/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD389-1	**GW-030917-PG-10**					
1,1-Dichloroethylene		2.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.6	1.0		ug/l	SW846 8260C
Trichloroethylene		7.6	0.50		ug/l	SW846 8260C
TD389-2	**GW-031017-PG-11**					
No hits reported in this sample.						
TD389-3	**GW-031017-PG-12**					
Chloroform		1.7	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.3	1.0		ug/l	SW846 8260C
Trichloroethylene		7.6	0.50		ug/l	SW846 8260C
TD389-4	**GW-031017-PG-13**					
Chloroform		1.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		4.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		9.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		4.2	1.0		ug/l	SW846 8260C
Trichloroethylene		14.9	0.50		ug/l	SW846 8260C
TD389-5	**GW-031017-PG-14**					
Trichloroethylene		3.8	0.50		ug/l	SW846 8260C
TD389-6	**TRIP BLANK 02**					
No hits reported in this sample.						
TD389-7	**GW-031017-PG-15**					
Trichloroethylene		3.8	0.50		ug/l	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-030917-PG-10		
Lab Sample ID:	TD389-1	**Date Sampled:**	03/09/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55084.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	7.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031017-PG-11		
Lab Sample ID:	TD389-2	**Date Sampled:**	03/10/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55085.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031017-PG-12		
Lab Sample ID:	TD389-3	**Date Sampled:**	03/10/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55086.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.7	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.3	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	7.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	97%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031017-PG-13		
Lab Sample ID:	TD389-4	**Date Sampled:**	03/10/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55087.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.2	1.0	ug/l	
75-34-3	1,1-Dichloroethane	4.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	9.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	14.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031017-PG-14		
Lab Sample ID:	TD389-5	**Date Sampled:**	03/10/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55088.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	3.8	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK 02		
Lab Sample ID:	TD389-6	**Date Sampled:**	03/10/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55083.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031017-PG-15		
Lab Sample ID:	TD389-7	**Date Sampled:**	03/10/17
Matrix:	AQ - Ground Water	**Date Received:**	03/11/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55089.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	3.8	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	104%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7788 2959 4639 "4904"
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest NC Job #: TD389

Client / Reporting Information

Company Name: GHD Inc.
Address: 4747 N. 22nd St.
City: PHOENIX State: AZ Zip: 85016
Project Contact: MANFRED PLASCHKE
Phone #
Samplers's Name: PATRICK GREENE

Project Information

Project Name: 042
Street: 12 N. 20th ST.
City: PHOENIX State: AZ
Project #: 013932-130
EMAIL: MANFRED.PLASCHKE@GHD.COM
Client Purchase Order #

Requested Analysis

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260										LAB USE ONLY
1	GW-030917-PG-10	3/9/17	1345	PG	GW	3	X								X										
2	GW-031017-PG-11	3/10/17	0745	PG	GW	3	X								X										
3	" " " 12	"	0830	PG	GW	3	X								X										
4	" " " 13	"	1225	PG	GW	3	X								X										
5	GW-031017-PG-14	3/10/17	1330	PG	GW	3	X								X										
6	TRIP BLANK 02	—	—	—		2	X								X										
7	GW-031017-PG-15	3/10/17	1335	PG	GW	3	X								X										

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

Turnaround Time (Business days)

Approved By:/ Date:

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format_____

Provide EDF Global ID _____
Provide EDF Logcode: _____

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	3/10/17 1455	[signature]	[signature]	3/10/17 1700	Fed-Ex
2	Relinquished by: Fedex	Date Time:	Received By: [signature] 1030 3/11/17	Relinquished By:	Date Time:	Received By:
3	Relinquished by:	Date Time:	Received By:	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N
4					Labels match Coc? Y / N	Separate Receiving Check List used: Y / N
5					On Ice Y / N	Cooler Temp. 3.6 oC

TD389: Chain of Custody
Page 1 of 4

ACCUTEST

COOLER TEMP FORM

TC# TD389

Delivered by (circle one): FedEx/UPS | ALGC Driver | Client

Date: 3/11/17

Client: G+D

Cooler Number:

Thermometer ID: IR5 CF, °C 0.0 Corrected Temp, °C 3.4

SAMPLES CONTAINED IN COOLER

Form: SM027-06 Rev 10/24/2016

4.1 4

TD389: Chain of Custody

Page 2 of 4

SGS Accutest Sample Receipt Summary

Job Number: TD389 **Client:** GHD **Project:** 042

Date / Time Received: 3/11/2017 10:30:00 AM **Delivery Method:** **Airbill #'s:**

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (3.6/3.6);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD389 **Date / Time Received:** 3/11/2017 10:30:00 AM 10:3 **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD389-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
	TD389-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD389-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
1	TD389-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6
1	TD389-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	3.6	0	3.6

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD389
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-MB	Z55082.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD389-1, TD389-2, TD389-3, TD389-4, TD389-5, TD389-6, TD389-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	102%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

Blank Spike Summary

Job Number: TD389
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-BS	Z55080.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD389-1, TD389-2, TD389-3, TD389-4, TD389-5, TD389-6, TD389-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.6	94	68-119
75-27-4	Bromodichloromethane	25	24.6	98	72-118
67-66-3	Chloroform	25	23.6	94	73-122
75-34-3	1,1-Dichloroethane	25	25.5	102	72-121
75-35-4	1,1-Dichloroethylene	25	25.2	101	67-140
107-06-2	1,2-Dichloroethane	25	24.4	98	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	72-117
156-60-5	trans-1,2-Dichloroethylene	25	27.6	110	68-124
74-83-9	Methyl bromide	25	23.9	96	53-138
74-87-3	Methyl chloride	25	23.0	92	50-145
71-55-6	1,1,1-Trichloroethane	25	23.6	94	72-129
127-18-4	Tetrachloroethylene	25	24.1	96	72-132
108-88-3	Toluene	25	23.6	94	73-119
79-01-6	Trichloroethylene	25	24.4	98	73-121
75-69-4	Trichlorofluoromethane	25	24.9	100	46-152
75-01-4	Vinyl chloride	25	23.0	92	54-126
1330-20-7	Xylene (total)	75	74.2	99	74-119
	m,p-Xylene	50	49.9	100	74-119
95-47-6	o-Xylene	25	24.3	97	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	100%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD389
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD716-3MS	Z55091.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3MSD	Z55092.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3	Z55090.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD389-1, TD389-2, TD389-3, TD389-4, TD389-5, TD389-6, TD389-7

CAS No.	Compound	TD716-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	26.7	107	25	26.2	105	2	68-119/12
75-27-4	Bromodichloromethane	0.70		25	27.8	108	25	27.5	107	1	72-118/16
67-66-3	Chloroform	1.4		25	28.3	108	25	27.7	105	2	73-122/13
75-34-3	1,1-Dichloroethane	ND		25	28.4	114	25	28.1	112	1	72-121/14
75-35-4	1,1-Dichloroethylene	ND		25	30.3	121	25	29.8	119	2	67-140/18
107-06-2	1,2-Dichloroethane	ND		25	27.1	108	25	26.5	106	2	68-121/12
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.6	106	25	26.1	104	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		25	31.7	127*	25	30.0	120	6	68-124/15
74-83-9	Methyl bromide	ND		25	32.7	131	25	30.8	123	6	53-138/16
74-87-3	Methyl chloride	ND		25	32.3	129	25	31.1	124	4	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		25	27.8	111	25	27.3	109	2	72-129/14
127-18-4	Tetrachloroethylene	0.75		25	28.0	109	25	28.4	111	1	72-132/14
108-88-3	Toluene	ND		25	27.2	109	25	27.3	109	0	73-119/13
79-01-6	Trichloroethylene	2.7		25	30.5	111	25	29.8	108	2	73-121/13
75-69-4	Trichlorofluoromethane	ND		25	35.3	141	25	35.1	140	1	46-152/25
75-01-4	Vinyl chloride	ND		25	33.0	132*	25	31.7	127*	4	54-126/17
1330-20-7	Xylene (total)	ND		75	84.1	112	75	83.6	111	1	74-119/13
	m,p-Xylene	ND		50	56.7	113	50	56.4	113	1	74-119/13
95-47-6	o-Xylene	ND		25	27.4	110	25	27.2	109	1	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD716-3	Limits
1868-53-7	Dibromofluoromethane	103%	101%	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	101%	68-124%
2037-26-5	Toluene-D8	100%	102%	103%	80-119%
460-00-4	4-Bromofluorobenzene	98%	99%	99%	72-126%

* = Outside of Control Limits.

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Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932-130

SGS Accutest Job Number: TD633

Sampling Dates: 03/13/17 - 03/14/17

Report to:

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Total number of pages in report: 33

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD633

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-130

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD633-1	03/13/17	09:45	PG	03/17/17	AQ	Ground Water	GW-031317-PG-16
TD633-2	03/13/17	09:50	PG	03/17/17	AQ	Ground Water	GW-031317-PG-17
TD633-3	03/13/17	11:00	PG	03/17/17	AQ	Ground Water	GW-031317-PG-18
TD633-4	03/13/17	12:10	PG	03/17/17	AQ	Ground Water	GW-031317-PG-19
TD633-5	03/13/17	15:50	PG	03/17/17	AQ	Ground Water	GW-031317-PG-21
TD633-5D	03/13/17	15:50	PG	03/17/17	AQ	Water Dup/MSD	GW-031317-PG-21
TD633-5S	03/13/17	15:50	PG	03/17/17	AQ	Water Matrix Spike	GW-031317-PG-21
TD633-6	03/14/17	09:25	PG	03/17/17	AQ	Ground Water	GW-031417-PG-22
TD633-7	03/14/17	11:15	PG	03/17/17	AQ	Ground Water	GW-031417-PG-23
TD633-8	03/14/17	11:45	PG	03/17/17	AQ	Ground Water	GW-031417-PG-24
TD633-9	03/14/17	14:25	PG	03/17/17	AQ	Ground Water	GW-031417-PG-25
TD633-10	03/14/17	14:30	PG	03/17/17	AQ	Ground Water	GW-031417-PG-26
TD633-11	03/14/17	08:15	PG	03/17/17	AQ	Ground Water	GW-031517-PG-27

SGS Accutest

Sample Summary
(continued)

GHD Services Inc.

Job No: TD633

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-130

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD633-12	03/14/17	00:00	PG	03/17/17	AQ	Trip Blank Water	TRIP BLANK 03

2

Summary of Hits

Job Number: TD633
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/13/17 thru 03/14/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD633-1	**GW-031317-PG-16**					
Chloroform		4.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.7	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		7.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.4	1.0		ug/l	SW846 8260C
Trichloroethylene		30.9	0.50		ug/l	SW846 8260C
TD633-2	**GW-031317-PG-17**					
Chloroform		4.3	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.7	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.9	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		7.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.4	1.0		ug/l	SW846 8260C
Trichloroethylene		30.7	0.50		ug/l	SW846 8260C
TD633-3	**GW-031317-PG-18**					
No hits reported in this sample.						
TD633-4	**GW-031317-PG-19**					
Chloroform		2.9	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		13.0	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.5	1.0		ug/l	SW846 8260C
Trichloroethylene		51.1	0.50		ug/l	SW846 8260C
TD633-5	**GW-031317-PG-21**					
1,1-Dichloroethane		1.4	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		5.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		4.1	1.0		ug/l	SW846 8260C
Trichloroethylene		20.2	0.50		ug/l	SW846 8260C
TD633-6	**GW-031417-PG-22**					
Chloroform		3.7	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.5	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		8.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.4	1.0		ug/l	SW846 8260C
Trichloroethylene		23.8	0.50		ug/l	SW846 8260C

Summary of Hits

Job Number: TD633
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/13/17 thru 03/14/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD633-7	**GW-031417-PG-23**					
No hits reported in this sample.						
TD633-8	**GW-031417-PG-24**					
1,1-Dichloroethane		6.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		23.4	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		12.0	1.0		ug/l	SW846 8260C
Trichloroethylene		40.1	0.50		ug/l	SW846 8260C
TD633-9	**GW-031417-PG-25**					
Chloroform		1.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.0	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		10.7	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.6	1.0		ug/l	SW846 8260C
Trichloroethylene		50.3	0.50		ug/l	SW846 8260C
TD633-10	**GW-031417-PG-26**					
Chloroform		1.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.9	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		10.2	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.6	1.0		ug/l	SW846 8260C
Trichloroethylene		51.3	0.50		ug/l	SW846 8260C
TD633-11	**GW-031517-PG-27**					
cis-1,2-Dichloroethylene		3.5	1.0		ug/l	SW846 8260C
Trichloroethylene		57.2	0.50		ug/l	SW846 8260C
TD633-12	**TRIP BLANK 03**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-031317-PG-16		
Lab Sample ID:	TD633-1	**Date Sampled:**	03/13/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55180.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	4.2	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.8	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.7	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.4	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	30.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031317-PG-17		
Lab Sample ID:	TD633-2	**Date Sampled:**	03/13/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55181.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	4.3	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.7	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.9	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	7.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.4	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	30.7	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031317-PG-18		
Lab Sample ID:	TD633-3	**Date Sampled:**	03/13/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55182.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	108%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031317-PG-19		
Lab Sample ID:	TD633-4	**Date Sampled:**	03/13/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55183.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.9	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.5	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	51.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	108%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	97%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031317-PG-21		
Lab Sample ID:	TD633-5	**Date Sampled:**	03/13/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55179.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.4	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	5.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	20.2	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		72-122%
17060-07-0	1,2-Dichloroethane-D4	108%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031417-PG-22		
Lab Sample ID:	TD633-6	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058451.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.7	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.4	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	23.8	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	110%		68-124%
2037-26-5	Toluene-D8	99%		80-119%
460-00-4	4-Bromofluorobenzene	96%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031417-PG-23		
Lab Sample ID:	TD633-7	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058452.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	110%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031417-PG-24		
Lab Sample ID:	TD633-8	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058453.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	6.2	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	23.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	12.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	40.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		72-122%
17060-07-0	1,2-Dichloroethane-D4	114%		68-124%
2037-26-5	Toluene-D8	107%		80-119%
460-00-4	4-Bromofluorobenzene	97%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031417-PG-25		
Lab Sample ID:	TD633-9	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058454.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.1	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.6	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	50.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		72-122%
17060-07-0	1,2-Dichloroethane-D4	113%		68-124%
2037-26-5	Toluene-D8	104%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031417-PG-26		
Lab Sample ID:	TD633-10	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058455.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.9	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.6	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	51.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		72-122%
17060-07-0	1,2-Dichloroethane-D4	113%		68-124%
2037-26-5	Toluene-D8	105%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031517-PG-27		
Lab Sample ID:	TD633-11	**Date Sampled:**	03/14/17
Matrix:	AQ - Ground Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058456.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	57.2	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		72-122%
17060-07-0	1,2-Dichloroethane-D4	111%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK 03		
Lab Sample ID:	TD633-12	**Date Sampled:**	03/14/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/17/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E0058443.D	1	03/27/17	ZQ	n/a	n/a	VE2590
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
Q9	Insufficient sample received to meet method QC requirements.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

1 of 2

FED-EX Tracking #: 7786 6272 3538
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest NC Job #: C TD633

Client / Reporting Information

Company Name: GHD
Address: 4747 N. 22nd ST
City: PHX State: AZ Zip: 85016
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: OUZ
Street: 12 N. 20th ST
City: PHX State: AZ
Project #: 013932-130
EMAIL: MANFRED.PLASCHKE@GHD.COM
Client Purchase Order #:

Requested Analysis

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260										LAB USE ONLY
1	GW-031317-PG-16	3/13/17	0945	PG	GW	3	X								X										
2	GW-031317-PG-17	3/13/17	0950	PG	GW	3	X								X										
3	GW-031317-PG-18	3/13/17	1100	PG	GW	3	X								X										
4	GW-031317-PG-19	3/13/17	1210	PG	GW	3	X								X										
5	GW-031317-PG-21	3/13/17	1550	PG	GW	9	X								X										MSMSD
6	GW-031417-PG-22	3/14/17	0925	PG	GW	3	X								X										
7	GW-031417-PG-23	3/14/17	1115	PG	GW	3	X								X										
8	GW-031417-PG-24	3/14/17	1145	PG	GW	3	X								X										
9	GW-031417-PG-25	3/14/17	1425	PG	GW	3	X								X										
10	GW-031417-PG-26	3/14/17	1430	PG	GW	3	X								X										

Turnaround Time (Business days)

Approved By:/ Date:

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/15/17 1325	1	2	3/15/17 1700	2 fed-ex
Relinquished by: FED EX	Date Time: 3/16/17 1000	Received By: 3 3/16/17 1000	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp. 2.6 oC

4.2 4

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

2 of 2

FED-EX Tracking #:
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest NC Job #: C TD633

Client / Reporting Information

Company Name: GHD
Address: 4747 N. 22nd ST
City: PHX State: AZ Zip: 85016
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: BUZ
Street: 12 W. 20th ST
City: PHX State: AZ
Project #: 013932-130
EMAIL: MANFRED.PLASCHKE@GHD.COM
Client Purchase Order #:

Requested Analysis: 082600

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; Ol-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	082600	LAB USE ONLY
11	GW-031517-PG-27	3/15/17	0815	PG	GW	3	X							X	
12	TRIP BLANK 03	—	—	—	—	2	X							X	

Turnaround Time (Business days)

Approved By:/ Date:

- [x] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/15/17 1325	1	2	3/15/17 1700	2 Fed-Ex
3	Relinquished By:	Date Time: 3/16/17 1600	3 Received By: 3/16/17 1000	4 Relinquished By:	Date Time:	4 Received By:
5	Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Appropriate Bottle / Preservative Y / N	Headspace Y / N; On Ice Y / N; Cooler Temp. 2.6 oC

Labels match Coc? Y / N Separate Receiving Check List used: Y / N

4.2 4

TD633: Chain of Custody
Page 2 of 6

SGS ACCUTEST

COOLER TEMP FORM

~~TC#~~ TD 633

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 3/16/17

Client: GHD

Cooler Number: 1

Thermometer ID: IR5 CF, °C 0.0 Corrected Temp, °C 2.6

SAMPLES CONTAINED

ORIGIN ID: MSCA (480) 275-6931
ROSE NOGALES
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 15MAR17
ACTWGT: 62.00 LB
CAD: 104695527/INET3850
BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W
HOUSTON TX 77071
(713) 271-4700 REF:
INV: DEPT:
PO:

546.3/1 ADB53C1

FedEx Express

E

THU - 16 MAR HOLD
PRIORITY OVERNIGHT
HLD
SGRA
IAH
TX-US

2 of 2
MPS# 0263 7786 6272 3538 0201
Mstr# 7786 6272 3516

AB SGRA

F COAST CUSTODY SEAL
12 __:__ INITIALS 6

Form: SM027-06 Rev 10/24/2016

TD633: Chain of Custody
Page 3 of 6

4.2 4

SGS Accutest Sample Receipt Summary

Job Number: TD633 **Client:** GHD **Project:** OU2

Date / Time Received: 3/17/2017 10:00:00 AM **Delivery Method:** **Airbill #'s:** 778662723538

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2.6/2.6);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD633 **Date / Time Received:** 3/17/2017 10:00:00 AM 10:0 **Initials:** RE

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD633-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6

Sample Receipt Log

Job #: TD633 **Date / Time Received:** 3/17/2017 10:00:00 AM 10:0 **Initials:** RE

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD633-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-9	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-10	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-10	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-10	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-11	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-11	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-11	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-12	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6
1	TD633-12	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.6	0	2.6

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5264-MB	Z55178.D	1	03/25/17	ZQ	n/a	n/a	VZ5264

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD633-1, TD633-2, TD633-3, TD633-4, TD633-5

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	72-122%
17060-07-0	1,2-Dichloroethane-D4	107%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

Method Blank Summary

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2590-MB	E0058436A.D	1	03/27/17	ZQ	n/a	n/a	VE2590

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD633-6, TD633-7, TD633-8, TD633-9, TD633-10, TD633-11, TD633-12

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	72-122%
17060-07-0	1,2-Dichloroethane-D4	105%	68-124%
2037-26-5	Toluene-D8	99%	80-119%
460-00-4	4-Bromofluorobenzene	97%	72-126%

Blank Spike Summary

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5264-BS	Z55174.D	1	03/25/17	ZQ	n/a	n/a	VZ5264

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD633-1, TD633-2, TD633-3, TD633-4, TD633-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.6	94	68-119
75-27-4	Bromodichloromethane	25	25.0	100	72-118
67-66-3	Chloroform	25	24.8	99	73-122
75-34-3	1,1-Dichloroethane	25	25.9	104	72-121
75-35-4	1,1-Dichloroethylene	25	27.4	110	67-140
107-06-2	1,2-Dichloroethane	25	26.0	104	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.7	95	72-117
156-60-5	trans-1,2-Dichloroethylene	25	26.2	105	68-124
74-83-9	Methyl bromide	25	23.8	95	53-138
74-87-3	Methyl chloride	25	23.3	93	50-145
71-55-6	1,1,1-Trichloroethane	25	24.2	97	72-129
127-18-4	Tetrachloroethylene	25	25.8	103	72-132
108-88-3	Toluene	25	24.3	97	73-119
79-01-6	Trichloroethylene	25	25.3	101	73-121
75-69-4	Trichlorofluoromethane	25	26.2	105	46-152
75-01-4	Vinyl chloride	25	23.3	93	54-126
1330-20-7	Xylene (total)	75	75.5	101	74-119
	m,p-Xylene	50	50.6	101	74-119
95-47-6	o-Xylene	25	24.9	100	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	72-122%
17060-07-0	1,2-Dichloroethane-D4	105%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	97%	72-126%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VE2590-BS	E0058438.D	1	03/27/17	ZQ	n/a	n/a	VE2590
VE2590-BSD [a]	E0058441.D	1	03/27/17	ZQ	n/a	n/a	VE2590

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD633-6, TD633-7, TD633-8, TD633-9, TD633-10, TD633-11, TD633-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	23.6	94	23.6	94	0	68-119/30
75-27-4	Bromodichloromethane	25	23.9	96	24.2	97	1	72-118/30
67-66-3	Chloroform	25	23.2	93	23.2	93	0	73-122/30
75-34-3	1,1-Dichloroethane	25	24.5	98	25.0	100	2	72-121/30
75-35-4	1,1-Dichloroethylene	25	23.9	96	24.3	97	2	67-140/30
107-06-2	1,2-Dichloroethane	25	23.8	95	24.2	97	2	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	24.0	96	24.0	96	0	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	27.0	108	27.0	108	0	68-124/30
74-83-9	Methyl bromide	25	24.1	96	26.8	107	11	53-138/30
74-87-3	Methyl chloride	25	17.9	72	20.7	83	15	50-145/30
71-55-6	1,1,1-Trichloroethane	25	23.6	94	23.8	95	1	72-129/30
127-18-4	Tetrachloroethylene	25	24.3	97	24.7	99	2	72-132/30
108-88-3	Toluene	25	23.2	93	22.7	91	2	73-119/30
79-01-6	Trichloroethylene	25	24.6	98	24.8	99	1	73-121/30
75-69-4	Trichlorofluoromethane	25	26.1	104	26.4	106	1	46-152/30
75-01-4	Vinyl chloride	25	20.2	81	23.0	92	13	54-126/30
1330-20-7	Xylene (total)	75	77.3	103	75.8	101	2	74-119/30
	m,p-Xylene	50	51.4	103	50.3	101	2	74-119/30
95-47-6	o-Xylene	25	25.9	104	25.5	102	2	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	102%	72-122%
17060-07-0	1,2-Dichloroethane-D4	97%	102%	68-124%
2037-26-5	Toluene-D8	100%	99%	80-119%
460-00-4	4-Bromofluorobenzene	99%	100%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD633
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD633-5MS	Z55184.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
TD633-5MSD	Z55185.D	1	03/25/17	ZQ	n/a	n/a	VZ5264
TD633-5	Z55179.D	1	03/25/17	ZQ	n/a	n/a	VZ5264

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD633-1, TD633-2, TD633-3, TD633-4, TD633-5

CAS No.	Compound	TD633-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	25.5	102	25	25.9	104	2	68-119/12
75-27-4	Bromodichloromethane	ND		25	26.3	105	25	26.6	106	1	72-118/16
67-66-3	Chloroform	0.37		25	26.1	103	25	26.4	104	1	73-122/13
75-34-3	1,1-Dichloroethane	1.4		25	27.4	104	25	28.0	106	2	72-121/14
75-35-4	1,1-Dichloroethylene	5.6		25	36.4	123	25	36.7	124	1	67-140/18
107-06-2	1,2-Dichloroethane	ND		25	27.1	108	25	27.3	109	1	68-121/12
156-59-2	cis-1,2-Dichloroethylene	4.1		25	28.1	96	25	28.6	98	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		25	29.6	118	25	30.2	121	2	68-124/15
74-83-9	Methyl bromide	ND		25	31.1	124	25	33.9	136	9	53-138/16
74-87-3	Methyl chloride	ND		25	27.9	112	25	28.8	115	3	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		25	25.5	102	25	26.0	104	2	72-129/14
127-18-4	Tetrachloroethylene	0.31		25	26.7	106	25	27.6	109	3	72-132/14
108-88-3	Toluene	ND		25	25.6	102	25	26.3	105	3	73-119/13
79-01-6	Trichloroethylene	20.2		25	47.1	108	25	48.3	112	3	73-121/13
75-69-4	Trichlorofluoromethane	ND		25	33.7	135	25	36.3	145	7	46-152/25
75-01-4	Vinyl chloride	ND		25	29.8	119	25	31.5	126	6	54-126/17
1330-20-7	Xylene (total)	ND		75	79.9	107	75	82.1	109	3	74-119/13
	m,p-Xylene	ND		50	53.9	108	50	55.2	110	2	74-119/13
95-47-6	o-Xylene	ND		25	26.0	104	25	27.0	108	4	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD633-5	Limits
1868-53-7	Dibromofluoromethane	102%	101%	101%	72-122%
17060-07-0	1,2-Dichloroethane-D4	110%	104%	108%	68-124%
2037-26-5	Toluene-D8	100%	100%	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	98%	99%	72-126%

* = Outside of Control Limits.

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Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932-130

SGS Accutest Job Number: TD716

Sampling Dates: 03/16/17 - 03/17/17

Report to:

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Total number of pages in report: 20

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Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD716

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-130

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD716-1	03/16/17	08:30	PG	03/18/17	AQ	Ground Water	GW-031617-PG-28
TD716-2	03/16/17	10:15	PG	03/18/17	AQ	Ground Water	GW-031617-PG-29
TD716-3	03/16/17	12:40	PG	03/18/17	AQ	Ground Water	GW-031617-PG-30
TD716-3D	03/16/17	12:40	PG	03/18/17	AQ	Water Dup/MSD	GW-031617-PG-30
TD716-3S	03/16/17	12:40	PG	03/18/17	AQ	Water Matrix Spike	GW-031617-PG-30
TD716-4	03/17/17	09:50	PG	03/18/17	AQ	Ground Water	GW-031717-PG-31
TD716-5	03/17/17	12:00	PG	03/18/17	AQ	Ground Water	GW-031717-PG-32
TD716-6	03/17/17	00:00	PG	03/18/17	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: TD716
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/16/17 thru 03/17/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD716-1	**GW-031617-PG-28**					
No hits reported in this sample.						
TD716-2	**GW-031617-PG-29**					
Chloroform		2.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		2.2	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		2.1	1.0		ug/l	SW846 8260C
Trichloroethylene		7.1	0.50		ug/l	SW846 8260C
TD716-3	**GW-031617-PG-30**					
Chloroform		1.4	1.0		ug/l	SW846 8260C
Trichloroethylene		2.7	0.50		ug/l	SW846 8260C
TD716-4	**GW-031717-PG-31**					
1,1-Dichloroethane		1.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		4.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		2.8	1.0		ug/l	SW846 8260C
Trichloroethylene		12.6	0.50		ug/l	SW846 8260C
TD716-5	**GW-031717-PG-32**					
Trichloroethylene		4.6	0.50		ug/l	SW846 8260C
TD716-6	**TRIP BLANK**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-031617-PG-28		
Lab Sample ID:	TD716-1	**Date Sampled:**	03/16/17
Matrix:	AQ - Ground Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55095.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031617-PG-29		
Lab Sample ID:	TD716-2	**Date Sampled:**	03/16/17
Matrix:	AQ - Ground Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55096.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.1	1.0	ug/l	
75-34-3	1,1-Dichloroethane	2.2	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	7.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031617-PG-30		
Lab Sample ID:	TD716-3	**Date Sampled:**	03/16/17
Matrix:	AQ - Ground Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55090.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.4	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	2.7	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031717-PG-31		
Lab Sample ID:	TD716-4	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55097.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	4.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	12.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-031717-PG-32		
Lab Sample ID:	TD716-5	**Date Sampled:**	03/17/17
Matrix:	AQ - Ground Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55098.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD716-6	**Date Sampled:**	03/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/18/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55094.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7786 8371 2399
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest NC Job #: C TD716

Client / Reporting Information

Company Name: GHD
Address: 4747 N 22nd ST.
City: PHX State: AZ Zip: 85016
Project Contact: MANFRED PLASCHKE
Phone #: 602-216-7200
Samplers's Name: PATRICK GREENE

Project Information

Project Name: OUZ
Street: 12 N. 20th ST.
City: PHX State: AZ
Project #: 013932-130
EMAIL: MANFRED.PLASCHKE@GHD.com
Client Purchase Order #

Requested Analysis: 08260

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	08260	LAB USE ONLY
1	GW-031617-PG-28	3/16/17	0830	PG	GW	3	X								X	
2	↓ ↓ ↓ 29	3/16/17	1015	PG	GW	3	X								X	
3	↓ ↓ ↓ 30	3/16/17	1240	PG	GW	9	X								X	MS/MSD
4	GW-031717-PG-31	3/17/17	0950	PG	GW	3	X								X	
5	↓ ↓ ↓ 32	3/17/17	1200	PG	GW	3	X								X	
6	TRIP BLANK	3/17/17	—	—	—	2	X								X	

Turnaround Time (Business days)

Approved By:/ Date:

- [X] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

LOGGED BY

QC

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	3/17/17 1335	1 [signature]	2 [signature]	3/17/17 1780	2 Fed-ex
Relinquished by: 3 [signature]	Date Time:	Received By: 3 [signature] 3/18/17 1000	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Headspace Y / N; On Ice Y / N; Labels match Coc? Y / N; Separate Receiving Check List used: Y / N	Cooler Temp. 2.3 oC

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TD716: Chain of Custody
Page 1 of 4

SGS ACCUTEST

COOLER TEMP FORM

TC# TD716

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 3/18/17

Client: GH

Cooler Number:

Thermometer ID: IR9 CF, °C Corrected Temp, °C 2.3

SAMPLES CONTAINED IN COOLER

ORIGIN ID:MSSR (480) 213-0931
ROSE NOGALES
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 17MAR17
ACTWGT: 42.00 LB
CAD: 104895527/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W
HOUSTON TX 77071
(713) 271-4700
INV:
PO:
REF:
DEPT:

546J1/ADB53C1

FedEx Express

SATURDAY HOLD
PRIORITY OVERNIGHT
HLD
SGRA
IAH
TX-US

TRK# 0201 7786 8371 2399

X0 SGRA

SGS ACCUTEST GULF COAST
DATE/TIME SEALED 3/17/17 :
CUSTODY SEAL
INITIALS

Rev 10,

4.1 4

TD716: Chain of Custody
Page 2 of 4

SGS Accutest Sample Receipt Summary

Job Number: TD716 **Client:** GHD **Project:** OUZ

Date / Time Received: 3/18/2017 10:00:00 AM **Delivery Method:** **Airbill #'s:** 778683712399

No. Coolers: 1 **Therm ID:** IR9; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2.3/2.3);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐	☐	☑	☑	☐
2. Trip Blank listed on COC:	☐	☐	☑		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD716 **Date / Time Received:** 3/18/2017 10:00:00 AM 10:0 **Initials:** bg

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
	TD716-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
1	TD716-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	7	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	8	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
1	TD716-3	40ml	9	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	2.3	0	2.3
	TD716-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD716-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD716
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-MB	Z55082.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD716-1, TD716-2, TD716-3, TD716-4, TD716-5, TD716-6

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	102%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

Blank Spike Summary

Job Number: TD716
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-BS	Z55080.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD716-1, TD716-2, TD716-3, TD716-4, TD716-5, TD716-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.6	94	68-119
75-27-4	Bromodichloromethane	25	24.6	98	72-118
67-66-3	Chloroform	25	23.6	94	73-122
75-34-3	1,1-Dichloroethane	25	25.5	102	72-121
75-35-4	1,1-Dichloroethylene	25	25.2	101	67-140
107-06-2	1,2-Dichloroethane	25	24.4	98	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	72-117
156-60-5	trans-1,2-Dichloroethylene	25	27.6	110	68-124
74-83-9	Methyl bromide	25	23.9	96	53-138
74-87-3	Methyl chloride	25	23.0	92	50-145
71-55-6	1,1,1-Trichloroethane	25	23.6	94	72-129
127-18-4	Tetrachloroethylene	25	24.1	96	72-132
108-88-3	Toluene	25	23.6	94	73-119
79-01-6	Trichloroethylene	25	24.4	98	73-121
75-69-4	Trichlorofluoromethane	25	24.9	100	46-152
75-01-4	Vinyl chloride	25	23.0	92	54-126
1330-20-7	Xylene (total)	75	74.2	99	74-119
	m,p-Xylene	50	49.9	100	74-119
95-47-6	o-Xylene	25	24.3	97	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	100%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD716
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD716-3MS	Z55091.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3MSD	Z55092.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3	Z55090.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD716-1, TD716-2, TD716-3, TD716-4, TD716-5, TD716-6

CAS No.	Compound	TD716-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	26.7	107	25	26.2	105	2	68-119/12
75-27-4	Bromodichloromethane	0.70		25	27.8	108	25	27.5	107	1	72-118/16
67-66-3	Chloroform	1.4		25	28.3	108	25	27.7	105	2	73-122/13
75-34-3	1,1-Dichloroethane	ND		25	28.4	114	25	28.1	112	1	72-121/14
75-35-4	1,1-Dichloroethylene	ND		25	30.3	121	25	29.8	119	2	67-140/18
107-06-2	1,2-Dichloroethane	ND		25	27.1	108	25	26.5	106	2	68-121/12
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.6	106	25	26.1	104	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		25	31.7	127*	25	30.0	120	6	68-124/15
74-83-9	Methyl bromide	ND		25	32.7	131	25	30.8	123	6	53-138/16
74-87-3	Methyl chloride	ND		25	32.3	129	25	31.1	124	4	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		25	27.8	111	25	27.3	109	2	72-129/14
127-18-4	Tetrachloroethylene	0.75		25	28.0	109	25	28.4	111	1	72-132/14
108-88-3	Toluene	ND		25	27.2	109	25	27.3	109	0	73-119/13
79-01-6	Trichloroethylene	2.7		25	30.5	111	25	29.8	108	2	73-121/13
75-69-4	Trichlorofluoromethane	ND		25	35.3	141	25	35.1	140	1	46-152/25
75-01-4	Vinyl chloride	ND		25	33.0	132*	25	31.7	127*	4	54-126/17
1330-20-7	Xylene (total)	ND		75	84.1	112	75	83.6	111	1	74-119/13
	m,p-Xylene	ND		50	56.7	113	50	56.4	113	1	74-119/13
95-47-6	o-Xylene	ND		25	27.4	110	25	27.2	109	1	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD716-3	Limits
1868-53-7	Dibromofluoromethane	103%	101%	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	101%	68-124%
2037-26-5	Toluene-D8	100%	102%	103%	80-119%
460-00-4	4-Bromofluorobenzene	98%	99%	99%	72-126%

* = Outside of Control Limits.

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932-131

SGS Accutest Job Number: TD804

Sampling Date: 03/20/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: **48**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD804

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-131

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD804-1	03/20/17	09:30	MM	03/21/17	AQ	Ground Water	PS-032017-MM-01
TD804-2	03/20/17	09:35	MM	03/21/17	AQ	Ground Water	PS-032017-MM-02
TD804-3	03/20/17	09:40	MM	03/21/17	AQ	Ground Water	PS-032017-MM-03
TD804-4	03/20/17	09:45	MM	03/21/17	AQ	Ground Water	PS-032017-MM-04
TD804-5	03/20/17	09:50	MM	03/21/17	AQ	Ground Water	PS-032017-MM-05
TD804-6	03/20/17	09:55	MM	03/21/17	AQ	Ground Water	PS-032017-MM-06
TD804-7	03/20/17	09:58	MM	03/21/17	AQ	Ground Water	PS-032017-MM-07
TD804-8	03/20/17	10:05	MM	03/21/17	AQ	Ground Water	PS-032017-MM-08
TD804-9	03/20/17	10:20	MM	03/21/17	AQ	Ground Water	PS-032017-MM-09
TD804-10	03/20/17	10:35	MM	03/21/17	AQ	Ground Water	PS-032017-MM-10
TD804-11	03/20/17	10:50	MM	03/21/17	AQ	Ground Water	PS-032017-MM-11
TD804-12	03/20/17	11:00	MM	03/21/17	AQ	Ground Water	PS-032017-MM-12
TD804-13	03/20/17	11:05	MM	03/21/17	AQ	Ground Water	PS-032017-MM-13

SGS Accutest

Sample Summary
(continued)

GHD Services Inc.

Job No: TD804

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-131

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD804-14	03/20/17	11:15	MM	03/21/17	AQ	Ground Water	PS-032017-MM-14
TD804-15	03/20/17	12:45	MM	03/21/17	AQ	Ground Water	PS-032017-MM-15
TD804-16	03/20/17	00:00	MM	03/21/17	AQ	Trip Blank Water	PS-032017-MM-16

2

Summary of Hits

Job Number: TD804
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/20/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD804-1	**PS-032017-MM-01**					
Chloroform		2.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.5	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		5.7	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.3	1.0		ug/l	SW846 8260C
Trichloroethylene		35.3	0.50		ug/l	SW846 8260C
TD804-2	**PS-032017-MM-02**					
Chloroform		5.5	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.5	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		8.7	1.0		ug/l	SW846 8260C
TD804-3	**PS-032017-MM-03**					
Chloroform		3.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		12.9	1.0		ug/l	SW846 8260C
Trichloroethylene		0.57	0.50		ug/l	SW846 8260C
TD804-4	**PS-032017-MM-04**					
Chloroform		3.9	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.9	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		12.4	1.0		ug/l	SW846 8260C
Trichloroethylene		0.56	0.50		ug/l	SW846 8260C
TD804-5	**PS-032017-MM-05**					
Chloroform		4.7	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.5	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		6.8	1.0		ug/l	SW846 8260C
TD804-6	**PS-032017-MM-06**					
No hits reported in this sample.						
TD804-7	**PS-032017-MM-07**					
No hits reported in this sample.						
TD804-8	**PS-032017-MM-08**					
Chloroform		3.0	1.0		ug/l	SW846 8260C

Summary of Hits

Job Number: TD804
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/20/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,1-Dichloroethane		1.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		4.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		11.2	1.0		ug/l	SW846 8260C
Tetrachloroethylene		5.4	1.0		ug/l	SW846 8260C
Trichloroethylene		57.3	0.50		ug/l	SW846 8260C
TD804-9	**PS-032017-MM-09**					
Chloroform		1.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.4	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		5.4	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.5	1.0		ug/l	SW846 8260C
Trichloroethylene		39.1	0.50		ug/l	SW846 8260C
TD804-10	**PS-032017-MM-10**					
Chloroform		1.1	1.0		ug/l	SW846 8260C
Methyl chloride		2.1	2.0		ug/l	SW846 8260C
Tetrachloroethylene		1.0	1.0		ug/l	SW846 8260C
Trichloroethylene		8.6	0.50		ug/l	SW846 8260C
TD804-11	**PS-032017-MM-11**					
Boron [a]		120	100		ug/l	EPA 200.7
TD804-12	**PS-032017-MM-12**					
Boron [a]		2490	100		ug/l	EPA 200.7
TD804-13	**PS-032017-MM-13**					
No hits reported in this sample.						
TD804-14	**PS-032017-MM-14**					
Boron [a]		377	100		ug/l	EPA 200.7
TD804-15	**PS-032017-MM-15**					
No hits reported in this sample.						
TD804-16	**PS-032017-MM-16**					
No hits reported in this sample.						

Summary of Hits

Job Number: TD804
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 03/20/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

(a) Analysis performed at SGS Accutest, Lafayette, LA. Cert# AZ0805

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PS-032017-MM-01		
Lab Sample ID:	TD804-1	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55099.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.1	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.3	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	35.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-02		
Lab Sample ID:	TD804-2	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55100.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	5.5	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	8.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-03		
Lab Sample ID:	TD804-3	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55101.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.8	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	12.9	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	0.57	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-04		
Lab Sample ID:	TD804-4	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55102.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.9	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.9	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	12.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	0.56	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-05		
Lab Sample ID:	TD804-5	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55103.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	4.7	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-06		
Lab Sample ID:	TD804-6	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55104.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-07		
Lab Sample ID:	TD804-7	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55105.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-08		
Lab Sample ID:	TD804-8	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271729.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.8	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	4.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	5.4	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	57.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		72-122%
17060-07-0	1,2-Dichloroethane-D4	86%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-09		
Lab Sample ID:	TD804-9	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271730.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.8	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.5	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	39.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-122%
17060-07-0	1,2-Dichloroethane-D4	86%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-10		
Lab Sample ID:	TD804-10	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271731.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.1	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	2.1	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	8.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-122%
17060-07-0	1,2-Dichloroethane-D4	84%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-11		
Lab Sample ID:	TD804-11	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
		Percent Solids:	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Boron [a]	120	100	ug/l	1	03/23/17	03/24/17	ALA	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: L:MA7020
(2) Prep QC Batch: L:MP7205

(a) Analysis performed at SGS Accutest, Lafayette, LA. Cert# AZ0805

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PS-032017-MM-12		
Lab Sample ID:	TD804-12	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
		Percent Solids:	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Boron [a]	2490	100	ug/l	1	03/23/17	03/24/17	ALA	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: L:MA7020
(2) Prep QC Batch: L:MP7205

(a) Analysis performed at SGS Accutest, Lafayette, LA. Cert# AZ0805

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PS-032017-MM-13		
Lab Sample ID:	TD804-13	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271733.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-122%
17060-07-0	1,2-Dichloroethane-D4	86%		68-124%
2037-26-5	Toluene-D8	100%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-14		
Lab Sample ID:	TD804-14	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
		Percent Solids:	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Boron [a]	377	100	ug/l	1	03/23/17	03/24/17	ALA	EPA 200.7 [1]	EPA 200.7 [2]

(1) Instrument QC Batch: L:MA7020
(2) Prep QC Batch: L:MP7205

(a) Analysis performed at SGS Accutest, Lafayette, LA. Cert# AZ0805

RL = Reporting Limit

Report of Analysis

Client Sample ID:	PS-032017-MM-15		
Lab Sample ID:	TD804-15	**Date Sampled:**	03/20/17
Matrix:	AQ - Ground Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271732.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	85%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	99%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-032017-MM-16		
Lab Sample ID:	TD804-16	**Date Sampled:**	03/20/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	03/21/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0271727.D	1	03/28/17	ZQ	n/a	n/a	VG2255
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-122%
17060-07-0	1,2-Dichloroethane-D4	86%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

1 of 2

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7786 9648 6999
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest NC Job #: C TD804

Client / Reporting Information

Company Name: GHD
Address: 4747 N 22nd St #200
City: Phoenix State: AZ Zip: 85016
Project Contact: Eric Mannlein
Phone #: 602-216-7200
Samplers's Name: Mike McNeil

Project Information

Project Name: OU2
Street: 12 N 20th ST
City: Phoenix State: AZ
Project #: 013932-131
EMAIL: eric.mannlein@ghd.com
Client Purchase Order #

Requested Analysis: 8270D

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8270D	LAB USE ONLY
1	PS-032017-MM-01	3/20/17	0930	MMcN	GW	3	X								X	
2	02		0935				X								X	
3	03		0940				X								X	
4	04		0945				X								X	
5	05		0950				X								X	
6	06		0955				X								X	
7	07		0958				X								X	
8	08		1005				X								X	
9	09		1020				X								X	
10	10		1035				X								X	

TAGGED BY: BK
VERIFIED BY: SY

Turnaround Time (Business days)

Approved By:/ Date:

- [x] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format_____
- Provide EDF Global ID _____
- Provide EDF Logcode: _____

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Mike McNeil 3/20/17	1510	2	2	3.20.17 1700	2 FedEx
Relinquished by: 3	Date Time:	Received By: 3 3/21/17 1000	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used Y / N; On Ice Y / N; Cooler Temp. 2.0 oC

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest NC Job #: C TD804

Client / Reporting Information

Company Name	GHD
Address	4747 N 22nd ST. #200
City / State / Zip	Phoenix AZ 85016
Project Contact:	Eric Mannlein
Phone #	602-216-7200
Samplers's Name	Mike McNeil

Project Information

Project Name:	OU2
Street	12 N 20th ST.
City / State	Phoenix AZ
Project #	013932-131
EMAIL:	eric.mannlein@ghd.com
Client Purchase Order #	

Requested Analysis: 8260B; Boron

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260B	Boron	LAB USE ONLY
11	PS-032017-MM-11	3/20/17	1050	MMC	GW	1			X							X	
12	12		1100			1			X							X	
13	13		1105			3	X								X		
14	14		1115			1			X							X	
15	15		1245			3	X								X		
16	16		TRIP BLANK			2	X								X		

Turnaround Time (Business days)

		Approved By:/ Date:
☑	10 Day	
☐	5 Day	
☐	3 Day	
☐	2 Day	
☐	1 Day	
☐	Same Day	

Emergency T/A data available VIA Lablink

Data Deliverable Information

- ☐ Commercial "A" - Results only
- ☐ Commercial "B" - Results with QC summaries
- ☐ Commerical "B+" - Results, QC, and chromatograms
- ☐ FULT1 - Level 4 data package
- ☐ EDF for Geotracker ☐ EDD Format_____
- Provide EDF Global ID _____
- Provide EDF Logcode: _____

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Mike McNeil 3/20/17	1510	1 [signature] 3/21/17 1000	2 [signature]	3/20/17 1700	2 Fed-EX
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N; Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N	Cooler Temp. _____ oC

TD804: Chain of Custody
Page 2 of 6

SGS ACCUTEST

COOLER TEMP FORM

TC# TD804

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 3/21/17

Client:

Cooler Number: 1 of 1

Thermometer ID: IR-5 CF, °C 0.0 Corrected Temp, °C 2.0

ROSE NOGALES (480) 275-6931
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 20MAR17
ACTWGT: 48.00 LB
CAD: 104695527/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W

HOUSTON TX 77071
(713) 271-4700
INV: REF:
PO: DEPT:

546L3/1 ADB63C1

FedEx Express

TRK# 0201 7786 9648 6999

TUE - 21 MAR HOLD
PRIORITY OVERNIGHT
HLD
SGRA
IAH

AB SGRA TX-US

S
DATE/TI

TD804: Chain of Custody
Page 3 of 6

SGS Accutest Sample Receipt Summary

Job Number: TD804 **Client:** GHD **Project:** OU2

Date / Time Received: **Delivery Method:** **Airbill #'s:** 778696486999

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2/2);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD804 **Date / Time Received:** 3/21/2017 10:00:00 AM **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD804-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2

Sample Receipt Log

Job #: TD804 **Date / Time Received:** 3/21/2017 10:00:00 AM **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD804-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-9	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-10	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-10	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-10	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
	TD804-11	250ml	1	SUB	HNO3	pH < 2				
	TD804-12	250ml	1	SUB	HNO3	pH < 2				
1	TD804-13	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-13	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-13	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
	TD804-14	250ml	1	SUB	HNO3	pH < 2				
1	TD804-15	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-15	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
1	TD804-15	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2	0	2
	TD804-16	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD804-16	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-MB	Z55082.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-1, TD804-2, TD804-3, TD804-4, TD804-5, TD804-6, TD804-7

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	102%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

Method Blank Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2255-MB	G0271715.D	1	03/28/17	ZQ	n/a	n/a	VG2255

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-8, TD804-9, TD804-10, TD804-13, TD804-15, TD804-16

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	88%	72-122%
17060-07-0	1,2-Dichloroethane-D4	88%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

Blank Spike Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5261-BS	Z55080.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-1, TD804-2, TD804-3, TD804-4, TD804-5, TD804-6, TD804-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.6	94	68-119
75-27-4	Bromodichloromethane	25	24.6	98	72-118
67-66-3	Chloroform	25	23.6	94	73-122
75-34-3	1,1-Dichloroethane	25	25.5	102	72-121
75-35-4	1,1-Dichloroethylene	25	25.2	101	67-140
107-06-2	1,2-Dichloroethane	25	24.4	98	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	72-117
156-60-5	trans-1,2-Dichloroethylene	25	27.6	110	68-124
74-83-9	Methyl bromide	25	23.9	96	53-138
74-87-3	Methyl chloride	25	23.0	92	50-145
71-55-6	1,1,1-Trichloroethane	25	23.6	94	72-129
127-18-4	Tetrachloroethylene	25	24.1	96	72-132
108-88-3	Toluene	25	23.6	94	73-119
79-01-6	Trichloroethylene	25	24.4	98	73-121
75-69-4	Trichlorofluoromethane	25	24.9	100	46-152
75-01-4	Vinyl chloride	25	23.0	92	54-126
1330-20-7	Xylene (total)	75	74.2	99	74-119
	m,p-Xylene	50	49.9	100	74-119
95-47-6	o-Xylene	25	24.3	97	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	100%	72-126%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG2255-BS	G0271712.D	1	03/28/17	ZQ	n/a	n/a	VG2255

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-8, TD804-9, TD804-10, TD804-13, TD804-15, TD804-16

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.8	95	68-119
75-27-4	Bromodichloromethane	25	22.9	92	72-118
67-66-3	Chloroform	25	21.9	88	73-122
75-34-3	1,1-Dichloroethane	25	24.6	98	72-121
75-35-4	1,1-Dichloroethylene	25	26.8	107	67-140
107-06-2	1,2-Dichloroethane	25	21.9	88	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.2	93	72-117
156-60-5	trans-1,2-Dichloroethylene	25	26.5	106	68-124
74-83-9	Methyl bromide	25	30.5	122	53-138
74-87-3	Methyl chloride	25	30.2	121	50-145
71-55-6	1,1,1-Trichloroethane	25	23.0	92	72-129
127-18-4	Tetrachloroethylene	25	25.5	102	72-132
108-88-3	Toluene	25	24.2	97	73-119
79-01-6	Trichloroethylene	25	24.0	96	73-121
75-69-4	Trichlorofluoromethane	25	28.3	113	46-152
75-01-4	Vinyl chloride	25	28.1	112	54-126
1330-20-7	Xylene (total)	75	74.6	99	74-119
	m,p-Xylene	50	50.1	100	74-119
95-47-6	o-Xylene	25	24.5	98	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	72-122%
17060-07-0	1,2-Dichloroethane-D4	89%	68-124%
2037-26-5	Toluene-D8	101%	80-119%
460-00-4	4-Bromofluorobenzene	99%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD716-3MS	Z55091.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3MSD	Z55092.D	1	03/23/17	ZQ	n/a	n/a	VZ5261
TD716-3	Z55090.D	1	03/23/17	ZQ	n/a	n/a	VZ5261

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-1, TD804-2, TD804-3, TD804-4, TD804-5, TD804-6, TD804-7

CAS No.	Compound	TD716-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	26.7	107	25	26.2	105	2	68-119/12
75-27-4	Bromodichloromethane	0.70		25	27.8	108	25	27.5	107	1	72-118/16
67-66-3	Chloroform	1.4		25	28.3	108	25	27.7	105	2	73-122/13
75-34-3	1,1-Dichloroethane	ND		25	28.4	114	25	28.1	112	1	72-121/14
75-35-4	1,1-Dichloroethylene	ND		25	30.3	121	25	29.8	119	2	67-140/18
107-06-2	1,2-Dichloroethane	ND		25	27.1	108	25	26.5	106	2	68-121/12
156-59-2	cis-1,2-Dichloroethylene	ND		25	26.6	106	25	26.1	104	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		25	31.7	127*	25	30.0	120	6	68-124/15
74-83-9	Methyl bromide	ND		25	32.7	131	25	30.8	123	6	53-138/16
74-87-3	Methyl chloride	ND		25	32.3	129	25	31.1	124	4	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		25	27.8	111	25	27.3	109	2	72-129/14
127-18-4	Tetrachloroethylene	0.75		25	28.0	109	25	28.4	111	1	72-132/14
108-88-3	Toluene	ND		25	27.2	109	25	27.3	109	0	73-119/13
79-01-6	Trichloroethylene	2.7		25	30.5	111	25	29.8	108	2	73-121/13
75-69-4	Trichlorofluoromethane	ND		25	35.3	141	25	35.1	140	1	46-152/25
75-01-4	Vinyl chloride	ND		25	33.0	132*	25	31.7	127*	4	54-126/17
1330-20-7	Xylene (total)	ND		75	84.1	112	75	83.6	111	1	74-119/13
	m,p-Xylene	ND		50	56.7	113	50	56.4	113	1	74-119/13
95-47-6	o-Xylene	ND		25	27.4	110	25	27.2	109	1	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD716-3	Limits
1868-53-7	Dibromofluoromethane	103%	101%	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	101%	68-124%
2037-26-5	Toluene-D8	100%	102%	103%	80-119%
460-00-4	4-Bromofluorobenzene	98%	99%	99%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD804
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD632-2MS	G0271719.D	25	03/28/17	ZQ	n/a	n/a	VG2255
TD632-2MSD	G0271720.D	25	03/28/17	ZQ	n/a	n/a	VG2255
TD632-2 [a]	G0271717.D	10	03/28/17	ZQ	n/a	n/a	VG2255
TD632-2	G0271718.D	25	03/28/17	ZQ	n/a	n/a	VG2255

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD804-8, TD804-9, TD804-10, TD804-13, TD804-15, TD804-16

CAS No.	Compound	TD632-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		625	607	97	625	622	100	2	68-119/12
75-27-4	Bromodichloromethane	ND		625	519	83	625	532	85	2	72-118/16
67-66-3	Chloroform	4.3		625	580	92	625	565	90	3	73-122/13
75-34-3	1,1-Dichloroethane	ND		625	625	100	625	640	102	2	72-121/14
75-35-4	1,1-Dichloroethylene	7.7		625	692	109	625	710	112	3	67-140/18
107-06-2	1,2-Dichloroethane	ND		625	520	83	625	533	85	2	68-121/12
156-59-2	cis-1,2-Dichloroethylene	3.1		625	578	92	625	597	95	3	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		625	678	108	625	693	111	2	68-124/15
74-83-9	Methyl bromide	ND		625	907	145*	625	989	158*	9	53-138/16
74-87-3	Methyl chloride	ND		625	888	142	625	946	151*	6	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		625	582	93	625	597	96	3	72-129/14
127-18-4	Tetrachloroethylene	8.5		625	649	102	625	657	104	1	72-132/14
108-88-3	Toluene	ND		625	618	99	625	634	101	3	73-119/13
79-01-6	Trichloroethylene	4100 [c]		625	4670	130* [b]	625	4560	112	2	73-121/13
75-69-4	Trichlorofluoromethane	ND		625	916	147	625	939	150	2	46-152/25
75-01-4	Vinyl chloride	ND		625	864	138*	625	916	147*	6	54-126/17
1330-20-7	Xylene (total)	ND		1880	1870	100	1880	1920	102	3	74-119/13
	m,p-Xylene	ND		1250	1260	101	1250	1290	103	2	74-119/13
95-47-6	o-Xylene	ND		625	612	98	625	627	100	2	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD632-2	TD632-2	Limits
1868-53-7	Dibromofluoromethane	96%	96%	95%	94%	72-122%
17060-07-0	1,2-Dichloroethane-D4	86%	87%	84%	86%	68-124%
2037-26-5	Toluene-D8	102%	102%	101%	102%	80-119%
460-00-4	4-Bromofluorobenzene	100%	100%	100%	99%	72-126%

(a) AZ:D1
(b) Outside control limits due to high level in sample relative to spike amount.
(c) Result is from Run #2.

* = Outside of Control Limits.

Misc. Forms

Custody Documents and Other Forms

(SGS Accutest Lafayette)

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

10165 Harwin Drive, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.sgs.com

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job TD804

Client / Reporting Information

Company Name: SGS Accutest
Street Address: 10165 Harwin Drive
City: Houston State: TX Zip: 77036
Project Contact: long.nguyen2@sgs.com E-mail:
Phone #: 713-271-4700 Fax #:
Sampler(s) Name(s): Phone:

Project Information

Project Name: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Street:
City: State:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	B	LAB USE ONLY
11	PS-032017-MM-11		3/20/17	10:50:00 AM		AQ	1			X						X	
12	PS-032017-MM-12		3/20/17	11:00:00 AM		AQ	1			X						X	
14	PS-032017-MM-14		3/20/17	11:15:00 AM		AQ	1			X						X	

RUSH

Turnaround Time (Business days)

Approved By (SGS Accutest PM): / Date:

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [X] other Due 3/28/2017

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [X] Other COMMB

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

3W2

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 S. James	3-22-17 1800	1 SGS TX Driver 3-23-17	2 TX Driver	3-23-17	2 Johnny Helmer
3 Johnny Helmer	3-23-17 1030	3 Walter Newman	4		4
5		5	Custody Seal # CS/OC ☑ Intact ☐ Not intact	Preserved where applicable ☑	On Ice ☑ Cooler Temp. 3.2 DN 260

6.1

6

TD804: Chain of Custody
Page 1 of 3
SGS Accutest Lafayette

Date / Time: 3/22/2017 4:27:28 PM
CSR: LONGN
Job #: TD804
Client Project: 52nd Street Superfund Site - OU2 Area, Phoenix, A
Deliverable: COMMB
TAT: Due 3/28/2017

Sub Lab: Accutest Gulf Coast Louisiana
Address: 500 Ambassador Caffery Prkway
City: Scott
State: LA Zip: 70583
Contact: Sample Receiving
Phone: 800-304-5227

SGS Accutest Sample #	Client Sample Description	Analysis	Location	Sampled By	Date Sampled	Time Sampled	Aliquot
TD804-11	PS-032017-MM-11	B .	SUB .		3/20/2017	10:50:00 AM	
TD804-12	PS-032017-MM-12	B .	SUB .		3/20/2017	11:00:00 AM	
TD804-14	PS-032017-MM-14	B .	SUB .		3/20/2017	11:15:00 AM	

Comments:

Sample Management Receipt: _____ Date: _____

1 = 250ml Nitric 3W2

6.1
6

TD804: Chain of Custody
Page 2 of 3

Accutest Laboratories Sample Receipt Summary

Job Number: TD804 **Client:** SGS (TX) **Project:** 52ND ST.SUPERFUND SITE

Date / Time Received: 3/23/2017 10:20:00 AM **Delivery Method:** Accutest Courier **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (3.2/3.2);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	DV260;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

TD804: Chain of Custody
Page 3 of 3

Metals Analysis

QC Data Summaries

(SGS Accutest Lafayette)

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TD804
Account: ALGC - SGS Accutest Gulf Coast
Project: CRAAZP: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

QC Batch ID: MP7205
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 03/23/17

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	35	24		
Antimony	6.0	1.2	3.3		
Arsenic	10	1.1	3.2		
Barium	10	1.3	.9		
Beryllium	4.0	.03	.8		
Boron	100	2.4	3.7	5.9	<100
Cadmium	5.0	.67	.6		
Calcium	100	6.5	11		
Chromium	10	.94	1.2		
Cobalt	10	.33	.7		
Copper	10	1.6	2.9		
Iron	100	11	14		
Lead	10	1.7	2.6		
Magnesium	100	41	39		
Manganese	10	.19	.6		
Molybdenum	10	.26	.7		
Nickel	10	.62	1.2		
Potassium	500	280	33		
Selenium	10	3.6	4.2		
Silver	10	1	1		
Sodium	500	75	72		
Strontium	10	.29	.6		
Thallium	5.0	1.9	2.5		
Tin	10	.47	.7		
Titanium	10	.79	1		
Vanadium	10	.76	1.6		
Zinc	20	4	4		
Lithium	10	3.9	5.6		

Associated samples MP7205: TD804-11, TD804-12, TD804-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TD804
Account: ALGC - SGS Accutest Gulf Coast
Project: CRAAZP: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

QC Batch ID: MP7205
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 03/23/17

Metal	LA31664-1 Original	MS	Spikelot ICPSPIKE1	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic	anr				
Barium					
Beryllium					
Boron	55.3	1110	1000	105.5	70-130
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				
Lithium					

Associated samples MP7205: TD804-11, TD804-12, TD804-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TD804
Account: ALGC - SGS Accutest Gulf Coast
Project: CRAAZP: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

QC Batch ID: MP7205 Methods: EPA 200.7
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/23/17

Metal	LA31664-1 Original	MSD	Spikelot ICPSPIKE1%	Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic	anr					
Barium						
Beryllium						
Boron	55.3	1130	1000	107.5	1.8	20
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					
Lithium						

Associated samples MP7205: TD804-11, TD804-12, TD804-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TD804
Account: ALGC - SGS Accutest Gulf Coast
Project: CRAAZP: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

QC Batch ID: MP7205
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:		03/23/17				03/23/17		
Metal	BSP Result	Spikelot ICPSPIKE1	% Rec	QC Limits	BSP Result	Spikelot AG-LOW	% Rec	QC Limits
Aluminum	anr							
Antimony								
Arsenic	anr							
Barium								
Beryllium								
Boron	1100	1000	110.0	85-115				
Cadmium	anr							
Calcium								
Chromium	anr							
Cobalt								
Copper	anr							
Iron	anr							
Lead	anr							
Magnesium								
Manganese								
Molybdenum	anr							
Nickel	anr							
Potassium								
Selenium	anr							
Silver								
Sodium								
Strontium								
Thallium								
Tin								
Titanium								
Vanadium								
Zinc	anr							
Lithium								

Associated samples MP7205: TD804-11, TD804-12, TD804-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TD804
Account: ALGC - SGS Accutest Gulf Coast
Project: CRAAZP: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

QC Batch ID: MP7205 | Methods: EPA 200.7
Matrix Type: AQUEOUS | Units: ug/l

Prep Date: 03/23/17

Metal	LA31664-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic	anr			
Barium				
Beryllium				
Boron	55.3	53.8	2.6	0-10
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			
Lithium				

Associated samples MP7205: TD804-11, TD804-12, TD804-14

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

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e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD1606

Sampling Date: 04/05/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: **28**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Elvin Kumar 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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Test results relate only to samples analyzed.

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Unauthorized modification of this report is strictly prohibited.

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD1606

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD1606-1	04/05/17	10:00		04/06/17	AQ	Ground Water	PS-040517-MM-01
TD1606-2	04/05/17	10:05		04/06/17	AQ	Ground Water	PS-040517-MM-02
TD1606-3	04/05/17	10:10		04/06/17	AQ	Ground Water	PS-040517-MM-03
TD1606-4	04/05/17	10:15		04/06/17	AQ	Ground Water	PS-040517-MM-04
TD1606-5	04/05/17	10:20		04/06/17	AQ	Ground Water	PS-040517-MM-05
TD1606-6	04/05/17	10:25		04/06/17	AQ	Ground Water	PS-040517-MM-06
TD1606-7	04/05/17	10:28		04/06/17	AQ	Ground Water	PS-040517-MM-07
TD1606-8	04/05/17	11:00		04/06/17	AQ	Ground Water	PS-040517-MM-08
TD1606-9	04/05/17	11:20		04/06/17	AQ	Ground Water	PS-040517-MM-09
TD1606-10	04/05/17	00:00		04/06/17	AQ	Trip Blank Water	TRIP BLANK

Summary of Hits

Job Number: TD1606
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 04/05/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD1606-1	**PS-040517-MM-01**					
Chloroform		2.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.3	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		6.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.0	1.0		ug/l	SW846 8260C
Trichloroethylene		36.0	0.50		ug/l	SW846 8260C
TD1606-2	**PS-040517-MM-02**					
Chloroform		3.9	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		9.2	1.0		ug/l	SW846 8260C
TD1606-3	**PS-040517-MM-03**					
Chloroform		4.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		13.7	1.0		ug/l	SW846 8260C
TD1606-4	**PS-040517-MM-04**					
Chloroform		2.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		11.5	1.0		ug/l	SW846 8260C
Trichloroethylene		2.0	0.50		ug/l	SW846 8260C
TD1606-5	**PS-040517-MM-05**					
Chloroform		3.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		6.7	1.0		ug/l	SW846 8260C
Trichloroethylene		0.69	0.50		ug/l	SW846 8260C
TD1606-6	**PS-040517-MM-06**					
Chloroform		1.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.2	1.0		ug/l	SW846 8260C
TD1606-7	**PS-040517-MM-07**					
Chloroform		1.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.3	1.0		ug/l	SW846 8260C

Summary of Hits

Job Number: TD1606
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 04/05/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD1606-8	**PS-040517-MM-08**					

No hits reported in this sample.

TD1606-9	**PS-040517-MM-09**

No hits reported in this sample.

TD1606-10	**TRIP BLANK**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	PS-040517-MM-01		
Lab Sample ID:	TD1606-1	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339148.D	1	04/08/17	EM	n/a	n/a	VR1432
Run #2	R0339175.D	1	04/10/17	SC	n/a	n/a	VR1433

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.3	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.0 [a]	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	36.0 [a]	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	92%	102%	68-124%
2037-26-5	Toluene-D8	96%	96%	80-119%
460-00-4	4-Bromofluorobenzene	96%	94%	72-126%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-02		
Lab Sample ID:	TD1606-2	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339149.D	1	04/08/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.9	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	93%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	96%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-03		
Lab Sample ID:	TD1606-3	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339150.D	1	04/08/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	4.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	13.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-122%
17060-07-0	1,2-Dichloroethane-D4	93%		68-124%
2037-26-5	Toluene-D8	96%		80-119%
460-00-4	4-Bromofluorobenzene	98%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-04		
Lab Sample ID:	TD1606-4	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339151.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2	R0339176.D	1	04/10/17	SC	n/a	n/a	VR1433

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.8	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND [a]	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	2.0 [a]	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	97%	72-122%
17060-07-0	1,2-Dichloroethane-D4	93%	103%	68-124%
2037-26-5	Toluene-D8	95%	99%	80-119%
460-00-4	4-Bromofluorobenzene	95%	96%	72-126%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-05		
Lab Sample ID:	TD1606-5	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339152.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2	R0339177.D	1	04/10/17	SC	n/a	n/a	VR1433

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	3.8	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	6.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND [a]	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	0.69 [a]	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%	96%	72-122%
17060-07-0	1,2-Dichloroethane-D4	94%	105%	68-124%
2037-26-5	Toluene-D8	95%	98%	80-119%
460-00-4	4-Bromofluorobenzene	96%	95%	72-126%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-06		
Lab Sample ID:	TD1606-6	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339153.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.1	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-122%
17060-07-0	1,2-Dichloroethane-D4	94%		68-124%
2037-26-5	Toluene-D8	96%		80-119%
460-00-4	4-Bromofluorobenzene	97%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-07		
Lab Sample ID:	TD1606-7	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339154.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.2	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	95%		80-119%
460-00-4	4-Bromofluorobenzene	95%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-08		
Lab Sample ID:	TD1606-8	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339155.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	95%		80-119%
460-00-4	4-Bromofluorobenzene	92%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	PS-040517-MM-09		
Lab Sample ID:	TD1606-9	**Date Sampled:**	04/05/17
Matrix:	AQ - Ground Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339156.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		72-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	96%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD1606-10	**Date Sampled:**	04/05/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/06/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R0339157.D	1	04/09/17	EM	n/a	n/a	VR1432
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [a]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [a]	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	95%		80-119%
460-00-4	4-Bromofluorobenzene	94%		72-126%

(a) AZ:V1,L5

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD1606
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
Q9	Insufficient sample received to meet method QC requirements.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7788 3551 3382
Bottle Order Control #
SGS Accutest Quote #
SGS Accutest NC Job #: C TD1606

Client / Reporting Information

Company Name: GHD
Address: 4747 N 22nd ST. #200
City: Phoenix State: AZ Zip: 85016
Project Contact: Eric Mannlein
Phone #: 602-216-7200
Samplers's Name: Mike McNeil

Project Information

Project Name: OU2
Street: 12 N 20th ST.
City: Phoenix State: AZ
Project #: 013932-131
EMAIL: eric.mannlein@ghd.com
Client Purchase Order #

Requested Analysis

8260 B

Matrix Codes

WW- Wastewater
GW- Ground Water
SW- Surface Water
SO- Soil
OI-Oil
WP-Wipe
LIQ - Non-aqueous Liquid
AIR
DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260 B	LAB USE ONLY
1	PS-040517-MM-01	4/5/17	1000	MM	GW	3	x								✓	
2	02		1005				x								✓	
3	03		1010				x								✓	
4	04		1015				x								✓	
5	05		1020				x								✓	
6	06		1025				x								✓	
7	07		1028				x								✓	
8	08		1100				x								✓	
9	09		1120				x								✓	
10	10 TRIP BLANK					2	x								✓	

Turnaround Time (Business days)

Approved By:/ Date:

- [x] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Mike McNeil 4/5/17	1308	1 [signature]	2 [signature]	4/5/17 1700	2 Fed EX
Relinquished by: 3 [signature]	Date Time:	Received By: 3 [signature] 4/5/17 1000	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres Y / N; Headspace Y / N; On Ice Y / N; Labels match Coc? Y / N; Separate Receiving Check List used: Y / N	Cooler Temp. 1.1 oC

TD1606: Chain of Custody
Page 1 of 5

SGS ACCUTEST

COOLER TEMP FORM

TC# TD1606

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 4/6/17

Client: GHD

Cooler Number: 1

Thermometer ID: 104 CF, °C 0 Corrected Temp, °C 1.1

SAMPLES CONTAINED IN COOLER

ORIGIN ID:MSDA (480) 273-0831
ROSE NOGALES
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 03APR17
ACTWGT: 45.00 LB
CAD: 104895527/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W
HOUSTON TX 77071
(713) 271-4700
INV:
PO:
REF:
DEPT:

546J0/CFD63C1

FedEx Express

TRK# 0201 7788 3551 3332

THU - 06 APR HOLD
PRIORITY OVERNIGHT
HLD
77071
TX-US IAH

AB SGRA

SGS ACCUTEST GULF COAST C
DATE/TIME SEALED 4/5/12 :

CUSTODY SEAL
INITIALS

Form: SM027-06 Rev 10/24/2016

TD1606: Chain of Custody
Page 2 of 5

SGS Accutest Sample Receipt Summary

Job Number: TD1606 **Client:** GHD **Project:** OU2

Date / Time Received: 4/6/2017 10:10:00 AM **Delivery Method:** **Airbill #'s:** 778835513382

No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (1.1/1.1);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD1606 **Date / Time Received:** 4/6/2017 10:10:00 AM 10:10: **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD1606-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1

Sample Receipt Log

Job #: TD1606 **Date / Time Received:** 4/6/2017 10:10:00 AM 10:10: **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD1606-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-9	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-10	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1
1	TD1606-10	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	1.1	0	1.1

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD1606
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1432-MB	R0339147.D	1	04/08/17	EM	n/a	n/a	VR1432

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1606-1, TD1606-2, TD1606-3, TD1606-4, TD1606-5, TD1606-6, TD1606-7, TD1606-8, TD1606-9, TD1606-10

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	0.64	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	94%	68-124%
2037-26-5	Toluene-D8	96%	80-119%
460-00-4	4-Bromofluorobenzene	96%	72-126%

Method Blank Summary

Job Number: TD1606
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1433-MB	R0339165.D	1	04/10/17	SC	n/a	n/a	VR1433

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1606-1, TD1606-4, TD1606-5

CAS No.	Compound	Result	RL	Units	Q
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	96%	68-124%
2037-26-5	Toluene-D8	93%	80-119%
460-00-4	4-Bromofluorobenzene	92%	72-126%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD1606
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1432-BS	R0339143.D	1	04/08/17	EM	n/a	n/a	VR1432
VR1432-BSD	R0339144.D	1	04/08/17	EM	n/a	n/a	VR1432

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1606-1, TD1606-2, TD1606-3, TD1606-4, TD1606-5, TD1606-6, TD1606-7, TD1606-8, TD1606-9, TD1606-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	25.8	103	26.0	104	1	68-119/30
75-27-4	Bromodichloromethane	25	23.6	94	23.8	95	1	72-118/30
67-66-3	Chloroform	25	23.8	95	23.4	94	2	73-122/30
75-34-3	1,1-Dichloroethane	25	25.8	103	26.1	104	1	72-121/30
75-35-4	1,1-Dichloroethylene	25	24.9	100	25.0	100	0	67-140/30
107-06-2	1,2-Dichloroethane	25	22.4	90	22.6	90	1	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	24.5	98	24.6	98	0	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	28.3	113	28.2	113	0	68-124/30
74-83-9	Methyl bromide	25	20.5	82	19.5	78	5	53-138/30
74-87-3	Methyl chloride	25	20.3	81	20.0	80	1	50-145/30
71-55-6	1,1,1-Trichloroethane	25	26.9	108	27.6	110	3	72-129/30
127-18-4	Tetrachloroethylene	25	38.0	152* [a]	37.5	150* [a]	1	72-132/30
108-88-3	Toluene	25	26.1	104	25.9	104	1	73-119/30
79-01-6	Trichloroethylene	25	30.5	122* [a]	30.6	122* [a]	0	73-121/30
75-69-4	Trichlorofluoromethane	25	27.3	109	27.5	110	1	46-152/30
75-01-4	Vinyl chloride	25	22.8	91	22.6	90	1	54-126/30
1330-20-7	Xylene (total)	75	77.0	103	77.6	103	1	74-119/30
	m,p-Xylene	50	51.5	103	52.0	104	1	74-119/30
95-47-6	o-Xylene	25	25.5	102	25.6	102	0	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	97%	72-122%
17060-07-0	1,2-Dichloroethane-D4	91%	91%	68-124%
2037-26-5	Toluene-D8	98%	98%	80-119%
460-00-4	4-Bromofluorobenzene	98%	97%	72-126%

(a) Outside control limits biased high. Analyte not detected in associated samples.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD1606
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1433-BS	R0339161.D	1	04/10/17	SC	n/a	n/a	VR1433
VR1433-BSD [a]	R0339162.D	1	04/10/17	SC	n/a	n/a	VR1433

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD1606-1, TD1606-4, TD1606-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4	Tetrachloroethylene	25	29.4	118	29.8	119	1	72-132/30
79-01-6	Trichloroethylene	25	25.0	100	25.6	102	2	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	94%	72-122%
17060-07-0	1,2-Dichloroethane-D4	91%	92%	68-124%
2037-26-5	Toluene-D8	93%	93%	80-119%
460-00-4	4-Bromofluorobenzene	95%	95%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

SGS ACCUTEST IS PART OF SGS, THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY.

e-Hardcopy 2.0
Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932-130

SGS Accutest Job Number: TD2317

Sampling Dates: 04/17/17 - 04/19/17

Report to:

GHD Services Inc.
4747 N. 22nd Street Second Floor
Phoenix, AZ 85016
eric.mannlein@ghd.com; manfred.plaschke@ghd.com;
mary.cameron@ghd.com; sheri.finn@ghd.com
ATTN: Manfred Plaschke

Total number of pages in report: 22

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Anita Patel 713-271-4700

Certifications: TX (T104704220-17-26) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD2317

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932-130

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD2317-1	04/17/17	16:20	PG	04/20/17	AQ	Ground Water	GW-041717-PG-01
TD2317-2	04/17/17	17:20	PG	04/20/17	AQ	Ground Water	GW-041717-PG-02
TD2317-3	04/18/17	15:45	PG	04/20/17	AQ	Ground Water	GW-041817-PG-03
TD2317-4	04/19/17	07:40	PG	04/20/17	AQ	Ground Water	GW-041917-PG-04
TD2317-5	04/19/17	08:35	PG	04/20/17	AQ	Ground Water	GW-041917-PG-05
TD2317-6	04/17/17	00:00	PG	04/20/17	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: TD2317
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 04/17/17 thru 04/19/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD2317-1	**GW-041717-PG-01**					
No hits reported in this sample.						
TD2317-2	**GW-041717-PG-02**					
1,1-Dichloroethane		1.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		3.3	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.2	1.0		ug/l	SW846 8260C
Trichloroethylene		4.3	0.50		ug/l	SW846 8260C
TD2317-3	**GW-041817-PG-03**					
cis-1,2-Dichloroethylene		1.5	1.0		ug/l	SW846 8260C
Trichloroethylene		41.0	0.50		ug/l	SW846 8260C
TD2317-4	**GW-041917-PG-04**					
No hits reported in this sample.						
TD2317-5	**GW-041917-PG-05**					
Chloroform		1.4	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		16.4	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		35.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		18.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		1.5	1.0		ug/l	SW846 8260C
Trichloroethylene [a]		89.7	1.0		ug/l	SW846 8260C
TD2317-6	**TRIP BLANK**					
No hits reported in this sample.						

(a) AZ:D2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-041717-PG-01		
Lab Sample ID:	TD2317-1	**Date Sampled:**	04/17/17
Matrix:	AQ - Ground Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353830.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	96%		80-119%
460-00-4	4-Bromofluorobenzene	89%		72-126%

(a) AZ:V1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-041717-PG-02		
Lab Sample ID:	TD2317-2	**Date Sampled:**	04/17/17
Matrix:	AQ - Ground Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353831.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	3.3	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	88%		72-126%

(a) AZ:V1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-041817-PG-03		
Lab Sample ID:	TD2317-3	**Date Sampled:**	04/18/17
Matrix:	AQ - Ground Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353832.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	41.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	88%		72-126%

(a) AZ:V1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-041917-PG-04		
Lab Sample ID:	TD2317-4	**Date Sampled:**	04/19/17
Matrix:	AQ - Ground Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353833.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		72-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	90%		72-126%

(a) AZ:V1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-041917-PG-05		
Lab Sample ID:	TD2317-5	**Date Sampled:**	04/19/17
Matrix:	AQ - Ground Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353834.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2	K353848.D	2	04/21/17	EM	n/a	n/a	VK1981

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.4	1.0	ug/l	
75-34-3	1,1-Dichloroethane	16.4	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	35.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	18.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	1.5	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene [b]	89.7 [c]	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	93%	68-124%
2037-26-5	Toluene-D8	96%	97%	80-119%
460-00-4	4-Bromofluorobenzene	89%	90%	72-126%

(a) AZ:V1
(b) AZ:D2
(c) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD2317-6	**Date Sampled:**	04/17/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/20/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K353829.D	1	04/20/17	EM	n/a	n/a	VK1979
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	97%		80-119%
460-00-4	4-Bromofluorobenzene	89%		72-126%

(a) AZ:V1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD2317
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
D2	Sample required dilution due to high concentration of target analyte.
Q9	Insufficient sample received to meet method QC requirements.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking # 7789 4563 2616
SGS Accutest Quote #
Bottle Order Control #
SGS Accutest NC Job #: C TD2317

Client / Reporting Information

Company Name: GHD
Address: 4747 N 22nd St.
City: PHX State: Zip:
Project Contact: MANFRED PLASCHKE
Phone #:
Samplers's Name: PATRICK GREENE

Project Information

Project Name: OU2
Street:
City: State:
Project #: 013932 - 130
EMAIL:
Client Purchase Order #:

Requested Analysis

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

SGS Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260	LAB USE ONLY
1	GW-041717-PG-01	4/17/17	1620	PG	GW	3									X	
2	〃 〃 〃 02	〃	1720			3									X	
3	GW-041817-PG-03	4/18/17	1545			3									X	
4	GW-041917-PG-04	4/19/17	0740			3									X	
5	GW-041917-PG-05	4/19/17	0835			3									X	
6	TRIP BLANK	—	—	—	—	2									X	

LOGGED BY

Turnaround Time (Business days)

Approved By:/ Date:

- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [x] 1 Day Rush!
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

VERIFIED BY:

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 Ken Cazan	1500/4/19	1 [signature]	2 [signature]	4/19/17 1780	2 Fed-EX
Relinquished by: 3 [signature]	Date Time:	Received By: 3 [signature] 4/20/17 0930	Relinquished By: 4 [signature]	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; On Ice Y / N; Separate Receiving Check List used: Y / N; Cooler Temp. ____ oC

TD2317: Chain of Custody
Page 1 of 4

SGS ACCUTEST

COOLER TEMP FORM

TC# TD2317

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 4/20/17

Client: GHD

Cooler Number: 1

Thermometer ID: IR4 CF, °C 0 Corrected Temp, °C 0.2

SAMPLES CONTAINED IN COOLER

ORIGIN ID:MSCA (480) 275-8931
ROSE NOGALES
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR., SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 19APR17
ACTWGT: 30.00 LB
CAD: 104695527/INET3850
BILL RECIPIENT

TO SAMPLE RECEIVING
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W
HOUSTON TX 77071
(713) 271-4700
REF: GHD RUSH!
INV:
PO:
DEPT:

546J2/CFD6.53C1

FedEx Express

THU - 20 APR HOLD
PRIORITY OVERNIGHT
HLD
77071
IAH

TRK# 0201 7789 4563 2616

AB SGRA

CUSTODY SEAL
INITIALS C

CCUTEST GULF COAST
EALED 4/17/17

GHD · 1 · Day Rush!

4.2 4

TD2317: Chain of Custody
Page 2 of 4

SGS Accutest Sample Receipt Summary

Job Number: TD2317 **Client:** GHD **Project:** OU2

Date / Time Received: 4/20/2017 9:30:00 AM **Delivery Method:** **Airbill #'s:** 778945632616

No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (0.2/0.2);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD2317 **Date / Time Received:** 4/20/2017 9:30:00 AM 9:30:0 **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD2317-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
1	TD2317-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-4	0.2	0	0.2
	TD2317-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD2317-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD2317
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK1979-MB	K353817.D	1	04/20/17	EM	n/a	n/a	VK1979

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD2317-1, TD2317-2, TD2317-3, TD2317-4, TD2317-5, TD2317-6

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	72-122%
17060-07-0	1,2-Dichloroethane-D4	93%	68-124%
2037-26-5	Toluene-D8	97%	80-119%
460-00-4	4-Bromofluorobenzene	90%	72-126%

Method Blank Summary

Job Number: TD2317
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK1981-MB	K353843.D	1	04/21/17	EM	n/a	n/a	VK1981

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD2317-5

CAS No.	Compound	Result	RL	Units	Q
79-01-6	Trichloroethylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	72-122%
17060-07-0	1,2-Dichloroethane-D4	93%	68-124%
2037-26-5	Toluene-D8	97%	80-119%
460-00-4	4-Bromofluorobenzene	89%	72-126%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD2317
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK1979-BS	K353815.D	1	04/20/17	EM	n/a	n/a	VK1979
VK1979-BSD [a]	K353826.D	1	04/20/17	EM	n/a	n/a	VK1979

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD2317-1, TD2317-2, TD2317-3, TD2317-4, TD2317-5, TD2317-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	24.0	96	23.8	95	1	68-119/30
75-27-4	Bromodichloromethane	25	24.2	97	23.8	95	2	72-118/30
67-66-3	Chloroform	25	23.2	93	23.8	95	3	73-122/30
75-34-3	1,1-Dichloroethane	25	24.7	99	24.0	96	3	72-121/30
75-35-4	1,1-Dichloroethylene	25	27.4	110	26.0	104	5	67-140/30
107-06-2	1,2-Dichloroethane	25	23.1	92	23.4	94	1	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	22.3	89	5	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	25.9	104	24.7	99	5	68-124/30
74-83-9	Methyl bromide	25	24.0	96	24.4	98	2	53-138/30
74-87-3	Methyl chloride	25	21.2	85	20.2	81	5	50-145/30
71-55-6	1,1,1-Trichloroethane	25	25.5	102	24.6	98	4	72-129/30
127-18-4	Tetrachloroethylene	25	27.2	109	25.6	102	6	72-132/30
108-88-3	Toluene	25	24.0	96	23.6	94	2	73-119/30
79-01-6	Trichloroethylene	25	25.5	102	24.9	100	2	73-121/30
75-69-4	Trichlorofluoromethane	25	25.7	103	24.1	96	6	46-152/30
75-01-4	Vinyl chloride	25	22.6	90	20.9	84	8	54-126/30
1330-20-7	Xylene (total)	75	69.7	93	68.8	92	1	74-119/30
	m,p-Xylene	50	46.8	94	46.4	93	1	74-119/30
95-47-6	o-Xylene	25	22.9	92	22.4	90	2	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	94%	93%	72-122%
17060-07-0	1,2-Dichloroethane-D4	91%	92%	68-124%
2037-26-5	Toluene-D8	95%	95%	80-119%
460-00-4	4-Bromofluorobenzene	92%	91%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD2317
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK1981-BS	K353840.D	1	04/21/17	EM	n/a	n/a	VK1981
VK1981-BSD [a]	K353841.D	1	04/21/17	EM	n/a	n/a	VK1981

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD2317-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
79-01-6	Trichloroethylene	25	25.6	102	24.0	96	6	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	94%	72-122%
17060-07-0	1,2-Dichloroethane-D4	91%	91%	68-124%
2037-26-5	Toluene-D8	96%	94%	80-119%
460-00-4	4-Bromofluorobenzene	91%	91%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

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Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD3928

Sampling Dates: 05/22/17 - 05/23/17

Report to:

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Total number of pages in report: 24

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Anita Patel 713-271-4700

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD3928

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD3928-1	05/22/17	08:55		05/24/17	AQ	Ground Water	GW-052217-PG-01
TD3928-2	05/22/17	10:45		05/24/17	AQ	Ground Water	GW-052217-PG-02
TD3928-3	05/22/17	13:30		05/24/17	AQ	Ground Water	GW-052217-PG-03
TD3928-4	05/23/17	05:25		05/24/17	AQ	Ground Water	GW-052317-PG-04
TD3928-5	05/23/17	06:50		05/24/17	AQ	Ground Water	GW-052317-PG-05
TD3928-6	05/23/17	07:30		05/24/17	AQ	Ground Water	GW-052317-PG-06
TD3928-7	05/23/17	10:20		05/24/17	AQ	Ground Water	GW-052317-PG-07
TD3928-8	05/23/17	13:20		05/24/17	AQ	Ground Water	GW-052317-PG-08
TD3928-9	05/23/17	00:00		05/24/17	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: TD3928
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 05/22/17 thru 05/23/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD3928-1	**GW-052217-PG-01**					
No hits reported in this sample.						
TD3928-2	**GW-052217-PG-02**					
1,1-Dichloroethylene		1.2	1.0		ug/l	SW846 8260C
Trichloroethylene		1.1	0.50		ug/l	SW846 8260C
TD3928-3	**GW-052217-PG-03**					
Trichloroethylene		2.9	0.50		ug/l	SW846 8260C
TD3928-4	**GW-052317-PG-04**					
1,1-Dichloroethane		2.3	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		8.4	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.5	1.0		ug/l	SW846 8260C
Trichloroethylene		5.2	0.50		ug/l	SW846 8260C
TD3928-5	**GW-052317-PG-05**					
No hits reported in this sample.						
TD3928-6	**GW-052317-PG-06**					
1,1-Dichloroethylene		1.7	1.0		ug/l	SW846 8260C
Trichloroethylene		4.4	0.50		ug/l	SW846 8260C
TD3928-7	**GW-052317-PG-07**					
1,1-Dichloroethylene		3.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.7	1.0		ug/l	SW846 8260C
Trichloroethylene		6.4	0.50		ug/l	SW846 8260C
TD3928-8	**GW-052317-PG-08**					
1,1-Dichloroethane		3.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		8.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		2.6	1.0		ug/l	SW846 8260C
Trichloroethylene		8.9	0.50		ug/l	SW846 8260C
TD3928-9	**TRIP BLANK**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-052217-PG-01		
Lab Sample ID:	TD3928-1	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56709.D	1	05/25/17 20:58	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		72-122%
17060-07-0	1,2-Dichloroethane-D4	110%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052217-PG-02		
Lab Sample ID:	TD3928-2	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56710.D	1	05/25/17 21:23	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	1.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		72-122%
17060-07-0	1,2-Dichloroethane-D4	111%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052217-PG-03		
Lab Sample ID:	TD3928-3	**Date Sampled:**	05/22/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56711.D	1	05/25/17 21:47	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	2.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	115%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052317-PG-04		
Lab Sample ID:	TD3928-4	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56712.D	1	05/25/17 22:12	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	2.3	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	8.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	5.2	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	114%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052317-PG-05		
Lab Sample ID:	TD3928-5	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56713.D	1	05/25/17 22:36	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	115%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	105%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052317-PG-06		
Lab Sample ID:	TD3928-6	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56714.D	1	05/25/17 23:01	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.7	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.4	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	117%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052317-PG-07		
Lab Sample ID:	TD3928-7	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56715.D	1	05/25/17 23:26	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	3.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	6.4	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		72-122%
17060-07-0	1,2-Dichloroethane-D4	116%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052317-PG-08		
Lab Sample ID:	TD3928-8	**Date Sampled:**	05/23/17
Matrix:	AQ - Ground Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56716.D	1	05/25/17 23:50	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	3.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	8.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	8.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	117%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	103%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD3928-9	**Date Sampled:**	05/23/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/24/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z56708.D	1	05/25/17 20:34	EM	n/a	n/a	VZ5330
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene [a]	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene [b]	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		72-122%
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	103%		72-126%

(a) AZ:L5
(b) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:N1,V9

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD3928
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
N1	See case narrative.
Q9	Insufficient sample received to meet method QC requirements.
V9	CCV recovery was below method acceptance limits.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

PAGE 1 OF 1

10165 Harwin Dr, Ste 150 Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 779212961178 | Bottle Order Control #
SGS Accutest Quote # | SGS Accutest Job # TD3928

Client / Reporting Information

Company Name: GHD
Street Address: 4747 N 22nd
City: PHX State: Zip:
Project Contact: MANFRED PLASCHKE E-mail:
Phone #: Fax #:
Sampler(s) Name(s): PATRICK GREENE Phone #: 585-314-8624

Project Information

Project Name: OU2
Street:
City: State:
Project #: 013932 - 130
Client Purchase Order #:
Project Manager: MANFRED PLASCHKE

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analyses

SGS Accutest Sample #	Field ID / Point of Collection	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	ZA/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	8260	LAB USE ONLY
1	GW-052217-PG-01	5/22/17	0855	PG	GW	3													X	
2	02		1045			3													X	
3	03		1330			3													X	
4	GW-052317-PG-04	5/23/17	0525			3													X	
5	05		0650			3													X	
6	06		0730			3													X	
7	07		1020			3													X	
8	08		1320			6													X	MS/MSD
9	TRIP BLANK					2													X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank

Turnaround Time (Business days)

- ☐ Standard
- ☑ ~~5 Day RUSH~~ Std
- ☐ 4 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date:

Data Deliverable Information

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULT1 (Level 3+4)
- ☐ REDT1 (Level 3+4)
- ☐ Commercial "C"
- ☐ TRRP
- ☐ EDD Format
- ☐ Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Form: SM021-0

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received By	Date Time	Relinquished By	Date Time	Received By	Date Time
1 [signature]	5/23/17 1423	2 [signature]	5/23/17 1623	2 [signature]	5/23/17 1630	→ FedEx	
3 FedEx		3 [signature] 9:15 5-24-17	1423	4		4	
5		5					

Custody Seal # ☑ Intact ☐ Not intact | Preserved where applicable ☑ | On Ice ☑ | Cooler Temp. 2.1

TD3928: Chain of Custody
Page 1 of 5

SGS ACCUTEST

COOLER TEMP FORM

TC# TD3928

Delivered by (circle one): FedEx/UPS ALGC Driver Client

Date: 5/24/17

Client: GHD

Cooler Number: 1

Thermometer ID: IR5 CF, °C 0.0 Corrected Temp, °C 2.1

SAMPLES CONTAINED IN COOLER

FEDEX 7792 1296 1128

T GULF COAST CUSTODY
5/23/17 15:30 INITI

Form: SM027-06 Rev 10/24/2016

TD3928: Chain of Custody
Page 2 of 5

SGS Accutest Sample Receipt Summary

Job Number: TD3928 **Client:** GHD **Project:** OU2

Date / Time Received: 5/24/2017 9:15:00 AM **Delivery Method:** **Airbill #'s:** 779212961178

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (2.1/2.1);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD3928 **Date / Time Received:** 5/24/2017 9:15:00 AM 9:15:0 **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD3928-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
1	TD3928-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	2.1	0	2.1
	TD3928-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

Sample Receipt Log

Job #: TD3928 **Date / Time Received:** 5/24/2017 9:15:00 AM 9:15:0 **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
	TD3928-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-8	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-8	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-8	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TD3928-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD3928
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5330-MB	Z56700.D	1	05/25/17	EM	n/a	n/a	VZ5330

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD3928-1, TD3928-2, TD3928-3, TD3928-4, TD3928-5, TD3928-6, TD3928-7, TD3928-8, TD3928-9

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	72-122%
17060-07-0	1,2-Dichloroethane-D4	97%	68-124%
2037-26-5	Toluene-D8	100%	80-119%
460-00-4	4-Bromofluorobenzene	101%	72-126%

Blank Spike/Blank Spike Duplicate Summary

Job Number: TD3928
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ5330-BS	Z56697.D	1	05/25/17	EM	n/a	n/a	VZ5330
VZ5330-BSD [a]	Z56698.D	1	05/25/17	EM	n/a	n/a	VZ5330

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD3928-1, TD3928-2, TD3928-3, TD3928-4, TD3928-5, TD3928-6, TD3928-7, TD3928-8, TD3928-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	25	25.5	102	25.9	104	2	68-119/30
75-27-4	Bromodichloromethane	25	22.6	90	22.4	90	1	72-118/30
67-66-3	Chloroform	25	21.5	86	22.4	90	4	73-122/30
75-34-3	1,1-Dichloroethane	25	26.5	106	26.6	106	0	72-121/30
75-35-4	1,1-Dichloroethylene	25	30.4	122	33.2	133	9	67-140/30
107-06-2	1,2-Dichloroethane	25	22.5	90	21.9	88	3	68-121/30
156-59-2	cis-1,2-Dichloroethylene	25	24.7	99	25.3	101	2	72-117/30
156-60-5	trans-1,2-Dichloroethylene	25	27.7	111	31.7	127*	13	68-124/30
74-83-9	Methyl bromide	25	25.8	103	22.7	91	13	53-138/30
74-87-3	Methyl chloride	25	24.1	96	23.1	92	4	50-145/30
71-55-6	1,1,1-Trichloroethane	25	23.1	92	23.8	95	3	72-129/30
127-18-4	Tetrachloroethylene	25	20.4	82	20.8	83	2	72-132/30
108-88-3	Toluene	25	24.0	96	24.7	99	3	73-119/30
79-01-6	Trichloroethylene	25	22.3	89	22.0	88	1	73-121/30
75-69-4	Trichlorofluoromethane	25	22.1	88	21.9	88	1	46-152/30
75-01-4	Vinyl chloride	25	24.7	99	25.4	102	3	54-126/30
1330-20-7	Xylene (total)	75	68.2	91	69.4	93	2	74-119/30
	m,p-Xylene	50	45.9	92	46.7	93	2	74-119/30
95-47-6	o-Xylene	25	22.3	89	22.7	91	2	73-121/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	72-122%
17060-07-0	1,2-Dichloroethane-D4	100%	97%	68-124%
2037-26-5	Toluene-D8	102%	101%	80-119%
460-00-4	4-Bromofluorobenzene	100%	100%	72-126%

(a) AZ:Q9

* = Outside of Control Limits.

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Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD4117

Sampling Dates: 05/24/17 - 05/26/17

Report to:

GHD Services Inc.
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Total number of pages in report: **38**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Anita Patel 713-271-4700

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD4117

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD4117-1	05/24/17	07:45		05/27/17	AQ	Ground Water	GW-052417-PG-09
TD4117-2	05/24/17	10:45		05/27/17	AQ	Ground Water	GW-052417-PG-10
TD4117-3	05/24/17	11:35		05/27/17	AQ	Ground Water	GW-052417-PG-11
TD4117-4	05/24/17	13:00		05/27/17	AQ	Ground Water	GW-052417-PG-12
TD4117-5	05/25/17	06:40		05/27/17	AQ	Ground Water	GW-052517-PG-13
TD4117-6	05/25/17	07:20		05/27/17	AQ	Ground Water	GW-052517-PG-14
TD4117-7	05/25/17	08:50		05/27/17	AQ	Ground Water	GW-052517-PG-15
TD4117-8	05/25/17	10:40		05/27/17	AQ	Ground Water	GW-052517-PG-16
TD4117-9	05/25/17	10:45		05/27/17	AQ	Ground Water	GW-052517-PG-17
TD4117-10	05/25/17	13:00		05/27/17	AQ	Ground Water	GW-052517-PG-18
TD4117-11	05/26/17	07:10		05/27/17	AQ	Ground Water	GW-052617-PG-19
TD4117-12	05/26/17	08:55		05/27/17	AQ	Ground Water	GW-052617-PG-20
TD4117-13	05/26/17	10:15		05/27/17	AQ	Ground Water	GW-052617-PG-21

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Sample Summary
(continued)

GHD Services Inc.

Job No: TD4117

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD4117-14	05/26/17	12:10		05/27/17	AQ	Ground Water	GW-052617-PG-22
TD4117-15	05/24/17	00:00		05/27/17	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: TD4117
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 05/24/17 thru 05/26/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD4117-1	**GW-052417-PG-09**					
1,1-Dichloroethane		1.6	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		5.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		5.4	1.0		ug/l	SW846 8260C
Trichloroethylene		20.0	0.50		ug/l	SW846 8260C
TD4117-2	**GW-052417-PG-10**					
Chloroform		4.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.9	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.6	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		9.5	1.0		ug/l	SW846 8260C
Tetrachloroethylene		3.0	1.0		ug/l	SW846 8260C
Trichloroethylene		32.3	0.50		ug/l	SW846 8260C
TD4117-3	**GW-052417-PG-11**					
No hits reported in this sample.						
TD4117-4	**GW-052417-PG-12**					
1,1-Dichloroethylene		1.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		9.0	1.0		ug/l	SW846 8260C
Trichloroethylene		28.1	0.50		ug/l	SW846 8260C
TD4117-5	**GW-052517-PG-13**					
No hits reported in this sample.						
TD4117-6	**GW-052517-PG-14**					
1,1-Dichloroethane		4.9	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		16.5	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		11.2	1.0		ug/l	SW846 8260C
Trichloroethylene		35.8	0.50		ug/l	SW846 8260C
TD4117-7	**GW-052517-PG-15**					
Chloroform		2.7	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		3.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		15.6	1.0		ug/l	SW846 8260C
Tetrachloroethylene		3.0	1.0		ug/l	SW846 8260C
Trichloroethylene		50.9	0.50		ug/l	SW846 8260C

Summary of Hits

Job Number: TD4117
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 05/24/17 thru 05/26/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD4117-8	**GW-052517-PG-16**					
1,1-Dichloroethylene		1.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		11.9	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.3	1.0		ug/l	SW846 8260C
Trichloroethylene		50.3	0.50		ug/l	SW846 8260C
TD4117-9	**GW-052517-PG-17**					
1,1-Dichloroethylene		1.8	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		11.8	1.0		ug/l	SW846 8260C
Tetrachloroethylene		2.2	1.0		ug/l	SW846 8260C
Trichloroethylene		50.4	0.50		ug/l	SW846 8260C
TD4117-10	**GW-052517-PG-18**					
Chloroform		2.5	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		1.5	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		2.0	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		10.1	1.0		ug/l	SW846 8260C
Tetrachloroethylene		3.0	1.0		ug/l	SW846 8260C
Trichloroethylene		25.9	0.50		ug/l	SW846 8260C
TD4117-11	**GW-052617-PG-19**					
cis-1,2-Dichloroethylene		4.4	1.0		ug/l	SW846 8260C
Trichloroethylene		57.6	0.50		ug/l	SW846 8260C
TD4117-12	**GW-052617-PG-20**					
Trichloroethylene		0.56	0.50		ug/l	SW846 8260C
TD4117-13	**GW-052617-PG-21**					
No hits reported in this sample.						
TD4117-14	**GW-052617-PG-22**					
1,1-Dichloroethane		1.1	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		3.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.3	1.0		ug/l	SW846 8260C
Trichloroethylene		3.8	0.50		ug/l	SW846 8260C

Summary of Hits

Job Number: TD4117
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 05/24/17 thru 05/26/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD4117-15	**TRIP BLANK**					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-052417-PG-09		
Lab Sample ID:	TD4117-1	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354740.D	1	06/01/17 13:41	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.6	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	5.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	5.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	20.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	105%		80-119%
460-00-4	4-Bromofluorobenzene	107%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052417-PG-10		
Lab Sample ID:	TD4117-2	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354744.D	1	06/01/17 17:53	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	4.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.9	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	3.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	32.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	104%		80-119%
460-00-4	4-Bromofluorobenzene	105%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052417-PG-11		
Lab Sample ID:	TD4117-3	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354745.D	1	06/01/17 18:19	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	104%		80-119%
460-00-4	4-Bromofluorobenzene	106%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052417-PG-12		
Lab Sample ID:	TD4117-4	**Date Sampled:**	05/24/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354746.D	1	06/01/17 18:46	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	9.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	28.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	104%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-13		
Lab Sample ID:	TD4117-5	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354747.D	1	06/01/17 19:12	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-14		
Lab Sample ID:	TD4117-6	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354748.D	1	06/01/17 19:39	EM	n/a	n/a	VK2016
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	4.9	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	16.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	35.8	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	103%		80-119%
460-00-4	4-Bromofluorobenzene	104%		72-126%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-15		
Lab Sample ID:	TD4117-7	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354776.D	1	06/02/17 16:57	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.7	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	3.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	3.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	50.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-16		
Lab Sample ID:	TD4117-8	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354777.D	1	06/02/17 17:24	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.9	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.3	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	50.3	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		72-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-17		
Lab Sample ID:	TD4117-9	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354778.D	1	06/02/17 17:50	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	11.8	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	2.2	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	50.4	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		72-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052517-PG-18		
Lab Sample ID:	TD4117-10	**Date Sampled:**	05/25/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354779.D	1	06/02/17 18:17	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	2.5	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.5	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	2.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	3.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	25.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		72-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052617-PG-19		
Lab Sample ID:	TD4117-11	**Date Sampled:**	05/26/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354780.D	1	06/02/17 18:44	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	4.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	57.6	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052617-PG-20		
Lab Sample ID:	TD4117-12	**Date Sampled:**	05/26/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354781.D	1	06/02/17 19:10	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	0.56	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	102%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052617-PG-21		
Lab Sample ID:	TD4117-13	**Date Sampled:**	05/26/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354782.D	1	06/02/17 19:36	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-052617-PG-22		
Lab Sample ID:	TD4117-14	**Date Sampled:**	05/26/17
Matrix:	AQ - Ground Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354783.D	1	06/02/17 20:03	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.1	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	3.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	3.8	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD4117-15	**Date Sampled:**	05/24/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354784.D	1	06/02/17 20:29	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
N1	See case narrative.
V9	CCV recovery was below method acceptance limits.

REVISED 6/1/17 AP

CHAIN OF CUSTODY RECORD

TD4117

COC NO.: 57209

Address:

Phone: Fax:

PAGE 1 OF 2

Project No/ Phase/Task Code: 013932 - 130	Laboratory Name: SGS - ACCUTEST	Lab Location: HOUSTON	SSOW ID:
Project Name: OU2	Lab Contact:		Cooler No:
Project Location: PHOENIX, AZ			Carrier:
GHD Chemistry Contact: MANFRED BLASCHKE SHERRI FINN			Airbill No: 7792 4424 9541
Sampler(s): PATRICK GREENE			Total # of Containers:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	8260										Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																		
1	GW - 052417 - PG - 09	5/24/17	0745	GW			X												
2	10		1045				X												
3	11		1135				X												
4	12		1300				X												
5	GW - 052517 - PG - 13	5/25/17	0640				X												
6	14		0720				X												
7	15		0850				X												
8	16		1046				X												
9	17		1045				X												
10	18		1300				X												
11	GW - 052617 - PG - 19	5/26/17	0710				X												
12	20		0855				X												

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other: 5/26/17

Notes/ Special Requirements:

PG 5/24/17

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. Patrick Greene	GHD	~~4/26/17~~	1315	1. E Prophatt	SGS Accutest	4/26/17	1315
2. E Prophatt	SGS Accutest	4/26/17	1600	2. Fedex			
3. Fedex				3. [illegible]		~~4/27/17~~ 5-27-17	~~10:15~~ 10:15

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

GHD Form: COC-10B (20110804)

4.2

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TD4117: Chain of Custody

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CHAIN OF CUSTODY RECORD

TD4117

COC NO.: 57209

Address:

Phone: Fax:

PAGE 1 OF 2

Project No/ Phase/Task Code: 013932 - 130	Laboratory Name: SGS - ACCUTEST	Lab Location: HOUSTON	SSOW ID:
Project Name: 042	Lab Contact:		Cooler No:
Project Location: PHOENIX, AZ			Carrier:
GHD Chemistry Contact: MANFRED PLASCHKE & SHERRI FINN			Airbill No: 7792 4424 9541
Sampler(s): PATRICK GREENE			Total # of Containers:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	8260											Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																			
1	GW - 052417 - PG - 09	5/24/17	0745	GW			X												N	
2	10		1045				X												N	
3	11		1135				X													
4	12		1300				X													
5	GW - 052517 - PG - 13	5/25/17	0640				X												Y	
6	14		0720				X												Y	
7	15		0850				X													
8	16		1040				X													
9	17		1045				X													
10	18		1300				X													
11	GW - 052617 - PG - 19	5/26/17	0710				X													
12	20		0855				X													

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	GHD	4/26/17	1315	1.	SGS Accutest	4/26/17	1315
2.	SGS Accutest	4/26/17	1600	2.			
3.				3.		4/27/17	1015

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

GHD Form: COC-10B (20110804)

TD4117: Chain of Custody

Page 2 of 6

CHAIN OF CUSTODY RECORD

TD4117

COC NO.: 57204

Address:

Phone:

Fax:

PAGE 2 OF 2

Project No/ Phase/Task Code: 013932 - 130	Laboratory Name: SGS - ACCUTEST	Lab Location:	SSOW ID:
Project Name: SEE PG. 1	Lab Contact:		Cooler No:
Project Location:			Carrier:
GHD Chemistry Contact:			Airbill No: 7792 -4424-954
Sampler(s):			Total # of Containers:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	8260											Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																			
1	GW-052617-PG-21	5/26/17	1015	GW			X													
2	〃 〃 〃 22	〃	1210	〃			X													
3	TRIP BLANK	—	—	WQ			X													
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. [signature]	GHD	5/26/17	1315	1. [signature]	SGS Accutest	5/26/17	1315
2. [signature]	SGS Accutest	5/26/17	1600	2. → FedEx			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

GHD Form: COC-10B (20110804)

4.2

4

TD4117: Chain of Custody

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SGS Accutest Sample Receipt Summary

Job Number: TD4117 **Client:** GHD **Project:** OU2

Date / Time Received: **Delivery Method:** **Airbill #'s:** 779244249541

No. Coolers: 1 **Therm ID:** IR9; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (3.6/3.6);

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TD4117 **Date / Time Received:** 5/27/2017 10:15:00 AM **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD4117-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6

Sample Receipt Log

Job #: TD4117 **Date / Time Received:** 5/27/2017 10:15:00 AM **Initials:** DS

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD4117-8	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-9	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-9	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-9	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-10	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-10	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-10	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-11	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-11	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-11	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-12	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-12	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-12	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-13	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-13	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-13	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-14	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-14	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-14	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-15	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6
1	TD4117-15	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR9	3.6	0	3.6

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2016-MB	K354732.D	1	06/01/17	EM	n/a	n/a	VK2016

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-1, TD4117-2, TD4117-3, TD4117-4, TD4117-5, TD4117-6

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	72-122%
17060-07-0	1,2-Dichloroethane-D4	107%	68-124%
2037-26-5	Toluene-D8	107%	80-119%
460-00-4	4-Bromofluorobenzene	116%	72-126%

Method Blank Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2017-MB	K354770.D	1	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-7, TD4117-8, TD4117-9, TD4117-10, TD4117-11, TD4117-12, TD4117-13, TD4117-14, TD4117-15

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	72-122%
17060-07-0	1,2-Dichloroethane-D4	104%	68-124%
2037-26-5	Toluene-D8	102%	80-119%
460-00-4	4-Bromofluorobenzene	102%	72-126%

Blank Spike Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2016-BS	K354742.D	50	06/01/17	EM	n/a	n/a	VK2016

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-1, TD4117-2, TD4117-3, TD4117-4, TD4117-5, TD4117-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	1250	1310	105	68-119
75-27-4	Bromodichloromethane	1250	1230	98	72-118
67-66-3	Chloroform	1250	1220	98	73-122
75-34-3	1,1-Dichloroethane	1250	1320	106	72-121
75-35-4	1,1-Dichloroethylene	1250	1080	86	67-140
107-06-2	1,2-Dichloroethane	1250	1130	90	68-121
156-59-2	cis-1,2-Dichloroethylene	1250	1300	104	72-117
156-60-5	trans-1,2-Dichloroethylene	1250	1280	102	68-124
74-83-9	Methyl bromide	1250	874	70	53-138
74-87-3	Methyl chloride	1250	863	69	50-145
71-55-6	1,1,1-Trichloroethane	1250	1320	106	72-129
127-18-4	Tetrachloroethylene	1250	1200	96	72-132
108-88-3	Toluene	1250	1310	105	73-119
79-01-6	Trichloroethylene	1250	1190	95	73-121
75-69-4	Trichlorofluoromethane	1250	1090	87	46-152
75-01-4	Vinyl chloride	1250	980	78	54-126
1330-20-7	Xylene (total)	3750	3960	106	74-119
	m,p-Xylene	2500	2660	106	74-119
95-47-6	o-Xylene	1250	1300	104	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	98%	68-124%
2037-26-5	Toluene-D8	102%	80-119%
460-00-4	4-Bromofluorobenzene	109%	72-126%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2017-BS	K354768.D	1	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-7, TD4117-8, TD4117-9, TD4117-10, TD4117-11, TD4117-12, TD4117-13, TD4117-14, TD4117-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	24.3	97	68-119
75-27-4	Bromodichloromethane	25	23.4	94	72-118
67-66-3	Chloroform	25	22.4	90	73-122
75-34-3	1,1-Dichloroethane	25	24.2	97	72-121
75-35-4	1,1-Dichloroethylene	25	24.1	96	67-140
107-06-2	1,2-Dichloroethane	25	21.6	86	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.9	96	72-117
156-60-5	trans-1,2-Dichloroethylene	25	23.6	94	68-124
74-83-9	Methyl bromide	25	18.0	72	53-138
74-87-3	Methyl chloride	25	21.5	86	50-145
71-55-6	1,1,1-Trichloroethane	25	24.6	98	72-129
127-18-4	Tetrachloroethylene	25	23.0	92	72-132
108-88-3	Toluene	25	24.2	97	73-119
79-01-6	Trichloroethylene	25	22.1	88	73-121
75-69-4	Trichlorofluoromethane	25	21.4	86	46-152
75-01-4	Vinyl chloride	25	22.6	90	54-126
1330-20-7	Xylene (total)	75	72.8	97	74-119
	m,p-Xylene	50	49.0	98	74-119
95-47-6	o-Xylene	25	23.9	96	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	68-124%
2037-26-5	Toluene-D8	102%	80-119%
460-00-4	4-Bromofluorobenzene	103%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD4002-6MS	K354736.D	200	06/01/17	EM	n/a	n/a	VK2016
TD4002-6MSD	K354737.D	200	06/01/17	EM	n/a	n/a	VK2016
TD4002-6	K354735.D	200	06/01/17	EM	n/a	n/a	VK2016

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-1, TD4117-2, TD4117-3, TD4117-4, TD4117-5, TD4117-6

CAS No.	Compound	TD4002-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		5000	5750	115	5000	5430	109	6	68-119/12
75-27-4	Bromodichloromethane	ND		5000	5360	107	5000	5050	101	6	72-118/16
67-66-3	Chloroform	ND		5000	5190	104	5000	4820	96	7	73-122/13
75-34-3	1,1-Dichloroethane	ND		5000	5990	120	5000	5570	111	7	72-121/14
75-35-4	1,1-Dichloroethylene	540		5000	5120	92	5000	4880	87	5	67-140/18
107-06-2	1,2-Dichloroethane	ND		5000	5000	100	5000	4680	94	7	68-121/12
156-59-2	cis-1,2-Dichloroethylene	ND		5000	5680	114	5000	5380	108	5	72-117/13
156-60-5	trans-1,2-Dichloroethylene	ND		5000	5810	116	5000	5500	110	5	68-124/15
74-83-9	Methyl bromide	ND		5000	4290	86	5000	3820	76	12	53-138/16
74-87-3	Methyl chloride	ND		5000	4540	91	5000	3870	77	16	50-145/17
71-55-6	1,1,1-Trichloroethane	ND		5000	5900	118	5000	5510	110	7	72-129/14
127-18-4	Tetrachloroethylene	ND		5000	4780	96	5000	4720	94	1	72-132/14
108-88-3	Toluene	ND		5000	5620	112	5000	5360	107	5	73-119/13
79-01-6	Trichloroethylene	8950		5000	14000	101	5000	13300	87	5	73-121/13
75-69-4	Trichlorofluoromethane	ND		5000	4760	95	5000	4580	92	4	46-152/25
75-01-4	Vinyl chloride	ND		5000	4720	94	5000	4160	83	13	54-126/17
1330-20-7	Xylene (total)	ND		15000	16800	112	15000	15900	106	6	74-119/13
	m,p-Xylene	ND		10000	11300	113	10000	10700	107	5	74-119/13
95-47-6	o-Xylene	ND		5000	5560	111	5000	5220	104	6	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD4002-6	Limits
1868-53-7	Dibromofluoromethane	106%	104%	108%	72-122%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	105%	68-124%
2037-26-5	Toluene-D8	103%	103%	106%	80-119%
460-00-4	4-Bromofluorobenzene	111%	110%	111%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD4117
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD4008-21MS	K354773.D	10	06/02/17	EM	n/a	n/a	VK2017
TD4008-21MSD	K354774.D	10	06/02/17	EM	n/a	n/a	VK2017
TD4008-21	K354771.D	10	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4117-7, TD4117-8, TD4117-9, TD4117-10, TD4117-11, TD4117-12, TD4117-13, TD4117-14, TD4117-15

CAS No.	Compound	TD4008-21 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	733		250	953	88	250	951	87	0	68-119/12
75-27-4	Bromodichloromethane	10 U		250	233	93	250	234	94	0	72-118/16
67-66-3	Chloroform	10 U		250	222	89	250	221	88	0	73-122/13
75-34-3	1,1-Dichloroethane	10 U		250	245	98	250	247	99	1	72-121/14
75-35-4	1,1-Dichloroethylene	10 U		250	241	96	250	239	96	1	67-140/18
107-06-2	1,2-Dichloroethane	10 U		250	213	85	250	211	84	1	68-121/12
156-59-2	cis-1,2-Dichloroethylene	10 U		250	241	96	250	246	98	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	10 U		250	238	95	250	240	96	1	68-124/15
74-83-9	Methyl bromide	10 U		250	185	74	250	194	78	5	53-138/16
74-87-3	Methyl chloride	10 U		250	219	88	250	235	94	7	50-145/17
71-55-6	1,1,1-Trichloroethane	10 U		250	248	99	250	242	97	2	72-129/14
127-18-4	Tetrachloroethylene	10 U		250	226	90	250	232	93	3	72-132/14
108-88-3	Toluene	257		250	495	95	250	501	98	1	73-119/13
79-01-6	Trichloroethylene	10 U		250	213	85	250	218	87	2	73-121/13
75-69-4	Trichlorofluoromethane	10 U		250	237	95	250	251	100	6	46-152/25
75-01-4	Vinyl chloride	10 U		250	236	94	250	254	102	7	54-126/17
1330-20-7	Xylene (total)	631		750	1340	95	750	1350	96	1	74-119/13
	m,p-Xylene	456		500	929	95	500	932	95	0	74-119/13
95-47-6	o-Xylene	174		250	416	97	250	418	98	0	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD4008-21	Limits
1868-53-7	Dibromofluoromethane	105%	103%	107%	72-122%
17060-07-0	1,2-Dichloroethane-D4	98%	95%	101%	68-124%
2037-26-5	Toluene-D8	101%	102%	102%	80-119%
460-00-4	4-Bromofluorobenzene	104%	103%	101%	72-126%

* = Outside of Control Limits.

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Automated Report

Technical Report for

GHD Services Inc.

52nd Street Superfund Site - OU2 Area, Phoenix, AZ

013932

SGS Accutest Job Number: TD4278

Sampling Date: 05/30/17

Report to:

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Total number of pages in report: 24

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Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Anita Patel 713-271-4700

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SGS Accutest

Sample Summary

GHD Services Inc.

Job No: TD4278

52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Project No: 013932

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TD4278-1	05/30/17	09:05	PG	06/01/17	AQ	Ground Water	GW-053017-PG-23
TD4278-2	05/30/17	10:00	PG	06/01/17	AQ	Ground Water	GW-053017-PG-24
TD4278-3	05/30/17	11:45	PG	06/01/17	AQ	Ground Water	GW-053017-PG-25
TD4278-4	05/30/17	12:45	PG	06/01/17	AQ	Ground Water	GW-053017-PG-26
TD4278-5	05/30/17	13:50	PG	06/01/17	AQ	Ground Water	GW-053017-PG-27
TD4278-6	05/30/17	13:55	PG	06/01/17	AQ	Ground Water	GW-053017-PG-28
TD4278-7	05/30/17	15:15	PG	06/01/17	AQ	Ground Water	GW-053017-PG-29
TD4278-8	05/30/17	00:00	PG	06/01/17	AQ	Trip Blank Water	TRIP BLANK

2

Summary of Hits

Job Number: TD4278
Account: GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ
Collected: 05/30/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
TD4278-1	**GW-053017-PG-23**					
No hits reported in this sample.						
TD4278-2	**GW-053017-PG-24**					
Trichloroethylene		3.9	0.50		ug/l	SW846 8260C
TD4278-3	**GW-053017-PG-25**					
1,1-Dichloroethane		1.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		5.2	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		3.2	1.0		ug/l	SW846 8260C
Trichloroethylene		11.9	0.50		ug/l	SW846 8260C
TD4278-4	**GW-053017-PG-26**					
1,1-Dichloroethane		1.6	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		1.1	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		1.2	1.0		ug/l	SW846 8260C
Trichloroethylene		4.4	0.50		ug/l	SW846 8260C
TD4278-5	**GW-053017-PG-27**					
cis-1,2-Dichloroethylene		1.7	1.0		ug/l	SW846 8260C
Trichloroethylene		38.0	0.50		ug/l	SW846 8260C
TD4278-6	**GW-053017-PG-28**					
cis-1,2-Dichloroethylene		1.6	1.0		ug/l	SW846 8260C
Trichloroethylene		39.1	0.50		ug/l	SW846 8260C
TD4278-7	**GW-053017-PG-29**					
Chloroform		1.0	1.0		ug/l	SW846 8260C
1,1-Dichloroethane		13.8	1.0		ug/l	SW846 8260C
1,1-Dichloroethylene		20.9	1.0		ug/l	SW846 8260C
cis-1,2-Dichloroethylene		15.1	1.0		ug/l	SW846 8260C
Trichloroethylene		65.1	0.50		ug/l	SW846 8260C
TD4278-8	**TRIP BLANK**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	GW-053017-PG-23		
Lab Sample ID:	TD4278-1	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354786.D	1	06/02/17 21:22	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	105%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	102%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-24		
Lab Sample ID:	TD4278-2	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354787.D	1	06/02/17 21:49	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	3.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	101%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-25		
Lab Sample ID:	TD4278-3	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354788.D	1	06/02/17 22:15	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	5.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	11.9	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	103%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-26		
Lab Sample ID:	TD4278-4	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354789.D	1	06/02/17 22:42	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	1.6	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	1.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	4.4	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	106%		68-124%
2037-26-5	Toluene-D8	86%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-27		
Lab Sample ID:	TD4278-5	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354790.D	1	06/02/17 23:08	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	38.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-28		
Lab Sample ID:	TD4278-6	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354791.D	1	06/02/17 23:34	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	1.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	39.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	105%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GW-053017-PG-29		
Lab Sample ID:	TD4278-7	**Date Sampled:**	05/30/17
Matrix:	AQ - Ground Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354792.D	1	06/03/17 00:01	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	1.0	1.0	ug/l	
75-34-3	1,1-Dichloroethane	13.8	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	20.9	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	15.1	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	65.1	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		72-122%
17060-07-0	1,2-Dichloroethane-D4	105%		68-124%
2037-26-5	Toluene-D8	101%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	TD4278-8	**Date Sampled:**	05/30/17
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/01/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	52nd Street Superfund Site - OU2 Area, Phoenix, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K354785.D	1	06/02/17 20:56	EM	n/a	n/a	VK2017
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
74-83-9	Methyl bromide [a]	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	4.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		72-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	102%		80-119%
460-00-4	4-Bromofluorobenzene	100%		72-126%

(a) CCV recovery was below method acceptance criteria. Low check standard confirms detectability. AZ:V9,N1

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: TD4278
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

The following Arizona qualifiers have been applied to data and/or QC in this report.

Qual	Description
N1	See case narrative.
V9	CCV recovery was below method acceptance limits.

CHAIN OF CUSTODY RECORD

TD4278

COC NO.: 57210

Address:

Phone:

PAGE 1 OF 1

Fax:

Project No/ Phase/Task Code: 013932 - 130	Laboratory Name: SGS ACCUTEST	Lab Location: PHX	SSOW ID:
Project Name: OUZ	Lab Contact:		Cooler No:
Project Location: PHX			Carrier:
GHD Chemistry Contact: SHERRI FINN, M. PLASCHKE			Airbill No: 7792 7217 5502
Sampler(s): PATRICK GREENE			Total # of Containers:

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Filtered (Y/N)	8260											Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
	PRESERVATION - (SEE BACK OF COC FOR ABBREVIATIONS)																			
1	GW-053017-PG-23	5/30/17	0905	GW	C	N	X													
2	24		1000				X													
3	25		1145				X													
4	26		1245				X													
5	27		1350				X													
6	28		1355				X													
7	29		1515	WQ			X													
8	TRIP BLANK						X													
9																				
10																				
11																				
12																				

VERIFIED BY:

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☐ 2 Week ☐ Other:

Notes/ Special Requirements:

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	GHD	5/31/17	1624	1.	SGS Accutest	5/31	1624
2.	SGS Accutest	5/31/17	1700	2. Fedex			
3.				3.	SGS	6/1/17	0920

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

GHD Form: COC-10B (20110804)

4.2

4

TD4278: Chain of Custody

Page 1 of 5

ORIGIN ID:MSCA (480) 275-8931
BETH PROFFITT
ACCUTEST TEMPE SERVICE CENTER
1741 W. UNIVERSITY DR.
SUITE 149
TEMPE, AZ 85281
UNITED STATES US

SHIP DATE: 31MAY17
ACTWGT: 22.00 LB
CAD: 104895527/NET3850
DIMS: 20x20x14 IN

BILL RECIPIENT

TO **SAMPLE RECEIVING**
ACCUTEST LABORATORIES
10555 S SAM HOUSTON PKY W

HOUSTON TX 77071
(713) 271-4700
INV:
PO:
REF: SAMPLES GHD
DEPT:

546J/87345/3C1

FedEx Express

J17111702140 Ver

THU - 01 JUN HOLD
PRIORITY OVERNIGHT

TRK# 0201 **7792 7217 5502**

HLD

AB SGRA

77071
TX-US **IAH**

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g.jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

SGS Accutest Sample Receipt Summary

Job Number: TD4278 **Client:** GHD **Project:** SGS ACCUTEST

Date / Time Received: 6/1/2017 9:20:00 AM **Delivery Method:** **Airbill #'s:** 779272175502

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (1.3/1.3);

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☑	☐	☐	☑	☐
2. Trip Blank listed on COC:	☑	☐	☐		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☑	☐	☐		

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☐	☑

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments Received 2 of 3 vials for sample "GW-053017-PG-24" on chain but label list "GW-053017-PG-23" date & time of collection match.

Problem Resolution

Accutest Job Number: TD4278

CSR: _____ **Response Date:** _____

Response:

Sample Receipt Log

Job #: TD4278 **Date / Time Received:** 6/1/2017 9:20:00 AM **Initials:** BG

Client: GHD

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TD4278-1	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-2	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-3	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-4	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-5	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-6	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-6	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-6	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-7	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-7	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-7	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-8	40ml	1	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3
1	TD4278-8	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.	IR-5	1.3	0	1.3

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: TD4278
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2017-MB	K354770.D	1	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4278-1, TD4278-2, TD4278-3, TD4278-4, TD4278-5, TD4278-6, TD4278-7, TD4278-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
74-83-9	Methyl bromide	ND	0.50	ug/l	
74-87-3	Methyl chloride	ND	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	0.50	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.5	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	72-122%
17060-07-0	1,2-Dichloroethane-D4	104%	68-124%
2037-26-5	Toluene-D8	102%	80-119%
460-00-4	4-Bromofluorobenzene	102%	72-126%

Blank Spike Summary

Job Number: TD4278
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VK2017-BS	K354768.D	1	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4278-1, TD4278-2, TD4278-3, TD4278-4, TD4278-5, TD4278-6, TD4278-7, TD4278-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	24.3	97	68-119
75-27-4	Bromodichloromethane	25	23.4	94	72-118
67-66-3	Chloroform	25	22.4	90	73-122
75-34-3	1,1-Dichloroethane	25	24.2	97	72-121
75-35-4	1,1-Dichloroethylene	25	24.1	96	67-140
107-06-2	1,2-Dichloroethane	25	21.6	86	68-121
156-59-2	cis-1,2-Dichloroethylene	25	23.9	96	72-117
156-60-5	trans-1,2-Dichloroethylene	25	23.6	94	68-124
74-83-9	Methyl bromide	25	18.0	72	53-138
74-87-3	Methyl chloride	25	21.5	86	50-145
71-55-6	1,1,1-Trichloroethane	25	24.6	98	72-129
127-18-4	Tetrachloroethylene	25	23.0	92	72-132
108-88-3	Toluene	25	24.2	97	73-119
79-01-6	Trichloroethylene	25	22.1	88	73-121
75-69-4	Trichlorofluoromethane	25	21.4	86	46-152
75-01-4	Vinyl chloride	25	22.6	90	54-126
1330-20-7	Xylene (total)	75	72.8	97	74-119
	m,p-Xylene	50	49.0	98	74-119
95-47-6	o-Xylene	25	23.9	96	73-121

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	72-122%
17060-07-0	1,2-Dichloroethane-D4	99%	68-124%
2037-26-5	Toluene-D8	102%	80-119%
460-00-4	4-Bromofluorobenzene	103%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: TD4278
Account: CRAAZP GHD Services Inc.
Project: 52nd Street Superfund Site - OU2 Area, Phoenix, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TD4008-21MS	K354773.D	10	06/02/17	EM	n/a	n/a	VK2017
TD4008-21MSD	K354774.D	10	06/02/17	EM	n/a	n/a	VK2017
TD4008-21	K354771.D	10	06/02/17	EM	n/a	n/a	VK2017

The QC reported here applies to the following samples: **Method:** SW846 8260C

TD4278-1, TD4278-2, TD4278-3, TD4278-4, TD4278-5, TD4278-6, TD4278-7, TD4278-8

CAS No.	Compound	TD4008-21 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	733		250	953	88	250	951	87	0	68-119/12
75-27-4	Bromodichloromethane	10 U		250	233	93	250	234	94	0	72-118/16
67-66-3	Chloroform	10 U		250	222	89	250	221	88	0	73-122/13
75-34-3	1,1-Dichloroethane	10 U		250	245	98	250	247	99	1	72-121/14
75-35-4	1,1-Dichloroethylene	10 U		250	241	96	250	239	96	1	67-140/18
107-06-2	1,2-Dichloroethane	10 U		250	213	85	250	211	84	1	68-121/12
156-59-2	cis-1,2-Dichloroethylene	10 U		250	241	96	250	246	98	2	72-117/13
156-60-5	trans-1,2-Dichloroethylene	10 U		250	238	95	250	240	96	1	68-124/15
74-83-9	Methyl bromide	10 U		250	185	74	250	194	78	5	53-138/16
74-87-3	Methyl chloride	10 U		250	219	88	250	235	94	7	50-145/17
71-55-6	1,1,1-Trichloroethane	10 U		250	248	99	250	242	97	2	72-129/14
127-18-4	Tetrachloroethylene	10 U		250	226	90	250	232	93	3	72-132/14
108-88-3	Toluene	257		250	495	95	250	501	98	1	73-119/13
79-01-6	Trichloroethylene	10 U		250	213	85	250	218	87	2	73-121/13
75-69-4	Trichlorofluoromethane	10 U		250	237	95	250	251	100	6	46-152/25
75-01-4	Vinyl chloride	10 U		250	236	94	250	254	102	7	54-126/17
1330-20-7	Xylene (total)	631		750	1340	95	750	1350	96	1	74-119/13
	m,p-Xylene	456		500	929	95	500	932	95	0	74-119/13
95-47-6	o-Xylene	174		250	416	97	250	418	98	0	73-121/13

CAS No.	Surrogate Recoveries	MS	MSD	TD4008-21	Limits
1868-53-7	Dibromofluoromethane	105%	103%	107%	72-122%
17060-07-0	1,2-Dichloroethane-D4	98%	95%	101%	68-124%
2037-26-5	Toluene-D8	101%	102%	102%	80-119%
460-00-4	4-Bromofluorobenzene	104%	103%	101%	72-126%

* = Outside of Control Limits.