Cardno

9977 North 90th Street,
Suite 150
Scottsdale, AZ 85258
USA

Phone 602 977 8000
Fax 602 977 8099
www.cardno.com

August 5, 2016

Mr. Richard Byrd
City of Tucson – Environmental Services
P.O. Box 27210
Tucson, Arizona 85726-7210

SUBJECT: Periodic Site Status Report, December 2015 through June 2016
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST No. 3208.01
Cardno Project No. 1052000015

Dear Mr. Byrd:

INTRODUCTION

At the request of City of Tucson – Environmental Services (COT-ES), Cardno is submitting this semi-annual Periodic Site Status Report (PSSR) in accordance with the Arizona Department of Environmental Quality (ADEQ) letter to COT-ES, dated August 25, 2008, for the Police/Fire Station Headquarters LUST Site (Figure 1). This PSSR summarizes activities performed by COT-ES and Cardno personnel at the subject site from December 1, 2015 through June 30, 2016. Relevant figures, tables, and appendices are attached.

DESCRIPTION OF ACTIVITIES PERFORMED DURING REPORTING PERIOD

The following activities were performed during the reporting period and are discussed in more detail in the following sections:

- Quarterly groundwater monitoring and sampling events conducted on February 24 and 25, 2016, May 24 and 26, and June 2, 2016.
- On June 28 and 29, 2016, a purge groundwater sampling event was conducted, to assess current site conditions for closure.
- Pump-and treat of dissolved phase hydrocarbons. Operation of Pump and Treat / Oil-Water Separator System (PT/OWS) for remediation of groundwater.
- Extraction of petroleum hydrocarbons from the vadose zone using a soil vapor extraction (SVE) system.
- On February 16, 2016, the SVE system was shut down and removed from the site on March 9, 2016.
- On March 18, 2016, the PT/OWS system was shut down due to the low volatile organic compounds observed during the quarterly groundwater sampling event conducted on February 24 and 25, 2016.
- Preparation and submittal of quarterly Self-Monitoring and Reporting Forms (SMRF) to Pima County Regional Wastewater Reclamation Department (Appendix A).

GROUNDWATER MONITORING AND SAMPLING AND NON-AQUEOUS PHASE LIQUID BAILING SUMMARY

Groundwater monitoring and sampling activities during the reporting period were conducted by COT-ES personnel on a quarterly basis at select wells using the standard groundwater sampling protocol (Appendix B). A summary of the water levels, including historical data, is provided in Table 1. Select monitoring wells and SVE wells, piping, and remediation equipment locations are presented on Figure 2. Groundwater samples were collected in February, May, and June 2016 and submitted to Northern California ACCUTEST Laboratories (ACCUTEST), an Arizona Department of Health Services (ADHS)-certified laboratory, under chain of custody (COC) protocol. The samples were analyzed for volatile organic compounds (VOC) using EPA Method 8260B. A summary of select VOC parameters is presented in Table 2 and on Figure 3. Additional parameters to evaluate long-term natural attenuation were also analyzed (Table 3). Laboratory analytical reports and COC documents for groundwater samples collected during the quarterly sampling events are provided in Appendix C.

Groundwater Sampling Results

During the reporting period:

- Benzene was reported below its ADEQ established Aquifer Water Quality Standard (AWQS; 5.0 micrograms per liter (µg/L)) in the groundwater samples collected at monitor wells HQUST-524A at 3.0 µg/L (February 2016) and HQUST-526A at 2.9 µg/L (June 2016).
- Toluene was reported below its ADEQ established AWQS (1,000 µg/L) in the groundwater samples collected at monitor well HQUST-523A at 9.0 µg/L (June 2016).
- Ethylbenzene was reported below its ADEQ established AWQS (700 µg/L) in the groundwater samples collected at monitor wells CEP-518A, HQUST-523A and HQUST-524A, with a maximum concentration of 419 µg/L (May 2016) reported at monitor well CEP-518A.
- Total xylenes was reported below its ADEQ established AWQS (10,000 µg/L) in the groundwater samples collected at monitor well CEP-518A, CEP-519A, HQUST-523A and HQUST-524A, with the maximum concentration of 580 µg/L (May 2016) reported at monitor well CEP-518A.
- Methyl-tert-butyl ether (MTBE) was reported in the groundwater samples collected at monitor wells HQUST-526A, HQUST-533A and HQUST-547A, with a maximum concentration of 126 µg/L (June 2016) reported at monitor well HQUST-526A.
- Tetrachloroethylene (PCE) was reported below its ADEQ established AWQS (5.0 µg/L) in the groundwater samples collected at monitor well CEP-528A at 2.3 µg/L (June 2016).
- During the reporting period benzene, toluene, ethylbenzene, total xylenes (BTEX) and MTBE were not detected above analytical method detection limits in the groundwater samples collected at monitor wells CEP-520A, CEP-527A, CEP-528A, HQUST-525A, HQUST-531A, HQUST-532A, and HQUST-548.
- 1,2-dichloroethane (1,2-DCA), and PCE were not detected above analytical method detection limits in the groundwater samples collected at the monitor wells during the February and May sampling event.

NAPL Bailing

On April 8, 2013 Cardno discontinued manual gauging and bailing of non-aqueous phase liquid (NAPL) at monitor wells CEP-518A, CEP-519A, and HQUST-523A, following the startup of the SVE remediation system. Cumulative NAPL removal at monitor wells CEP-518A, CEP-519A, and HQUST-523A is summarized in Table 4.

REMEDIATION SUMMARY

Soil Vapor Extraction System

The SVE system extracted petroleum hydrocarbons from the vadose zone. The remediation system was connected to three wells: HQUST-523A, HQUST-524A, and CEP-518A (Figure 2). Extracted soil vapor was abated using a Solleco 250 standard cubic feet per minute (scfm) thermal catalytic oxidizer, operating under ADEQ Permit No. 60343. Cardno collected vapor samples on a monthly basis at influent and effluent ports to calculate hydrocarbon removal rates, destruction efficiencies, and permit compliance.

Vapor samples were collected in Tedlar bags and submitted to Airtech Environmental Laboratories (Airtech), an ADHS-certified laboratory, under COC protocol. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and BTEX using modified EPA Method 8015 GRO and 8260B AZ vapor full list. Copies of the analytical reports and the COC records are provided in Appendix D. Tables 5A, 5B, and 6 summarize the operations and performance of the hydrocarbon removal and remediation systems.

System start-up date:	April 8, 2013
System shut down date:	February 16, 2016
System discharge permit:	ADEQ Air Quality Division General Permit No. 60343
Reporting period:	December 1, 2015 to June 30, 2016
System modifications during reporting period:	None
System status during reporting period:	Active through February 16, 2016
Laboratory:	Airtech
Effluent analyses performed:	EPA Method 8015 GRO and 8260B AZ Vapor full list

System performance:

Period	Mass of TPH Removed (Pounds)	Mass of TPH Removed (Gallons)
12/01/15 to 06/30/16	139	23
Cumulative:	20,555	3,426

Pump and Treat / Oil-Water Separator System

The PT/OWS system primary components are comprised of two pneumatic extraction well pumps, an air compressor, an OWS, a bag filter, and aqueous-phase carbon vessels for treatment of the extracted groundwater stream prior to discharge at a Pima County permitted discharge location (Permit No. 12916). Compressed air operates the pneumatic pumps, located in groundwater monitoring wells HQUST-523A and HQUST-524A (Figure 2) in Area of Concern 1 (AOC1). Groundwater is pumped into the OWS, where NAPL is skimmed off and drained into a 55-gallon drum with secondary containment. Process water flows by gravity from the OWS into a 250-gallon equalization tank. A high/low-level float in the equalization tank controls a transfer pump, which pumps the untreated process water through two bag filters (in parallel) and two aqueous-phase carbon vessels (in series). Treated process water is metered by a mechanical flow totalizer and discharged at the Pima County discharge location. Treated process water is sampled on a quarterly basis and submitted to ACCUTEST, an ADHS-certified laboratory, under COC protocol. Laboratory analytical reports for treated process water samples collected during the quarterly sampling events are provided in Appendix A. The 55-gallon NAPL drum is equipped with secondary containment, and an explosion-proof high-level shutoff switch that turns off the compressor, which stops groundwater pumping, at a high-level condition. Tables 7 through 10 summarize the operations and performance of the PT/OWS system for the reporting period.

System start-up date:	July 2007
System discharge permit:	Pima County Industrial Wastewater Discharge Permit No. 12916
Reporting period:	December 1, 2015 to June 30, 2016
System modifications during reporting period:	On March 18, 2016, the system was shut down due to the low VOCs observed during the February 2016 quarterly groundwater sampling event. The system will remain shut down for approximately 12-months to evaluate groundwater conditions.
System status during reporting period:	Active through March 18, 2016
Laboratory:	ACCUTEST
Analyses performed (liquid GAC system):	EPA 624, EPA 1664A, SM 2540D, and SM HACH 8000
NAPL removed by OWS:	None
NAPL removed by manual bailing of wells:	NAPL bailing was discontinued when the SVE system was started on April 8, 2013.

Hydrocarbon removal (aqueous-phase carbon vessels): 1.0-gallon (6.0 pounds)

System performance:

Period	Mass of Hydrocarbons Removed (Pounds)	Mass of Hydrocarbons Removed (Gallons)
12/01/15 to 06/30/16	6.0	1.0
Cumulative:	12,978	2,163

Interpretive Analysis of Current and Historical Water Level and Water Quality Data

To examine the effectiveness of remediation efforts, including natural attenuation, Cardno reviewed monitoring data to assess groundwater elevations and constituent concentrations trends. Groundwater elevations are presented in Table 1 and analytical results are presented in Tables 2 and 3.

A potentiometric surface map (Figure 4A) was created using the February 24 and 25, 2016 groundwater monitoring data to aid in the evaluation of changes to groundwater flow across the site due to operation of the OWS remediation system. The contours were compared to the May 2008 contours created by EEC and presented in the *Site Characterization Report* (EEC, 2008). Comparison of the two potentiometric surfaces shows little change in groundwater flow direction, except locally in the area of the OWS system. The groundwater flow gradient is approximately 0.009 foot per foot (ft/ft) immediately downgradient of the remediation system and in a northwesterly direction. Additionally, a potentiometric surface maps (Figure 4B and 4C) were created using the May 24 and 26, 2016 and June 2, 2016, and June 28 and 29, 2016 data. The groundwater flow gradients in May and June 2016 are approximately 0.005 ft/ft in a northwesterly direction.

Historical groundwater elevations were examined to assess groundwater trends. Based on the data, groundwater elevations have decreased approximately one to four feet between January 2007 and June 2016; however, groundwater fluctuations within the sample set vary between monitoring events and continued monitoring is necessary to assess longer term groundwater elevation trends.

Benzene concentrations in groundwater were plotted to evaluate the presence and trends over time. Benzene is the only constituent of concern consistently above its ADEQ established AWQS. Figure 5 illustrates the benzene concentration over time for wells sampled across the site. Based on the benzene concentration graph, benzene concentrations were reported below its ADEQ established AWQS in the groundwater samples collected at monitor wells HQUST-524A (3.0 µg/L; February 2016) and HQUST-526A (1.8 µg/L; February 2016 and 2.9 µg/L; June 2016). Benzene concentrations at the other monitor wells were not detected above analytical method detection limits in the groundwater samples collected.

The presence of NAPL has decreased at three monitor wells CEP-518A, HQUST-523A, and HQUST-524A. Through microbial degradation, SVE remediation, and groundwater remediation through the PT/OWS,

concentration trends of BTEX and MTBE constituents at the source continue to decrease. Based on the recent sampling activities, the chemicals of concern are projected to be at or below the ADEQ corrective action standard within zero to two years.

PROPOSED FUTURE ACTIVITIES

Future activities planned over the next six-month period (July through December 2016) include the following:

- Confirmation soil borings to assess remedial activities conducted at the site.
- Quarterly groundwater monitoring and sampling to evaluate remediation.
- Preparation and submittal of quarterly Self-Monitoring and Reporting Forms to Pima County Regional Wastewater Reclamation Department.
- Preparation and submittal of the semi-annual PSSR to ADEQ.

LIMITATIONS

For documents cited that were not generated by Cardno, the data taken from those documents is used “as is” and is assumed to be accurate. Cardno does not guarantee the accuracy of this data and makes no warranties for the referenced work performed nor the inferences or conclusions stated in these documents.

This document and the work performed have been undertaken in good faith, with due diligence and with the expertise, experience, capability, and specialized knowledge necessary to perform the work in a good and workmanlike manner and within all accepted standards pertaining to providers of environmental services in Arizona at the time of investigation. No soil engineering or geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

Please call Mr. Justin T. Patton, Cardno’s Project Manager for this site, at (602) 909-3448 with any questions regarding this report.

Respectfully submitted,

Justin T. Patton
Project Manager
for Cardno
Direct Line +1 602 909 3448
Email: justin.patton@cardno.com

Heidi Dieffenbach-Carle, R.G.
Senior Project Geologist
for Cardno
Direct Line +1 707 766 2019
Email: heidi.dieffenbach-carle@cardno.com

REGISTERED GEOLOGIST
CERTIFICATE NO
42909
HEIDI L.
DIEFFENBACH-CARLE
Date Signed 8-3-16
ARIZONA U.S.A.
Expires 6-30-17

Enclosures:

References

Figure 1	Site Vicinity Map
Figure 2	Generalized Site Plan
Figure 3	Select Analytical Results – February 24 and 25, 2016 / May 24 and 26, 2016 and June 2, 2016 / June 28 and 29, 2016
Figure 4A	Groundwater Elevation Map – February 24 and 25, 2016
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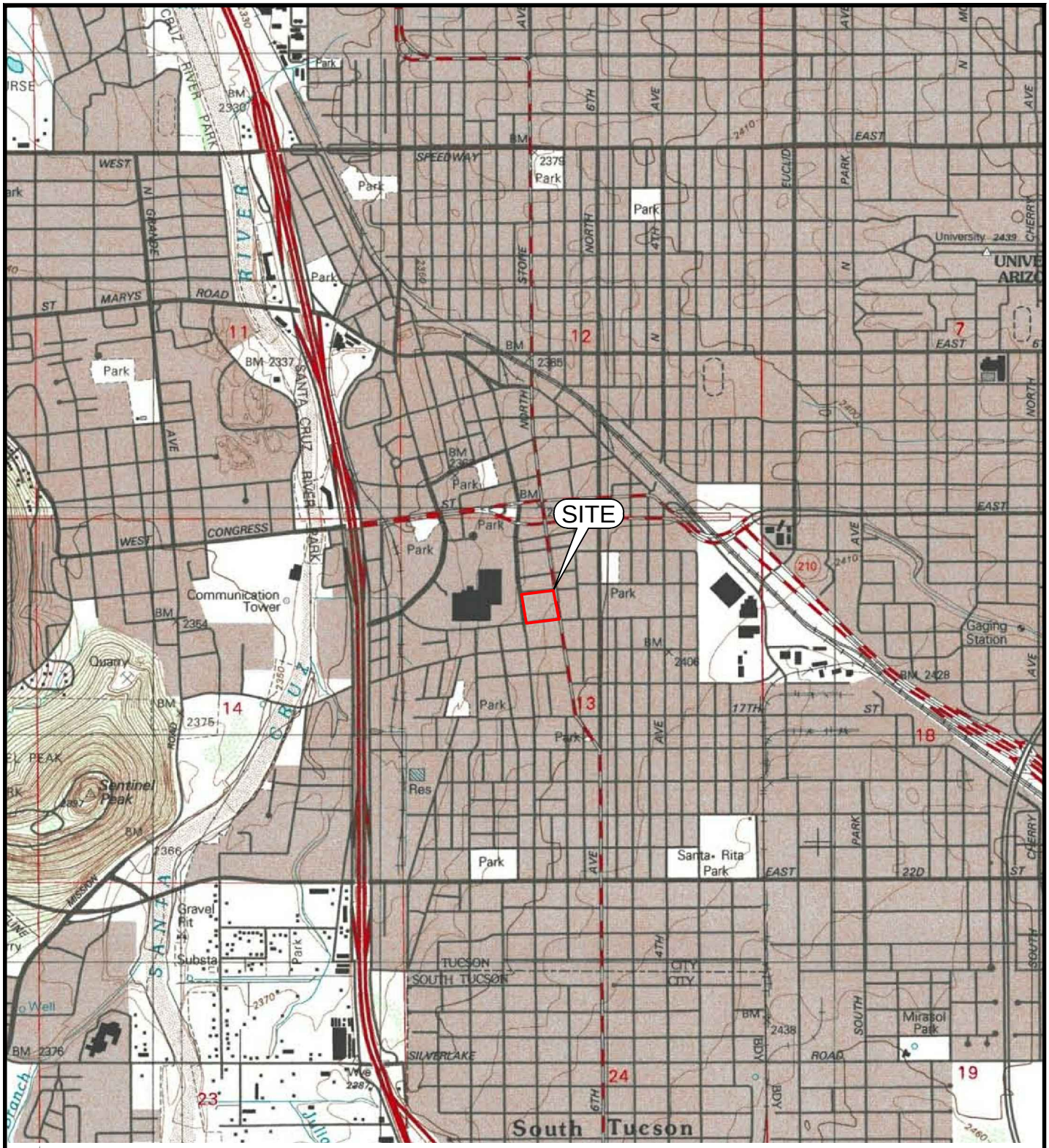
Appendix B	Groundwater Sampling Protocol
Appendix C	Groundwater Sample Laboratory Analytical Reports and Chain-of-Custody Records
Appendix D	Vapor Sample Laboratory Analytical Reports and Chain-of-Custody Records
Appendix E	ADEQ Reporting Forms

REFERENCES

Conestoga-Rovers & Associates (CRA). June 29, 2012. *Periodic Site Status Report – December 2011 through May 2012 Corrective Action, City of Tucson Police/Fire Former Fueling Facility, LUST Site 3208.01; UST Facility 0-005176, 260 South Stone Avenue, Tucson Arizona.* Conestoga-Rovers & Associates Reference No 055672-50.

Engineering and Environmental Consultants, Inc (EEC). July 31, 2008. *Initial Site Characterization Report, City of Tucson Police/Fire Fuel Island Leaking Underground Storage Tank Site, LUST File No. 3208.01; UST Facility 0-005176, 260 South Stone Avenue, Tucson, Arizona.* Engineering and Environmental Consultants, Inc. 206100.41.



SOURCE: USGS TOPO MAP, TUCSON, AZ QUAD, 1996

0 2,000 4,000

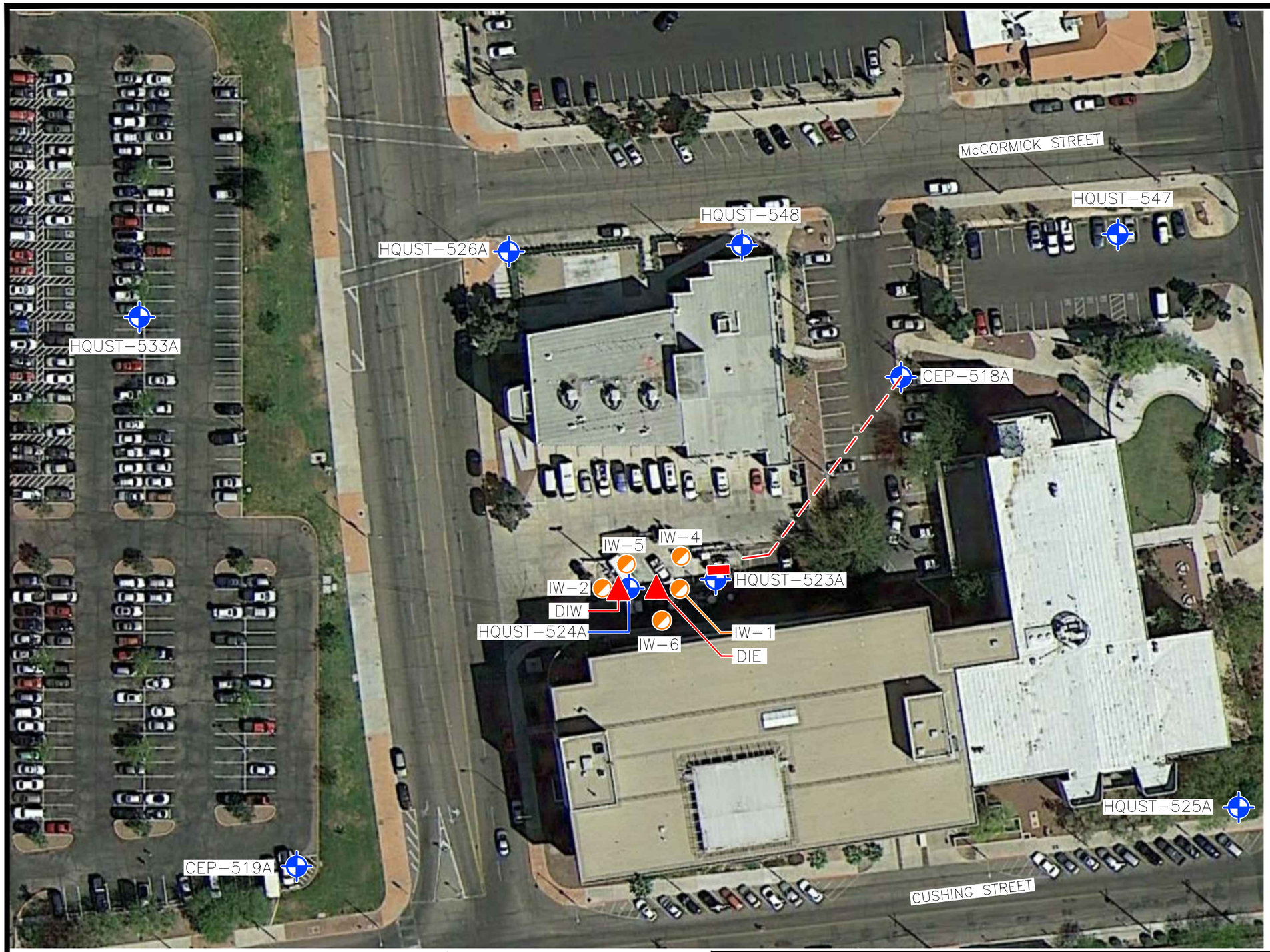
SCALE, FT

SITE VICINITY MAP

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015		DATE: 6/13/16	FIGURE 1
APPROVED BY: HDC		DRAWN BY: JTP	

Cardno Shaping the Future
9977 N. 90th Street, Ste. #150
Scottsdale, Arizona 85258-4426
Ph: (602) 977-8000 *** Fax: (602) 977-8099



LEGEND

- Groundwater Monitor Well
- Soil Vapor Extraction Well
- SVE/Injection Well
- SVE Piping
- SVE Remediation Equipment

SOURCE: Modified from a map provided by Google.

N

0 60 120

SCALE, FT

GENERALIZED SITE PLAN

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015		DATE: 6/13/16	FIGURE
APPROVED BY: HDC		DRAWN BY: JTP	2

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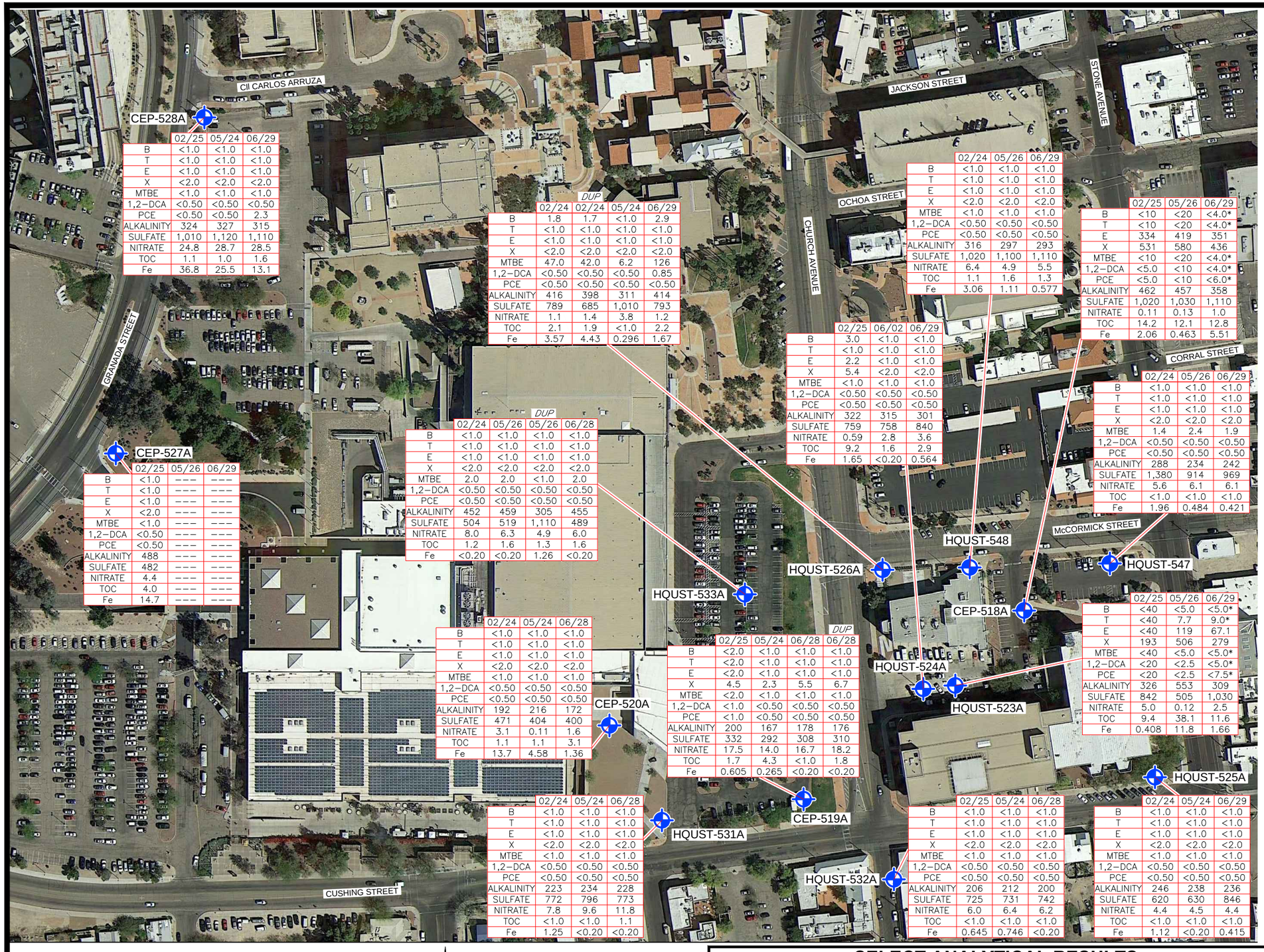


CEP-528A

	02/25	05/24	06/29
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	2.3
ALKALINITY	324	327	315
SULFATE	1,010	1,120	1,110
NITRATE	24.8	28.7	28.5
TOC	1.1	1.0	1.6
Fe	36.8	25.5	13.1

		DUP		
	02/24	02/24	05/24	06/29
B	1.8	1.7	<1.0	2.9
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0	<2.0
MTBE	47.0	42.0	6.2	126
1,2-DCA	<0.50	<0.50	<0.50	0.85
PCE	<0.50	<0.50	<0.50	<0.50
ALKALINITY	416	398	311	414
SULFATE	789	685	1,010	793
NITRATE	1.1	1.4	3.8	1.2
TOC	2.1	1.9	<1.0	2.2
Fe	3.57	4.43	0.296	1.67

	02/24	05/26	06/29
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	316	297	293
SULFATE	1,020	1,100	1,110
NITRATE	6.4	4.9	5.5
TOC	1.1	1.6	1.3
Fe	3.06	1.11	0.577

	02/25	05/26	06/29
B	<10	<20	<4.0*
T	<10	<20	<4.0*
E	334	419	351
X	531	580	436
MTBE	<10	<20	<4.0*
1,2-DCA	<5.0	<10	<4.0*
PCE	<5.0	<10	<6.0*
ALKALINITY	462	457	358
SULFATE	1,020	1,030	1,110
NITRATE	0.11	0.13	1.0
TOC	14.2	12.1	12.8
Fe	2.06	0.463	5.51

	02/25	06/02	06/29
B	3.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	2.2	<1.0	<1.0
X	5.4	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	322	315	301
SULFATE	759	758	840
NITRATE	0.59	2.8	3.6
TOC	9.2	1.6	2.9
Fe	1.65	<0.20	0.564

	02/24	05/26	06/29
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	1.4	2.4	1.9
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	288	234	242
SULFATE	1,380	914	969
NITRATE	5.6	6.1	6.1
TOC	<1.0	<1.0	<1.0
Fe	1.96	0.484	0.421

CEP-527A

	02/25	05/26	06/29
B	<1.0	---	---
T	<1.0	---	---
E	<1.0	---	---
X	<2.0	---	---
MTBE	<1.0	---	---
1,2-DCA	<0.50	---	---
PCE	<0.50	---	---
ALKALINITY	488	---	---
SULFATE	482	---	---
NITRATE	4.4	---	---
TOC	4.0	---	---
Fe	14.7	---	---

		DUP		
	02/24	05/26	05/26	06/28
B	<1.0	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0	<2.0
MTBE	2.0	2.0	<1.0	2.0
1,2-DCA	<0.50	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50	<0.50
ALKALINITY	452	459	305	455
SULFATE	504	519	1,110	489
NITRATE	8.0	6.3	4.9	6.0
TOC	1.2	1.6	1.3	1.6
Fe	<0.20	<0.20	1.26	<0.20

	02/24	05/24	06/28
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	192	216	172
SULFATE	471	404	400
NITRATE	3.1	0.11	1.6
TOC	1.1	1.1	3.1
Fe	13.7	4.58	1.36

		DUP		
	02/25	05/24	06/28	06/28
B	<2.0	<1.0	<1.0	<1.0
T	<2.0	<1.0	<1.0	<1.0
E	<2.0	<1.0	<1.0	<1.0
X	4.5	2.3	5.5	6.7
MTBE	<2.0	<1.0	<1.0	<1.0
1,2-DCA	<1.0	<0.50	<0.50	<0.50
PCE	<1.0	<0.50	<0.50	<0.50
ALKALINITY	200	167	178	176
SULFATE	332	292	308	310
NITRATE	17.5	14.0	16.7	18.2
TOC	1.7	4.3	<1.0	1.8
Fe	0.605	0.265	<0.20	<0.20

	02/25	05/26	06/29
B	<40	<5.0	<5.0*
T	<40	7.7	9.0*
E	<40	119	67.1
X	193	506	279
MTBE	<40	<5.0	<5.0*
1,2-DCA	<20	<2.5	<5.0*
PCE	<20	<2.5	<7.5*
ALKALINITY	326	553	309
SULFATE	842	505	1,030
NITRATE	5.0	0.12	2.5
TOC	9.4	38.1	11.6
Fe	0.408	11.8	1.66

	02/24	05/24	06/28
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	223	234	228
SULFATE	772	796	773
NITRATE	7.8	9.6	11.8
TOC	<1.0	<1.0	1.1
Fe	1.25	<0.20	<0.20

	02/25	05/24	06/28
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	206	212	200
SULFATE	725	731	742
NITRATE	6.0	6.4	6.2
TOC	<1.0	<1.0	<1.0
Fe	0.645	0.746	<0.20

	02/24	05/24	06/29
B	<1.0	<1.0	<1.0
T	<1.0	<1.0	<1.0
E	<1.0	<1.0	<1.0
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
1,2-DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	246	238	236
SULFATE	620	630	846
NITRATE	4.4	4.5	4.4
TOC	<1.0	<1.0	<1.0
Fe	1.12	<0.20	0.415

LEGEND

Groundwater Monitor Well

	05/26	SAMPLING DATE
B	<5.0	BENZENE (µg/L)
T	7.7	TOLUENE (µg/L)
E	119	ETHYLBENZENE (µg/L)
X	506	TOTAL XYLENES (µg/L)
MTBE	<5.0	METHYL TERT BUTYL ETHER (µg/L)
1,2-DCA	<2.5	1,2-DICHLOROETHANE (µg/L)
PCE	<2.5	TETRACHLOROETHENE (µg/L)
ALKALINITY	553	TOTAL ALKALINITY (mg/L)
SULFATE	505	SULFATE (mg/L)
NITRATE	0.12	NITRATE (mg/L)
TOC	38.1	TOTAL ORGANIC CARBON (mg/L)
Fe	11.8	TOTAL IRON (mg/L)

< LESS THAN THE LABORATORY REPORTING LIMIT

* ANALYTICAL RESULTS REPORTED TO THE LABORATORY METHOD DETECTION LIMIT

BOLD CONCENTRATION EXCEEDS ADEQ AWQS

µg/L MICROGRAMS PER LITER

mg/L MILLIGRAMS PER LITER

--- NOT SAMPLED

DUP DUPLICATE SAMPLE

SOURCE: Modified from a map provided by Google.

N

0 160 320

SCALE, FT

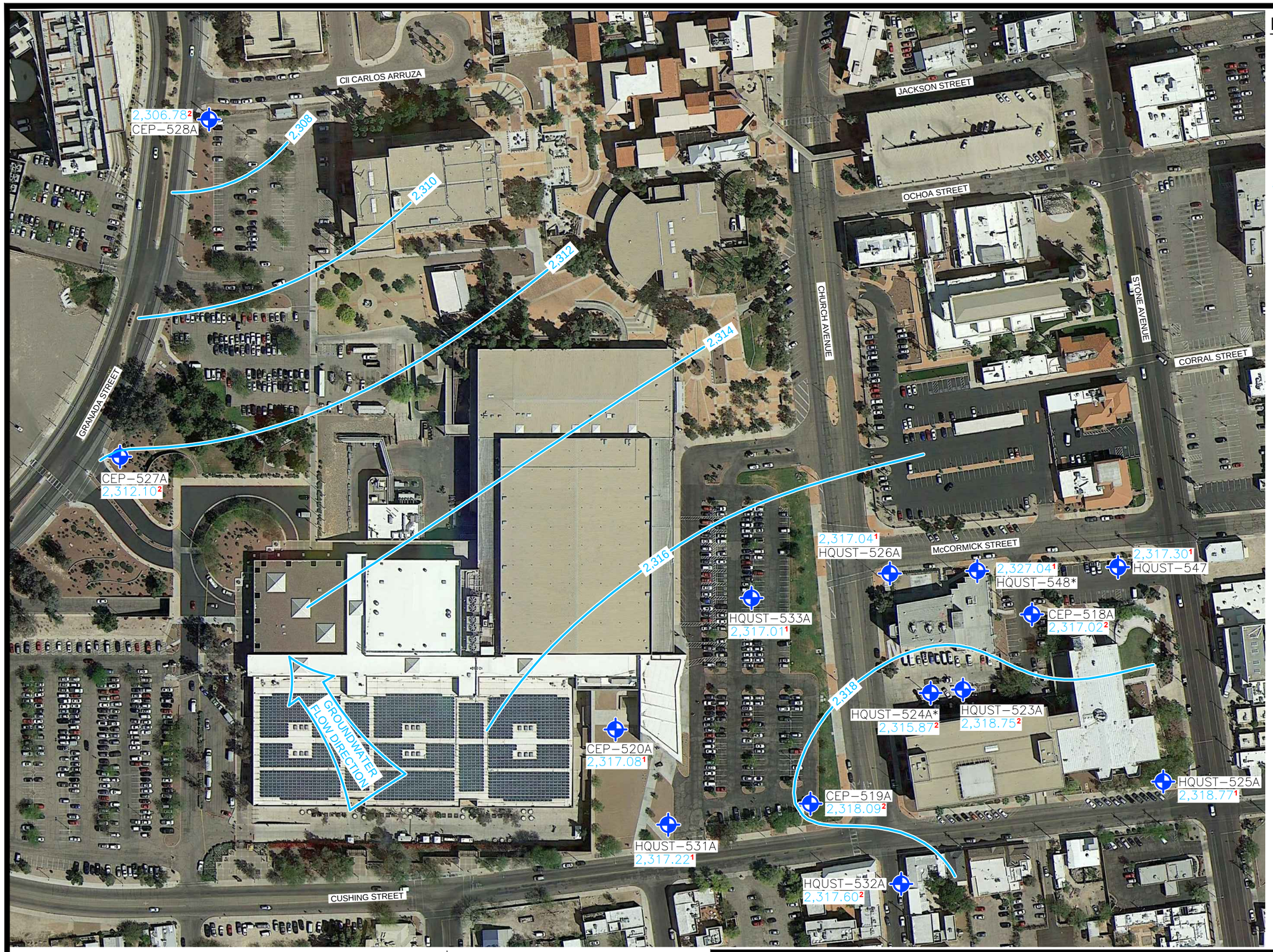
SELECT ANALYTICAL RESULTS FEBRUARY 24 AND 25, 2016 / MAY 24 AND 26, 2016 AND JUNE 2, 2016 / JUNE 28 AND 29, 2016

POLICE/FIRE STATION HEADQUARTERS LUST SITE

260 SOUTH STONE AVENUE, TUCSON, ARIZONA

PROJECT NUMBER: I052000015	DATE: 7/12/16	FIGURE
APPROVED BY: HDC	DRAWN BY: JTP	3

Cardno Shaping the Future
9977 N. 90th Street, Ste. #150
Scottsdale, Arizona 85258-4426
Ph: (602) 977-8000 *** Fax: (602) 977-8099



LEGEND

Groundwater Monitor Well

2,318.77 Groundwater elevation in feet; datum is mean sea level

Line of equal groundwater elevation; datum is mean sea level

1 Groundwater level measured on February 24, 2016

2 Groundwater level measured on February 25, 2016

* Not used for contouring

SOURCE: Modified from a map provided by Google.

N

0 160 320

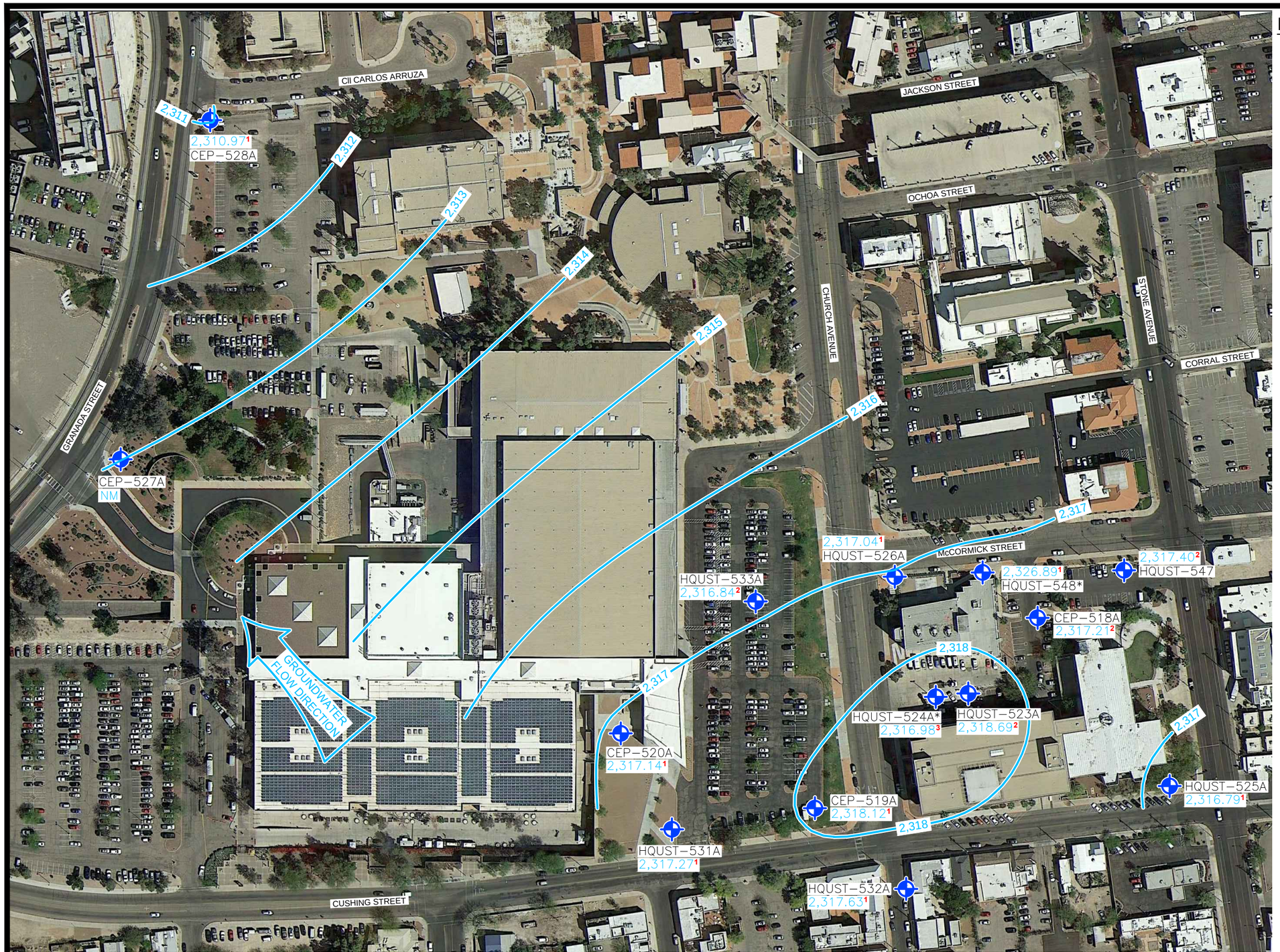
SCALE, FT

GROUNDWATER ELEVATION MAP FEBRUARY 24 AND 25, 2016

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015		DATE: 6/13/16	FIGURE
APPROVED BY: HDC		DRAWN BY: JTP	4A

Cardno Shaping the Future
9977 N. 90th Street, Ste. #150
Scottsdale, Arizona 85258-4426
Ph: (602) 977-8000 *** Fax: (602) 977-8099



LEGEND

Groundwater Monitor Well

2,318.69 Groundwater elevation in feet; datum is mean sea level

Line of equal groundwater elevation; datum is mean sea level

1 Groundwater level measured on May 24, 2016

2 Groundwater level measured on May 26, 2016

3 Groundwater level measured on June 2, 2016

* Not used for contouring

NM Not measured

SOURCE: Modified from a map provided by Google.

N

0 160 320

SCALE, FT

GROUNDWATER ELEVATION MAP
MAY 24 AND 26, 2016 AND JUNE 2, 2016

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015	DATE: 6/13/16	FIGURE
APPROVED BY: HDC	DRAWN BY: JTP	4B

Cardno Shaping the Future
9977 N. 90th Street, Ste. #150
Scottsdale, Arizona 85258-4426
Ph: (602) 977-8000 *** Fax: (602) 977-8099

LEGEND

Groundwater Monitor Well

2,318.65 Groundwater elevation in feet; datum is mean sea level

Line of equal groundwater elevation; datum is mean sea level

1 Groundwater level measured on June 28, 2016

2 Groundwater level measured on June 29, 2016

* Not used for contouring

SOURCE: Modified from a map provided by Google.

N

0 160 320

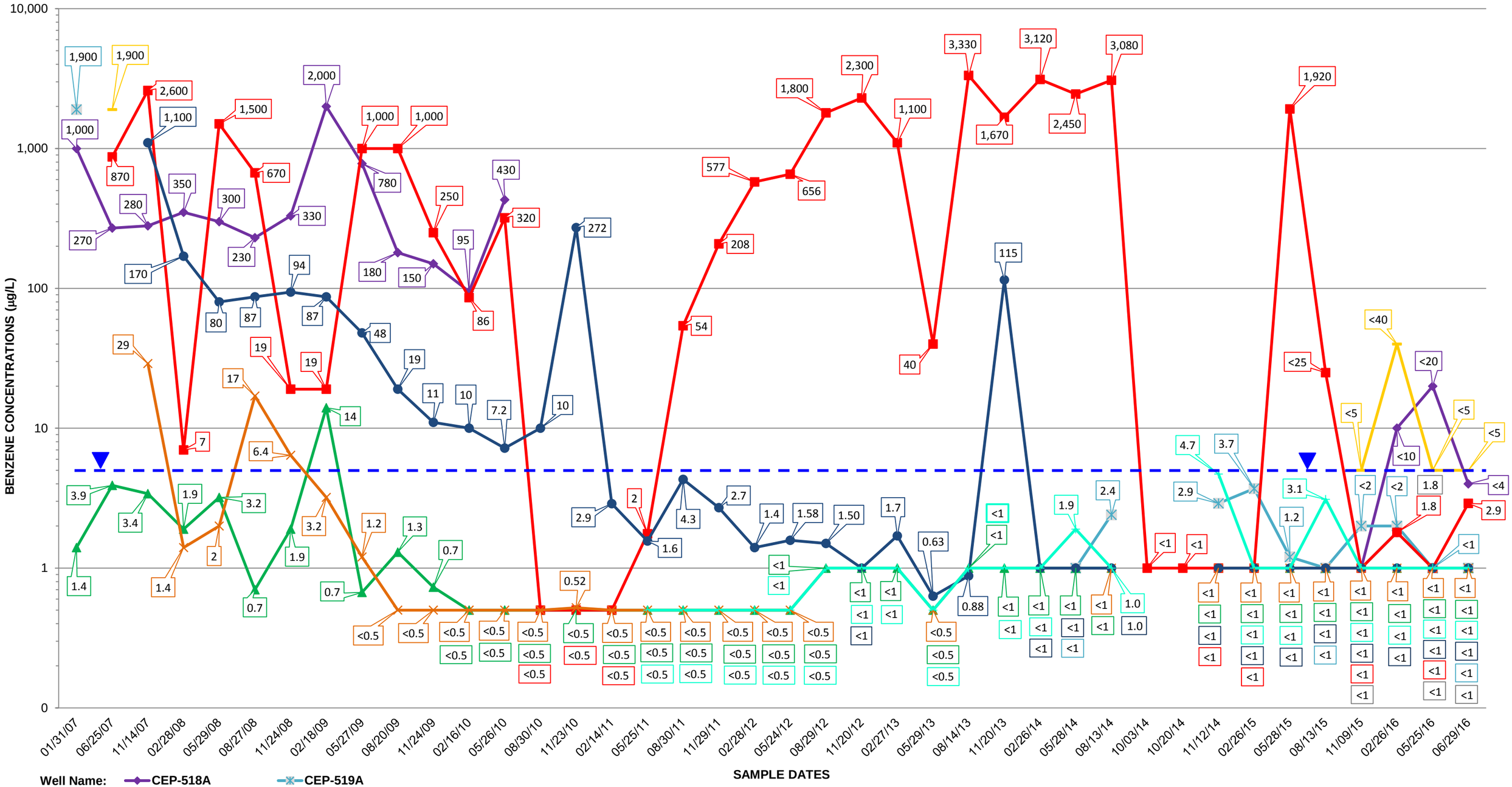
SCALE, FT

GROUNDWATER ELEVATION MAP
JUNE 28 AND 29, 2016

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015		DATE: 7/13/16	FIGURE
APPROVED BY: HDC		DRAWN BY: JTP	4C

Cardno Shaping the Future
9977 N. 90th Street, Ste. #150
Scottsdale, Arizona 85258-4426
Ph: (602) 977-8000 *** Fax: (602) 977-8099



DISSOLVED PHASE BENZENE CONCENTRATION GRAPH

POLICE/FIRE STATION HEADQUARTERS LUST SITE
260 SOUTH STONE AVENUE
TUCSON, ARIZONA

PROJECT NUMBER: I052000015	DATE: 07/14/16	FIGURE 5
APPROVED BY: HDC	DRAWN BY: JTP	

Cardno
Shaping the Future
9977 N. 90th St., Ste. #150
Scottsdale, Arizona 85258
Ph: (602) 977-8000 *** Fax: (602) 977-8099

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-518A	01/31/07	2,385.52	65.82	N/A	0.00	2,319.70
CEP-518A	06/27/07	2,385.52	66.18	N/A	0.00	2,319.34
CEP-518A	11/13/07	2,385.52	66.24	N/A	0.00	2,319.28
CEP-518A	02/27/08	2,385.52	66.26	N/A	0.00	2,319.26
CEP-518A	05/27/08	2,385.52	66.36	N/A	0.00	2,319.16
CEP-518A	08/27/08	2,385.52	66.28	N/A	0.00	2,319.24
CEP-518A	11/17/08	2,385.52	66.04	N/A	0.00	2,319.48
CEP-518A	02/17/09	2,385.52	66.24	N/A	0.00	2,319.28
CEP-518A	05/27/09	2,385.52	66.13	N/A	0.00	2,319.39
CEP-518A	08/17/09	2,385.52	66.77	N/A	0.00	2,318.75
CEP-518A	11/24/09	2,385.52	66.83	N/A	0.00	2,318.69
CEP-518A	02/16/10	2,385.52	66.89	N/A	0.00	2,318.63
CEP-518A	05/26/10	2,385.52	67.72	66.75	0.97	2,318.58
CEP-518A(4)	08/16/10	2,385.52	67.05	66.45	0.60	2,318.95
CEP-518A(4)	08/26/10	2,385.52	67.05	66.42	0.63	2,318.97
CEP-518A(4)	08/27/10	2,385.52	67.00	66.40	0.60	2,319.00
CEP-518A	08/30/10	2,385.52	67.03	66.42	0.61	2,318.98
CEP-518A(4)	09/13/10	2,385.52	66.96	66.36	0.60	2,319.04
CEP-518A(4)	09/15/10	2,385.52	66.96	66.37	0.59	2,319.03
CEP-518A(4)	10/08/10	2,385.52	66.79	66.15	0.64	2,319.24
CEP-518A(4)	10/23/10	2,385.52	66.81	66.20	0.61	2,319.20
CEP-518A	10/29/10	2,385.52	66.60	66.10	0.50	2,319.32
CEP-518A(4)	11/10/10	2,385.52	66.40	66.00	0.40	2,319.44
CEP-518A(4)	11/12/10	2,385.52	66.15	66.01	0.14	2,319.48
CEP-518A(4)	11/15/10	2,385.52	66.05	N/A	0.00	2,319.47
CEP-518A(4)	11/17/10	2,385.52	66.09	N/A	0.00	2,319.43
CEP-518A(4)	11/23/10	2,385.52	66.12	66.05	0.07	2,319.46
CEP-518A(4)	12/10/10	2,385.52	65.98	N/A	0.00	2,319.54
CEP-518A(4)	12/13/10	2,385.52	66.02	65.94	0.08	2,319.56
CEP-518A(4)	12/17/10	2,385.52	66.02	65.94	0.08	2,319.56
CEP-518A(4)	12/30/10	2,385.52	66.02	65.97	0.05	2,319.54
CEP-518A(4)	01/07/11	2,385.52	66.10	65.95	0.15	2,319.54
CEP-518A(4)	01/23/11	2,385.52	66.00	65.94	0.06	2,319.57
CEP-518A(4)	02/02/11	2,385.52	66.15	66.10	0.05	2,319.41
CEP-518A(4)	02/11/11	2,385.52	66.25	N/A	0.00	2,319.27
CEP-518A	02/14/11	2,385.52	66.25	N/A	0.00	2,319.27
CEP-518A(4)	02/18/11	2,385.52	66.42	66.39	0.03	2,319.12
CEP-518A(4)	02/24/11	2,385.52	66.40	66.37	0.03	2,319.14
CEP-518A(4)	03/03/11	2,385.52	66.55	66.22	0.33	2,319.23
CEP-518A(4)	03/11/11	2,385.52	66.10	65.95	0.15	2,319.54
CEP-518A(4)	03/18/11	2,385.52	66.52	N/A	0.00	2,319.00
CEP-518A(4)	03/21/11	2,385.52	66.70	N/A	0.00	2,318.82
CEP-518A(4)	03/25/11	2,385.52	66.55	N/A	0.00	2,318.97
CEP-518A(4)	04/01/11	2,385.52	66.67	66.65	0.02	2,318.87
CEP-518A(4)	04/08/11	2,385.52	66.69	66.66	0.03	2,318.85
CEP-518A(4)	04/22/11	2,385.52	66.81	66.78	0.03	2,318.73
CEP-518A(4)	05/06/11	2,385.52	66.81	66.77	0.04	2,318.74
CEP-518A(4)	05/20/11	2,385.52	66.77	N/A	0.00	2,318.75
CEP-518A(4)	06/03/11	2,385.52	66.68	N/A	0.00	2,318.84
CEP-518A(4)	06/17/11	2,385.52	67.59	66.81	0.78	2,318.55
CEP-518A(4)	06/24/11	2,385.52	67.55	66.83	0.72	2,318.55
CEP-518A(4)	07/11/11	2,385.52	67.62	66.91	0.71	2,318.47

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-518A(4)	07/22/11	2,385.52	67.65	66.93	0.72	2,318.45
CEP-518A(4)	07/26/11	2,385.52	67.70	66.98	0.72	2,318.40
CEP-518A(4)	08/12/11	2,385.52	67.69	66.95	0.74	2,318.42
CEP-518A(4)	08/24/11	2,385.52	67.62	66.95	0.67	2,318.44
CEP-518A(4)	09/29/11	2,385.52	67.61	67.00	0.61	2,318.40
CEP-518A(4)	10/06/11	2,385.52	67.80	67.15	0.65	2,318.24
CEP-518A(4)	10/17/11	2,385.52	67.55	67.10	0.45	2,318.33
CEP-518A(4)	10/20/11	2,385.52	68.00	67.18	0.82	2,318.18
CEP-518A(4)	10/28/11	2,385.52	67.88	67.10	0.78	2,318.26
CEP-518A(4)	11/04/11	2,385.52	67.80	67.11	0.69	2,318.27
CEP-518A(4)	11/21/11	2,385.52	67.90	67.20	0.70	2,318.18
CEP-518A(4)	12/14/11	2,385.52	67.91	67.21	0.70	2,318.17
CEP-518A(4)	01/06/12	2,385.52	67.98	67.25	0.73	2,318.12
CEP-518A(4)	01/13/12	2,385.52	68.00	67.29	0.71	2,318.09
CEP-518A(4)	02/10/12	2,385.52	67.95	7.29	0.66	2,318.10
CEP-518A(4)	03/14/12	2,385.52	68.01	67.31	0.70	2,318.07
CEP-518A(4)	04/06/12	2,385.52	67.95	67.29	0.66	2,318.10
CEP-518A(4)	04/17/12	2,385.52	68.12	67.39	0.73	2,317.98
CEP-518A(4)	05/10/12	2,385.52	68.15	67.45	0.70	2,317.93
CEP-518A(4)	05/23/12	2,385.52	67.55	N/A	0.00	2,317.97
CEP-518A(4) (6)	05/25/12	2,385.52	67.50	N/A	0.00	2,318.02
CEP-518A(4)	06/01/12	2,385.52	67.50	N/A	0.00	2,318.02
CEP-518A(4)	06/08/12	2,385.52	67.51	N/A	0.00	2,318.01
CEP-518A(4)	06/15/12	2,385.52	68.05	67.55	0.50	2,317.87
CEP-518A(7)	08/10/12	2,385.58	67.55	N/A	0.00	2,318.03
CEP-518A(7)	08/27/12	2,385.58	68.10	67.58	0.52	2,317.93
CEP-518A	08/28/12	2,385.52	NM	NM	NM	NM
CEP-518A(7)	09/05/12	2,385.52	68.16	67.57	0.59	2,317.87
CEP-518A(7)	09/14/12	2,385.52	67.59	N/A	0.00	2,317.93
CEP-518A(7)	09/24/12	2,385.52	68.18	67.56	0.62	2,317.87
CEP-518A(7)	10/08/12	2,385.52	68.20	67.61	0.59	2,317.83
CEP-518A(7)	10/22/12	2,385.52	68.25	67.58	0.67	2,317.84
CEP-518A(7)	11/06/12	2,385.52	67.71	67.59	0.12	2,317.91
CEP-518A	11/19/12	2,385.52	NM	NM	NM	NM
CEP-518A	02/27/13	2,385.52	NM	NM	NM	NM
CEP-518A	05/29/13	2,385.52	NM	NM	NM	NM
CEP-518A	08/14/13	2,385.52	NM	NM	NM	NM
CEP-518A	11/20/13	2,385.52	NM	NM	NM	NM
CEP-518A	02/26/14	2,385.52	NM	NM	NM	NM
CEP-518A	05/28/14	2,385.52	NM	NM	NM	NM
CEP-518A	08/13/14	2,385.52	NM	NM	NM	NM
CEP-518A	11/12/14	2,385.52	NM	NM	NM	NM
CEP-518A	02/25/15	2,385.52	NM	NM	NM	NM
CEP-518A	05/27/15	2,385.52	NM	NM	NM	NM
CEP-518A	08/13/15	2,385.52	NM	NM	NM	NM
CEP-518A	11/09/15	2,385.52	69.84	N/A	0.00	2,315.68
CEP-518A	02/25/16	2,385.52	68.50	N/A	0.00	2,317.02
CEP-518A	05/26/16	2,385.52	68.31	N/A	0.00	2,317.21
CEP-518A	06/24/16	2,385.52	68.85	N/A	0.00	2,316.67
CEP-518A	06/29/16	2,385.52	68.85	N/A	0.00	2,316.67
CEP-519A	06/27/07	2,381.67	62.75	62.10	0.65	2,391.44

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-519A	11/09/07	2,381.67	62.53	62.10	0.43	2,319.48
CEP-519A	11/16/07	2,381.67	62.54	62.25	0.29	2,319.36
CEP-519A	11/21/07	2,381.67	62.56	62.29	0.27	2,319.33
CEP-519A	11/30/07	2,381.67	62.51	62.24	0.27	2,319.38
CEP-519A	12/07/07	2,381.67	62.54	62.25	0.29	2,319.36
CEP-519A	12/14/07	2,381.67	62.53	62.25	0.28	2,319.36
CEP-519A	12/21/07	2,381.67	62.53	62.25	0.28	2,319.36
CEP-519A	12/27/07	2,381.67	62.47	62.25	0.22	2,319.38
CEP-519A	01/04/08	2,381.67	62.41	62.18	0.23	2,319.44
CEP-519A	01/27/09	2,381.67	62.60	62.31	0.29	2,319.30
CEP-519A (1)	01/27/09	2,381.67	62.40	62.31	0.09	2,319.34
CEP-519A	04/29/09	2,381.67	63.60	62.30	1.30	2,319.11
CEP-519A (2)	04/29/09	2,381.67	62.87	62.55	0.32	2,319.06
CEP-519A (4)	07/30/09	2,381.67	63.41	62.45	0.96	2,319.03
CEP-519A (4)	07/31/09	2,381.67	63.18	62.51	0.67	2,319.03
CEP-519A (4)	08/03/09	2,381.67	63.50	62.40	1.10	2,319.05
CEP-519A (4)	08/19/09	2,381.67	63.60	62.42	1.18	2,319.01
CEP-519A (4)	10/13/09	2,381.67	63.45	62.48	0.97	2,319.00
CEP-519A (4)	10/14/09	2,381.67	63.49	62.46	1.03	2,319.00
CEP-519A (4)	11/11/09	2,381.67	63.63	62.58	1.05	2,318.88
CEP-519A (4)	11/12/09	2,381.67	65.13	63.97	1.16	2,317.47
CEP-519A (4)	11/17/09	2,381.67	64.10	N/A	0.00	2,317.57
CEP-519A (4)	11/23/09	2,381.67	64.14	N/A	0.00	2,317.53
CEP-519A (4)	11/30/09	2,381.67	64.15	N/A	0.00	2,317.52
CEP-519A (4)	12/17/09	2,381.67	63.71	62.49	1.22	2,318.94
CEP-519A (4)	12/18/09	2,381.67	63.90	62.60	1.30	2,318.81
CEP-519A (4)	12/21/09	2,381.67	63.88	62.60	1.28	2,318.81
CEP-519A (4)	12/22/09	2,381.67	63.75	62.64	1.11	2,318.81
CEP-519A	02/06/10	2,381.67	63.67	62.60	1.07	2,318.86
CEP-519A (4)	04/06/10	2,381.67	63.50	62.00	1.50	2,319.37
CEP-519A (4)	04/14/10	2,381.67	62.80	62.30	0.50	2,319.27
CEP-519A (4)	04/20/10	2,381.67	62.90	62.00	0.90	2,319.49
CEP-519A	05/26/10	2,381.67	62.28	62.25	0.03	2,319.41
CEP-519A (4)	08/16/10	2,381.67	61.85	N/A	0.00	2,319.82
CEP-519A (4)	08/27/10	2,381.67	62.18	N/A	0.00	2,319.49
CEP-519A (4)	10/08/10	2,381.67	61.61	N/A	0.00	2,320.06
CEP-519A (4)	10/23/10	2,381.67	61.58	N/A	0.00	2,320.09
CEP-519A (4)	11/10/10	2,381.67	61.38	N/A	0.00	2,320.29
CEP-519A (4)	11/12/10	2,381.67	61.37	N/A	0.00	2,320.30
CEP-519A (4)	11/15/10	2,381.67	61.34	N/A	0.00	2,320.33
CEP-519A (4)	11/23/10	2,381.67	61.34	N/A	0.00	2,320.33
CEP-519A (4)	01/07/11	2,381.67	61.26	N/A	0.00	2,320.41
CEP-519A (4)	01/14/11	2,381.67	61.30	N/A	0.00	2,320.37
CEP-519A (4)	01/23/11	2,381.67	61.24	N/A	0.00	2,320.43
CEP-519A	02/14/11	2,381.67	61.69	61.65	0.04	2,320.01
CEP-519A (4)	02/18/11	2,381.67	61.65	N/A	0.00	2,320.02
CEP-519A (4)	02/24/11	2,381.67	61.62	N/A	0.00	2,320.05
CEP-519A (4)	03/18/11	2,381.67	61.81	N/A	0.00	2,319.86
CEP-519A (4)	03/21/11	2,381.67	61.91	N/A	0.00	2,319.76
CEP-519A (4)	03/25/11	2,381.67	61.92	61.89	0.03	2,319.77
CEP-519A (4)	04/22/11	2,381.67	62.08	N/A	0.00	2,319.59
CEP-519A (4)	05/06/11	2,381.67	62.14	N/A	0.00	2,319.53

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-519A (4)	05/20/11	2,381.67	62.12	N/A	0.00	2,319.55
CEP-519A (4)	06/03/11	2,381.67	62.10	N/A	0.00	2,319.57
CEP-519A (4)	06/17/11	2,381.67	62.07	N/A	0.00	2,319.60
CEP-519A (4)	07/01/11	2,381.67	62.31	62.29	0.02	2,319.38
CEP-519A (4)	07/22/11	2,381.67	62.41	62.34	0.07	2,319.32
CEP-519A (4)	08/05/11	2,381.67	62.43	62.36	0.07	2,319.30
CEP-519A (4)	08/12/11	2,381.67	62.45	N/A	0.00	2,319.22
CEP-519A (4)	08/19/11	2,381.67	62.45	N/A	0.00	2,319.22
CEP-519A (4)	09/09/11	2,381.67	62.42	N/A	0.00	2,319.25
CEP-519A (4)	11/04/11	2,381.67	62.38	N/A	0.00	2,319.29
CEP-519A (4)	11/28/11	2,381.67	62.51	62.47	0.04	2,319.19
CEP-519A	11/29/11	2,381.67	62.50	62.47	0.03	2,319.19
CEP-519A (4)	12/09/11	2,381.67	62.94	62.44	0.50	2,319.13
CEP-519A (4)	01/06/12	2,381.67	63.31	62.55	0.76	2,318.97
CEP-519A (4)	01/13/12	2,381.67	63.28	62.60	0.68	2,318.93
CEP-519A (4)	02/15/12	2,381.67	63.29	62.58	0.71	2,318.95
CEP-519A (4)	03/14/12	2,381.67	63.15	62.61	0.54	2,318.95
CEP-519A (4)	04/06/12	2,381.67	63.13	62.59	0.54	2,318.97
CEP-519A (4)	05/23/12	2,381.67	62.97	62.85	0.12	2,318.80
CEP-519A(4) (6)	05/25/12	2,381.67	63.05	62.80	0.25	2,318.82
CEP-519A (4)	06/01/12	2,381.67	62.81	N/A	0.00	2,318.86
CEP-519A (4)	06/08/12	2,381.67	63.11	62.81	0.30	2,318.80
CEP-519A (4)	06/15/12	2,381.67	63.22	62.79	0.43	2,318.79
CEP-519A (7)	08/10/12	2,381.67	62.77	N/A	0.00	2,318.90
CEP-519A (7)	08/27/12	2,381.67	62.74	N/A	0.00	2,318.93
CEP-519A (6)	08/28/12	2,381.67	NM	NM	NM	NM
CEP-519A (7)	09/05/12	2,381.67	63.04	62.72	0.32	2,318.90
CEP-519A (7)	09/14/12	2,381.67	62.85	N/A	0.00	2,318.82
CEP-519A (7)	09/24/12	2,381.67	62.87	62.84	0.03	2,318.83
CEP-519A (7)	10/08/12	2,381.67	62.80	N/A	0.00	2,318.87
CEP-519A (7)	10/22/12	2,381.67	62.72	N/A	0.00	2,318.95
CEP-519A (7)	11/06/12	2,381.67	62.75	N/A	0.00	2,318.92
CEP-519A	11/19/12	2,381.67	NM	NM	NM	NM
CEP-519A	02/27/13	2,381.67	NM	NM	NM	NM
CEP-519A	05/29/13	2,381.67	NM	NM	NM	NM
CEP-519A	08/14/13	2,381.67	NM	NM	NM	NM
CEP-519A	11/20/13	2,381.67	NM	NM	NM	NM
CEP-519A	02/26/14	2,381.67	NM	NM	NM	NM
CEP-519A	05/29/14	2,381.67	63.58	N/A	0.00	2,318.09
CEP-519A	08/14/14	2,381.67	63.61	N/A	0.00	2,318.06
CEP-519A	11/13/14	2,381.67	63.71	N/A	0.00	2,317.96
CEP-519A	02/25/15	2,381.67	63.73	N/A	0.00	2,317.94
CEP-519A	05/28/15	2,381.67	63.57	N/A	0.00	2,318.10
CEP-519A	08/13/15	2,381.67	63.61	N/A	0.00	2,318.06
CEP-519A	11/05/15	2,381.67	63.61	N/A	0.00	2,318.06
CEP-519A	02/25/16	2,381.67	63.58	N/A	0.00	2,318.09
CEP-519A	05/24/16	2,381.67	63.55	N/A	0.00	2,318.12
CEP-519A	06/23/16	2,381.67	63.52	N/A	0.00	2,318.15
CEP-519A	06/28/16	2,381.67	63.55	N/A	0.00	2,318.12
CEP-520A	01/31/07	2,379.40	59.87	N/A	0.00	2,319.53
CEP-520A	06/27/07	2,379.40	60.26	N/A	0.00	2,319.14

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-520A	11/13/07	2,379.40	60.25	N/A	0.00	2,319.15
CEP-520A	02/27/08	2,379.40	60.21	N/A	0.00	2,319.19
CEP-520A	05/27/08	2,379.40	60.41	N/A	0.00	2,318.99
CEP-520A	08/28/08	2,379.40	60.37	N/A	0.00	2,319.03
CEP-520A	11/17/08	2,379.40	61.08	N/A	0.00	2,318.32
CEP-520A	02/17/09	2,379.40	60.42	N/A	0.00	2,318.98
CEP-520A	05/27/09	2,379.40	60.82	N/A	0.00	2,318.58
CEP-520A	08/17/09	2,379.40	60.51	N/A	0.00	2,318.89
CEP-520A	11/24/09	2,379.40	60.83	N/A	0.00	2,318.57
CEP-520A	02/16/10	2,379.40	60.09	N/A	0.00	2,319.31
CEP-520A	05/26/10	2,379.40	61.00	N/A	0.00	2,318.40
CEP-520A	08/30/10	2,379.40	60.80	N/A	0.00	2,318.60
CEP-520A	11/23/10	2,379.40	60.18	N/A	0.00	2,319.22
CEP-520A	02/14/11	2,379.40	60.35	N/A	0.00	2,319.05
CEP-520A	05/25/11	2,379.40	61.02	N/A	0.00	2,318.38
CEP-520A	08/29/11	2,379.40	61.25	N/A	0.00	2,318.15
CEP-520A	11/30/11	2,379.40	61.38	N/A	0.00	2,318.02
CEP-520A	02/28/12	2,379.40	61.52	N/A	0.00	2,317.88
CEP-520A	05/23/12	2,379.40	61.61	N/A	0.00	2,317.79
CEP-520A	08/28/12	2,379.40	61.56	N/A	0.00	2,317.84
CEP-520A	11/19/12	2,379.40	61.70	N/A	0.00	2,317.70
CEP-520A	02/27/13	2,379.40	61.83	N/A	0.00	2,317.57
CEP-520A	05/29/13	2,379.40	61.99	N/A	0.00	2,317.41
CEP-520A	08/14/13	2,379.40	63.07	N/A	0.00	2,316.33
CEP-520A	11/20/13	2,379.40	62.10	N/A	0.00	2,317.30
CEP-520A	02/26/14	2,379.40	62.26	N/A	0.00	2,317.14
CEP-520A	05/28/14	2,379.40	62.39	N/A	0.00	2,317.01
CEP-520A	08/13/14	2,379.40	62.26	N/A	0.00	2,317.14
CEP-520A	11/12/14	2,379.40	62.58	N/A	0.00	2,316.82
CEP-520A	02/26/15	2,379.40	62.38	N/A	0.00	2,317.02
CEP-520A	05/27/15	2,379.40	62.13	N/A	0.00	2,317.27
CEP-520A	08/12/15	2,379.40	61.65	N/A	0.00	2,317.75
CEP-520A	11/04/15	2,379.40	62.40	N/A	0.00	2,317.00
CEP-520A	02/24/16	2,379.40	62.32	N/A	0.00	2,317.08
CEP-520A	05/24/16	2,379.40	62.26	N/A	0.00	2,317.14
CEP-520A	06/21/16	2,379.40	62.31	N/A	0.00	2,317.09
CEP-520A	06/28/16	2,379.40	62.32	N/A	0.00	2,317.08
CEP-527A	06/27/07	2,357.48	42.30	N/A	0.00	2,315.18
CEP-527A	07/02/07	2,357.48	42.31	N/A	0.00	2,315.17
CEP-527A	08/01/07	2,357.48	41.36	N/A	0.00	2,316.12
CEP-527A	11/01/07	2,357.48	NM	NM	NM	NM
CEP-527A	01/03/08	2,357.48	42.05	N/A	0.00	2,315.43
CEP-527A	02/26/08	2,357.48	41.99	N/A	0.00	2,315.49
CEP-527A	05/27/08	2,357.48	42.61	N/A	0.00	2,314.87
CEP-527A	08/26/08	2,357.48	42.25	N/A	0.00	2,315.23
CEP-527A	11/17/08	2,357.48	42.72	N/A	0.00	2,314.76
CEP-527A	02/17/09	2,357.48	42.45	N/A	0.00	2,315.03
CEP-527A	05/27/09	2,357.48	42.51	N/A	0.00	2,314.97
CEP-527A	08/17/09	2,357.48	40.87	N/A	0.00	2,316.61
CEP-527A	08/30/10	2,357.48	43.71	N/A	0.00	2,313.77
CEP-527A [(3)]	11/23/10	2,357.48	NM	NM	NM	NM

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-527A	02/14/11	2,357.48	43.42	N/A	0.00	2,314.06
CEP-527A	05/25/11	2,357.48	43.95	N/A	0.00	2,313.53
CEP-527A	08/29/11	2,357.48	43.99	N/A	0.00	2,313.49
CEP-527A	11/30/11	2,357.48	44.5	N/A	0.00	2,312.98
CEP-527A	02/28/12	2,357.48	43.9	N/A	0.00	2,313.55
CEP-527A (3)	05/23/12	2,357.48	NM	N/A	0.00	NM
CEP-527A	08/28/12	2,357.48	44.07	N/A	0.00	2,313.41
CEP-527A	11/19/12	2,357.48	44.73	N/A	0.00	2,312.75
CEP-527A	03/06/13	2,357.48	44.95	N/A	0.00	2,312.53
CEP-527A	05/30/13	2,357.48	45.18	N/A	0.00	2,312.30
CEP-527A	08/15/13	2,357.48	45.40	N/A	0.00	2,312.08
CEP-527A	11/21/13	2,357.48	45.43	N/A	0.00	2,312.05
CEP-527A	02/26/14	2,357.48	45.33	N/A	0.00	2,312.15
CEP-527A	05/29/14	2,357.48	44.78	N/A	0.00	2,312.70
CEP-527A	08/14/14	2,357.48	44.14	N/A	0.00	2,313.34
CEP-527A	11/13/14	2,357.48	39.59	N/A	0.00	2,317.89
CEP-527A	02/25/15	2,357.48	40.24	N/A	0.00	2,317.24
CEP-527A	05/28/15	2,357.48	43.78	N/A	0.00	2,313.70
CEP-527A	08/13/15	2,357.48	45.95	N/A	0.00	2,311.53
CEP-527A	11/09/15	2,357.48	45.29	N/A	0.00	2,312.19
CEP-527A	02/25/16	2,357.48	45.38	N/A	0.00	2,312.10
CEP-527A (3)	05/26/16	2,357.48	NM	NM	NM	NM
CEP-527A	06/28/16	2,357.48	45.45	N/A	0.00	2,312.03
CEP-528A	06/27/07	2,359.78	46.06	N/A	0.00	2,313.72
CEP-528A	07/02/07	2,359.78	46.04	N/A	0.00	2,313.74
CEP-528A	08/01/07	2,359.78	45.61	N/A	0.00	2,314.17
CEP-528A	01/03/08	2,359.78	45.89	N/A	0.00	2,313.89
CEP-528A	02/26/08	2,359.78	45.99	N/A	0.00	2,313.79
CEP-528A	05/27/08	2,359.78	46.57	N/A	0.00	2,313.21
CEP-528A	08/26/08	2,359.78	46.47	N/A	0.00	2,313.31
CEP-528A	11/17/08	2,359.78	46.63	N/A	0.00	2,313.15
CEP-528A	02/17/09	2,359.78	46.47	N/A	0.00	2,313.31
CEP-528A	05/27/09	2,359.78	46.54	N/A	0.00	2,313.24
CEP-528A	08/17/09	2,359.78	47.14	N/A	0.00	2,312.64
CEP-528A	11/24/09	2,359.78	47.36	N/A	0.00	2,312.42
CEP-528A	02/16/10	2,359.78	47.44	N/A	0.00	2,312.34
CEP-528A	05/26/10	2,359.78	47.52	N/A	0.00	2,312.26
CEP-528A	08/03/10	2,359.78	47.52	N/A	0.00	2,312.26
CEP-528A	11/23/10	2,359.78	47.36	N/A	0.00	2,312.42
CEP-528A	02/14/11	2,359.78	47.10	N/A	0.00	2,312.68
CEP-528A	05/25/11	2,359.78	47.51	N/A	0.00	2,312.27
CEP-528A	08/29/11	2,359.78	47.48	N/A	0.00	2,312.30
CEP-528A	11/30/11	2,359.78	47.83	N/A	0.00	2,311.95
CEP-528A	02/28/12	2,359.78	47.77	N/A	0.00	2,312.01
CEP-528A	05/23/12	2,359.78	48.12	N/A	0.00	2,311.66
CEP-528A	08/28/12	2,359.78	48.14	N/A	0.00	2,311.64
CEP-528A	11/19/12	2,359.78	48.45	N/A	0.00	2,311.33
CEP-528A	02/27/13	2,359.78	48.56	N/A	0.00	2,311.22
CEP-528A	05/29/13	2,359.78	48.72	N/A	0.00	2,311.06
CEP-528A	08/14/13	2,359.78	48.75	N/A	0.00	2,311.03
CEP-528A	11/20/13	2,359.78	48.94	N/A	0.00	2,310.84

TABLE 1
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Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-528A	02/27/14	2,359.78	48.94	N/A	0.00	2,310.84
CEP-528A	05/28/14	2,359.78	48.84	N/A	0.00	2,310.94
CEP-528A	08/13/14	2,359.78	48.61	N/A	0.00	2,311.17
CEP-528A	11/12/14	2,359.78	48.38	N/A	0.00	2,311.40
CEP-528A	02/25/15	2,359.78	48.14	N/A	0.00	2,311.64
CEP-528A	05/27/15	2,359.78	48.44	N/A	0.00	2,311.34
CEP-528A	08/12/15	2,359.78	48.80	N/A	0.00	2,310.98
CEP-528A	11/04/15	2,359.78	48.75	N/A	0.00	2,311.03
CEP-528A	02/25/16	2,359.78	53.00	N/A	0.00	2,306.78
CEP-528A	05/24/16	2,359.78	48.81	N/A	0.00	2,310.97
CEP-528A	06/21/16	2,359.78	48.87	N/A	0.00	2,310.91
CEP-528A	06/29/16	2,359.78	48.81	N/A	0.00	2,310.97
HQUST-523A	06/27/07	2,382.85	63.32	N/A	0.00	2,319.53
HQUST-523A	08/01/07	2,382.85	63.41	N/A	0.00	2,319.44
HQUST-523A	11/14/07	2,382.85	63.94	63.21	0.73	2,319.49
HQUST-523A	12/21/07	2,382.85	63.42	63.40	0.02	2,319.45
HQUST-523A	12/27/07	2,382.85	63.42	63.41	0.01	2,319.44
HQUST-523A	01/04/08	2,382.85	63.36	63.35	0.01	2,319.50
HQUST-523A	01/27/09	2,382.85	64.27	63.28	0.99	2,319.37
HQUST-523A (1)	01/28/09	2,382.85	64.14	63.20	0.94	2,319.46
HQUST-523A	04/29/09	2,382.85	64.10	63.35	0.75	2,319.35
HQUST-523A (2)	04/29/09	2,382.85	65.73	65.67	0.06	2,317.17
HQUST-523A (4)	07/29/09	2,382.85	62.96	N/A	0.00	2,319.89
HQUST-523A (4)	07/30/09	2,382.85	63.33	N/A	0.00	2,319.52
HQUST-523A (4)	07/31/09	2,382.85	63.38	N/A	0.00	2,319.47
HQUST-523A (4)	08/03/09	2,382.85	63.46	63.33	0.13	2,319.49
HQUST-523A (4)	08/19/03	2,382.85	63.80	63.33	0.47	2,319.43
HQUST-523A (4)	10/13/09	2,382.85	63.57	63.32	0.25	2,319.48
HQUST-523A (4)	10/14/09	2,382.85	63.81	63.31	0.50	2,319.44
HQUST-523A (4)	11/10/09	2,382.85	63.27	63.24	0.03	2,319.60
HQUST-523A (4)	11/13/09	2,382.85	63.90	63.45	0.45	2,319.31
HQUST-523A (4)	11/16/09	2,382.85	64.05	63.41	0.64	2,319.31
HQUST-523A (4)	11/18/09	2,382.85	64.14	63.41	0.73	2,319.29
HQUST-523A (4)	11/20/09	2,382.85	64.14	63.38	0.76	2,319.32
HQUST-523A (4)	11/23/09	2,382.85	64.13	63.29	0.84	2,319.39
HQUST-523A (4)	11/24/09	2,382.85	64.27	63.41	0.86	2,319.27
HQUST-523A (4)	11/27/09	2,382.85	64.18	63.32	0.86	2,319.36
HQUST-523A (4)	11/30/09	2,382.85	64.20	63.30	0.90	2,319.37
HQUST-523A (4)	12/02/09	2,382.85	64.31	63.32	0.99	2,319.33
HQUST-523A (4)	12/03/09	2,382.85	63.86	63.50	0.36	2,319.28
HQUST-523A (4)	12/04/09	2,382.85	64.01	63.50	0.51	2,319.25
HQUST-523A (4)	12/07/09	2,382.85	63.64	63.40	0.24	2,319.40
HQUST-523A (4)	10/05/10	2,382.85	64.10	0.00	0.00	2,318.75
HQUST-523A	05/26/10	2,382.85	63.85	63.65	0.20	2,319.16
HQUST-523A (4)	08/16/10	2,382.85	63.20	N/A	0.00	2,319.65
HQUST-523A (4)	08/26/10	2,382.85	63.20	N/A	0.00	2,319.65
HQUST-523A (4)	08/27/10	2,382.85	63.24	N/A	0.00	2,319.61
HQUST-523A	11/10/10	2,382.85	62.75	62.73	0.02	2,320.12
HQUST-523A	11/12/10	2,382.85	61.74	61.72	0.02	2,321.13
HQUST-523A	11/15/10	2,382.85	62.71	N/A	0.00	2,320.14
HQUST-523A	11/17/10	2,382.85	62.77	N/A	0.00	2,320.08

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Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-523A	11/23/10	2,382.85	61.88	N/A	0.00	2,320.97
HQUST-523A (4)	02/24/11	2,382.85	63.38	63.11	0.27	2,319.69
HQUST-523A (4)	03/03/11	2,382.85	63.31	63.11	0.20	2,319.70
HQUST-523A (4)	03/11/11	2,382.85	63.55	63.18	0.37	2,319.60
HQUST-523A (4)	03/18/11	2,382.85	63.62	63.15	0.47	2,319.61
HQUST-523A (4)	03/21/11	2,382.85	63.77	63.25	0.52	2,319.50
HQUST-523A (4)	05/26/11	2,382.85	63.42	63.24	0.18	2,319.57
HQUST-523A (4)	09/14/11	2,382.85	64.00	63.90	0.10	2,318.93
HQUST-523A (4)	09/29/11	2,382.85	64.59	63.83	0.76	2,318.87
HQUST-523A (4)	10/17/11	2,382.85	64.42	64.20	0.22	2,318.61
HQUST-523A	11/29/11	2,382.85	64.90	64.03	0.87	2,318.65
HQUST-523A (4) (5)	12/06/11	2,382.85	64.83	63.91	0.92	2,318.76
HQUST-523A (4)	05/10/12	2,382.85	64.42	63.91	0.51	2,318.84
HQUST-523A (6)	05/23/12	2,382.85	64.40	N/A	0.00	2,318.45
HQUST-523A (4) (6)	05/25/12	2,382.85	64.39	N/A	0.00	2,318.46
HQUST-523A (4)	06/01/12	2,382.85	64.49	N/A	0.00	2,318.36
HQUST-523A (4)	06/08/12	2,382.85	64.42	N/A	0.00	2,318.43
HQUST-523A (4)	06/15/12	2,382.85	64.41	N/A	0.00	2,318.44
HQUST-523A (7)	08/10/12	2,382.85	64.38	N/A	0.00	2,318.47
HQUST-523A	08/28/12	2,382.85	NM	NM	NM	NM
HQUST-523A (7)	09/05/12	2,382.85	64.42	N/A	0.00	2,318.43
HQUST-523A (7)	09/14/12	2,382.85	64.39	N/A	0.00	2,318.46
HQUST-523A (7)	09/24/12	2,382.85	64.39	N/A	0.00	2,318.46
HQUST-523A (7)	10/08/12	2,382.85	64.43	64.41	0.02	2,318.44
HQUST-523A (7)	10/22/12	2,382.85	64.41	N/A	0.00	2,318.44
HQUST-523A (7)	11/06/12	2,382.85	64.54	64.38	0.16	2,318.45
HQUST-523A	11/19/12	2,383.85	NM	NM	NM	NM
HQUST-523A	02/27/13	2,383.85	NM	NM	NM	NM
HQUST-523A	05/29/13	2,383.85	NM	NM	NM	NM
HQUST-523A	08/14/13	2,383.85	NM	NM	NM	NM
HQUST-523A	11/20/13	2,383.85	NM	NM	NM	NM
HQUST-523A	02/26/14	2,383.85	NM	NM	NM	NM
HQUST-523A	05/28/14	2,383.85	NM	NM	NM	NM
HQUST-523A	08/13/14	2,383.85	NM	NM	NM	NM
HQUST-523A	11/12/14	2,383.85	NM	NM	NM	NM
HQUST-523A	02/26/15	2,383.85	NM	NM	NM	NM
HQUST-523A	05/27/15	2,383.85	NM	NM	NM	NM
HQUST-523A	08/13/15	2,383.85	NM	NM	NM	NM
HQUST-523A	11/09/15	2,383.85	65.15	N/A	0.00	2,318.70
HQUST-523A	02/25/16	2,383.85	65.10	N/A	0.00	2,318.75
HQUST-523A	05/26/16	2,383.85	65.16	N/A	0.00	2,318.69
HQUST-523A	06/24/16	2,383.85	65.10	N/A	0.00	2,318.75
HQUST-523A	06/29/16	2,383.85	65.20	N/A	0.00	2,318.65
HQUST-524A	06/27/07	2,382.21	62.93	62.68	0.25	2,319.48
HQUST-524A	08/17/07	2,382.21	63.20	62.67	0.53	2,319.43
HQUST-524A	08/21/07	2,382.21	63.29	62.61	0.68	2,319.46
HQUST-524A	08/30/07	2,382.21	63.09	62.77	0.32	2,319.38
HQUST-524A	09/05/07	2,382.21	63.15	62.75	0.40	2,319.38
HQUST-524A	09/11/07	2,382.21	63.10	62.70	0.40	2,319.43
HQUST-524A	09/17/07	2,382.21	63.16	62.72	0.44	2,319.40
HQUST-524A	09/20/07	2,382.21	63.12	62.72	0.40	2,319.41

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-524A	09/26/07	2,382.21	63.19	62.75	0.44	2,319.37
HQUST-524A	09/28/07	2,382.21	63.16	62.72	0.44	2,319.40
HQUST-524A	10/01/07	2,382.21	63.14	62.72	0.42	2,319.41
HQUST-524A	10/03/07	2,382.21	63.10	62.76	0.34	2,319.38
HQUST-524A	10/11/07	2,382.21	63.15	62.69	0.46	2,319.43
HQUST-524A	10/16/07	2,382.21	63.15	62.62	0.53	2,319.48
HQUST-524A	01/27/09	2,382.21	63.96	62.62	1.34	2,319.32
HQUST-524A (1)	01/27/09	2,382.21	63.91	62.57	1.34	2,319.37
HQUST-524A	01/28/09	2,382.21	63.88	62.56	1.32	2,319.39
HQUST-524A (1)	01/28/09	2,382.21	63.71	62.49	1.22	2,319.48
HQUST-524A	04/29/09	2,382.21	63.96	62.82	1.14	2,319.16
HQUST-524A (2)	04/29/09	2,382.21	63.14	63.07	0.07	2,319.13
HQUST-524A (4)	07/09/09	2,382.21	62.12	N/A	0.00	2,320.09
HQUST-524A (4)	07/30/09	2,382.21	62.45	N/A	0.00	2,319.76
HQUST-524A (4)	07/31/09	2,382.21	62.52	N/A	0.00	2,319.69
HQUST-524A (4)	08/03/09	2,382.21	62.50	N/A	0.00	2,319.71
HQUST-524A (4)	08/19/03	2,382.21	62.60	62.53	0.07	2,319.67
HQUST-524A (4)	10/13/09	2,382.21	62.49	N/A	0.00	2,319.72
HQUST-524A (4)	11/11/09	2,382.21	62.39	N/A	0.00	2,319.82
HQUST-524A (4)	11/13/09	2,382.21	62.70	N/A	0.00	2,319.51
HQUST-524A (4)	11/16/09	2,382.21	62.66	N/A	0.00	2,319.55
HQUST-524A (4)	11/18/09	2,382.21	62.70	N/A	0.00	2,319.51
HQUST-524A (4)	11/20/09	2,382.21	62.67	N/A	0.00	2,319.54
HQUST-524A (4)	11/23/09	2,382.21	62.59	N/A	0.00	2,319.62
HQUST-524A (4)	11/24/09	2,382.21	62.71	N/A	0.00	2,319.50
HQUST-524A (4)	11/27/09	2,382.21	62.63	N/A	0.00	2,319.58
HQUST-524A (4)	11/30/09	2,382.21	62.60	N/A	0.00	2,319.61
HQUST-524A (4)	12/02/09	2,382.21	62.62	N/A	0.00	2,319.59
HQUST-524A (4)	12/03/09	2,382.21	62.72	N/A	0.00	2,319.49
HQUST-524A (4)	12/04/09	2,382.21	62.72	N/A	0.00	2,319.49
HQUST-524A (4)	12/07/09	2,382.21	62.63	N/A	0.00	2,319.58
HQUST-524A (4)	12/10/09	2,382.21	62.69	N/A	0.00	2,319.52
HQUST-524A (4)	12/16/09	2,382.21	62.69	N/A	0.00	2,319.52
HQUST-524A (4)	12/21/09	2,382.21	62.86	N/A	0.00	2,319.35
HQUST-524A (4)	12/22/09	2,382.21	62.82	N/A	0.00	2,319.39
HQUST-524A	02/16/10	2,382.21	62.71	62.66	0.05	2,319.54
HQUST-524A (4)	04/14/10	2,382.21	63.18	62.85	0.33	2,319.29
HQUST-524A	05/26/10	2,382.21	63.53	62.67	0.86	2,319.37
HQUST-524A (4)	08/16/10	2,382.21	62.60	62.30	0.30	2,319.85
HQUST-524A (4)	08/26/10	2,382.21	62.39	62.31	0.08	2,319.88
HQUST-524A (4)	08/27/10	2,382.21	62.40	62.31	0.09	2,319.88
HQUST-524A (4)	11/01/10	2,382.21	61.90	N/A	0.00	2,320.31
HQUST-524A (4)	11/10/10	2,382.21	61.90	N/A	0.00	2,320.31
HQUST-524A (4)	11/12/10	2,382.21	61.88	N/A	0.00	2,320.33
HQUST-524A (4)	11/15/10	2,382.21	61.87	N/A	0.00	2,320.34
HQUST-524A (4)	11/17/10	2,382.21	62.00	N/A	0.00	2,320.21
HQUST-524A (4)	11/23/10	2,382.21	62.74	N/A	0.00	2,319.47
HQUST-524A (4)	02/24/11	2,382.21	62.25	N/A	0.00	2,319.96
HQUST-524A (4)	03/03/11	2,382.21	62.25	N/A	0.00	2,319.96
HQUST-524A (4)	03/11/11	2,382.21	62.25	N/A	0.00	2,319.96
HQUST-524A (4)	03/18/11	2,382.21	62.25	N/A	0.00	2,319.96
HQUST-524A (4)	03/21/11	2,382.21	62.25	N/A	0.00	2,319.96

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-524A (4)	03/25/11	2,382.21	62.25	N/A	0.00	2,319.96
HQUST-524A (4)	05/26/11	2,382.21	62.52	N/A	0.00	2,319.69
HQUST-524A (4)	10/20/11	2,382.21	63.20	N/A	0.00	2,319.01
HQUST-524A	11/29/11	2,382.21	63.31	N/A	0.00	2,318.90
HQUST-524A (4) (5)	12/06/11	2,382.21	63.40	63.22	0.00	2,318.81
HQUST-524A (4)	12/21/06	2,382.21	63.33	63.30	0.00	2,318.88
HQUST-524A (4)	01/24/12	2,382.21	63.50	63.25	0.00	2,318.71
HQUST-524A (4)	02/21/12	2,382.21	64.40	N/A	0.00	2,317.81
HQUST-524A (4)	05/10/12	2,382.21	63.54	N/A	0.00	2,318.67
HQUST-524A (6)	05/23/12	2,382.21	63.55	63.48	0.07	2,318.72
HQUST-524A (4) (6)	05/25/12	2,382.21	63.45	N/A	0.00	2,318.76
HQUST-524A (4)	06/01/12	2,382.21	63.53	63.48	0.05	2,318.72
HQUST-524A (4)	06/08/12	2,382.21	63.52	63.48	0.04	2,318.72
HQUST-524A (4)	06/15/12	2,382.21	63.52	63.47	0.05	2,318.73
HQUST-524A	08/28/12	2,381.21	NM	NM	NM	NM
HQUST-524A	11/19/12	2,381.21	NM	NM	NM	NM
HQUST-524A	02/27/13	2,381.21	NM	NM	NM	NM
HQUST-524A	05/29/13	2,381.21	NM	NM	NM	NM
HQUST-524A	08/14/13	2,381.21	NM	NM	NM	NM
HQUST-524A	11/20/13	2,381.21	NM	NM	NM	NM
HQUST-524A	02/26/14	2,381.21	NM	NM	NM	NM
HQUST-524A	05/28/14	2,381.21	NM	NM	NM	NM
HQUST-524A	08/13/14	2,381.21	NM	NM	NM	NM
HQUST-524A	11/12/14	2,381.21	NM	NM	NM	NM
HQUST-524A	02/26/15	2,381.21	NM	NM	NM	NM
HQUST-524A	05/27/15	2,381.21	NM	NM	NM	NM
HQUST-524A	08/13/15	2,381.21	NM	NM	NM	NM
HQUST-524A	11/09/15	2,381.21	62.59	N/A	0.00	2,318.62
HQUST-524A	02/25/16	2,381.21	65.34	N/A	0.00	2,315.87
HQUST-524A	06/02/16	2,381.21	64.23	N/A	0.00	2,316.98
HQUST-524A	06/22/16	2,381.21	64.21	N/A	0.00	2,317.00
HQUST-524A	06/29/16	2,381.21	64.29	N/A	0.00	2,316.92
HQUST-525A	06/26/07	2,391.50	71.74	N/A	0.00	2,319.76
HQUST-525A	08/01/07	2,391.50	71.78	N/A	0.00	2,319.66
HQUST-525A	11/13/07	2,391.50	71.83	N/A	0.00	2,319.67
HQUST-525A	02/26/08	2,391.50	71.82	N/A	0.00	2,319.68
HQUST-525A	05/27/08	2,391.50	71.92	N/A	0.00	2,319.58
HQUST-525A	08/26/08	2,391.50	71.79	N/A	0.00	2,319.71
HQUST-525A	11/17/08	2,391.50	71.63	N/A	0.00	2,319.87
HQUST-525A	02/17/09	2,391.50	71.95	N/A	0.00	2,319.55
HQUST-525A	05/27/09	2,391.50	71.76	N/A	0.00	2,319.74
HQUST-525A	08/17/09	2,391.50	72.11	N/A	0.00	2,319.39
HQUST-525A	11/24/09	2,391.50	72.15	N/A	0.00	2,319.35
HQUST-525A	02/16/10	2,391.50	72.02	N/A	0.00	2,319.48
HQUST-525A	05/26/10	2,391.50	72.23	N/A	0.00	2,319.27
HQUST-525A	08/30/10	2,391.50	71.59	N/A	0.00	2,319.91
HQUST-525A	11/23/10	2,391.50	71.23	N/A	0.00	2,320.27
HQUST-525A	02/14/11	2,391.50	71.85	N/A	0.00	2,319.65
HQUST-525A	05/25/11	2,391.50	72.49	N/A	0.00	2,319.01
HQUST-525A	08/29/11	2,391.50	72.74	N/A	0.00	2,318.76
HQUST-525A	11/30/11	2,391.50	72.88	N/A	0.00	2,318.62

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SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-525A	02/28/12	2,391.50	73.03	N/A	0.00	2,318.47
HQUST-525A	05/23/12	2,391.50	73.14	N/A	0.00	2,318.36
HQUST-525A	08/28/12	2,391.50	73.19	N/A	0.00	2,318.31
HQUST-525A	11/19/12	2,391.50	73.28	N/A	0.00	2,318.22
HQUST-525A	02/27/13	2,391.50	73.38	N/A	0.00	2,318.12
HQUST-525A	05/29/13	2,391.50	73.47	N/A	0.00	2,318.03
HQUST-525A	08/14/13	2,391.50	73.57	N/A	0.00	2,317.93
HQUST-525A	11/20/13	2,391.50	73.67	N/A	0.00	2,317.83
HQUST-525A	02/27/14	2,391.50	73.81	N/A	0.00	2,317.69
HQUST-525A	05/29/14	2,391.50	73.89	N/A	0.00	2,317.61
HQUST-525A	08/13/14	2,391.50	73.95	N/A	0.00	2,317.55
HQUST-525A	11/12/14	2,391.50	73.97	N/A	0.00	2,317.53
HQUST-525A	02/26/15	2,391.50	74.00	N/A	0.00	2,317.50
HQUST-525A	05/27/15	2,391.50	73.81	N/A	0.00	2,317.69
HQUST-525A	08/12/15	2,391.50	73.92	N/A	0.00	2,317.58
HQUST-525A	11/09/15	2,391.50	73.84	N/A	0.00	2,317.66
HQUST-525A	02/24/16	2,391.50	72.73	N/A	0.00	2,318.77
HQUST-525A	05/24/16	2,391.50	74.71	N/A	0.00	2,316.79
HQUST-525A	06/21/16	2,391.50	73.71	N/A	0.00	2,317.79
HQUST-525A	06/29/16	2,391.50	73.86	N/A	0.00	2,317.64
HQUST-526A	06/25/07	2,379.57	60.42	N/A	0.00	2,319.15
HQUST-526A	08/13/07	2,379.57	60.55	N/A	0.00	2,319.02
HQUST-526A	11/14/07	2,379.57	60.46	N/A	0.00	2,319.11
HQUST-526A	02/28/08	2,379.57	60.40	N/A	0.00	2,319.17
HQUST-526A	05/27/08	2,379.57	60.61	N/A	0.00	2,318.96
HQUST-526A	08/27/08	2,379.57	60.50	N/A	0.00	2,319.07
HQUST-526A	11/17/08	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A	02/18/09	2,379.57	60.02	N/A	0.00	2,319.55
HQUST-526A	05/27/09	2,379.57	60.06	N/A	0.00	2,319.51
HQUST-526A	08/17/09	2,379.57	60.93	N/A	0.00	2,318.64
HQUST-526A	11/24/09	2,379.57	61.05	N/A	0.00	2,318.52
HQUST-526A	02/16/10	2,379.57	60.15	N/A	0.00	2,318.42
HQUST-526A	05/26/10	2,379.57	61.19	N/A	0.00	2,318.38
HQUST-526A	08/03/10	2,379.57	60.86	N/A	0.00	2,318.71
HQUST-526A (4)	11/10/10	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A (4)	11/12/10	2,379.57	60.30	N/A	0.00	2,319.27
HQUST-526A (4)	11/15/10	2,379.57	60.28	N/A	0.00	2,319.29
HQUST-526A (4)	11/17/10	2,379.57	60.34	N/A	0.00	2,319.23
HQUST-526A	11/23/10	2,379.57	60.39	N/A	0.00	2,319.18
HQUST-526A (4)	11/23/10	2,379.57	60.33	N/A	0.00	2,319.24
HQUST-526A (4)	01/07/11	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A (4)	01/14/11	2,379.57	60.31	N/A	0.00	2,319.26
HQUST-526A (4)	01/23/11	2,379.57	60.31	N/A	0.00	2,319.26
HQUST-526A	02/14/11	2,379.57	60.60	N/A	0.00	2,318.97
HQUST-526A (4)	02/18/11	2,379.57	60.65	N/A	0.00	2,319.92
HQUST-526A (4)	02/24/11	2,379.57	60.63	N/A	0.00	2,318.94
HQUST-526A (4)	03/03/11	2,379.57	60.68	N/A	0.00	2,318.89
HQUST-526A (4)	03/11/11	2,379.57	60.55	N/A	0.00	2,319.02
HQUST-526A (4)	03/18/11	2,379.57	60.84	N/A	0.00	2,318.73
HQUST-526A (4)	03/21/11	2,379.57	60.89	N/A	0.00	2,318.68
HQUST-526A (4)	03/25/11	2,379.57	60.89	N/A	0.00	2,318.68

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Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-526A (4)	05/06/11	2,379.57	61.12	N/A	0.00	2,318.45
HQUST-526A	05/25/11	2,379.57	61.22	N/A	0.00	2,318.35
HQUST-526A (4)	07/01/11	2,379.57	61.29	N/A	0.00	2,318.28
HQUST-526A (4)	07/26/11	2,379.57	61.41	N/A	0.00	2,318.16
HQUST-526A (4)	08/05/11	2,379.57	61.40	N/A	0.00	2,318.17
HQUST-526A (4)	08/12/11	2,379.57	61.39	N/A	0.00	2,318.18
HQUST-526A	08/29/11	2,379.57	61.55	N/A	0.00	2,318.02
HQUST-526A (4)	09/09/11	2,379.57	61.38	N/A	0.00	2,318.19
HQUST-526A (4)	10/17/11	2,379.57	61.49	N/A	0.00	2,318.08
HQUST-526A (4)	10/28/11	2,379.57	61.46	N/A	0.00	2,318.11
HQUST-526A (4)	11/28/11	2,379.57	61.70	N/A	0.00	2,317.87
HQUST-526A	11/29/11	2,379.57	61.69	N/A	0.00	2,317.88
HQUST-526A (4)	02/15/12	2,379.57	61.71	N/A	0.00	2,317.86
HQUST-526A	02/28/12	2,379.57	61.81	N/A	0.00	2,317.76
HQUST-526A (4)	03/14/12	2,379.57	61.89	N/A	0.00	2,317.68
HQUST-526A (4)	04/06/12	2,379.57	61.87	N/A	0.00	2,317.70
HQUST-526A (4)	05/04/12	2,379.57	61.90	N/A	0.00	2,317.67
HQUST-526A	05/23/12	2,379.57	61.92	N/A	0.00	2,317.65
HQUST-526A (4) (6)	05/25/12	2,379.57	61.94	N/A	0.00	2,317.63
HQUST-526A (4)	06/01/12	2,379.57	61.89	N/A	0.00	2,317.68
HQUST-526A (4)	06/08/12	2,379.57	61.89	N/A	0.00	2,317.68
HQUST-526A (4)	06/15/12	2,379.57	61.71	N/A	0.00	2,317.86
HQUST-526A	08/28/12	2,379.57	62.03	N/A	0.00	2,317.54
HQUST-526A	11/19/12	2,379.57	62.02	N/A	0.00	2,317.55
HQUST-526A	02/27/13	2,379.57	62.18	N/A	0.00	2,317.39
HQUST-526A	05/29/13	2,379.57	62.29	N/A	0.00	2,317.28
HQUST-526A	08/14/13	2,379.57	62.39	N/A	0.00	2,317.18
HQUST-526A	11/20/13	2,379.57	62.46	N/A	0.00	2,317.11
HQUST-526A	02/27/14	2,379.57	62.63	N/A	0.00	2,316.94
HQUST-526A	05/29/14	2,379.57	62.74	N/A	0.00	2,316.83
HQUST-526A	08/13/14	2,379.57	62.78	N/A	0.00	2,316.79
HQUST-526A (8)	10/03/14	2,379.57	62.68	N/A	0.00	2,316.89
HQUST-526A (8)	10/20/14	2,379.57	62.71	N/A	0.00	2,316.86
HQUST-526A	11/12/14	2,379.57	62.74	N/A	0.00	2,316.83
HQUST-526A	02/25/15	2,379.57	62.69	N/A	0.00	2,316.88
HQUST-526A	05/27/15	2,379.57	62.57	N/A	0.00	2,317.00
HQUST-526A	08/12/15	2,379.57	62.73	N/A	0.00	2,316.84
HQUST-526A	11/05/15	2,379.57	62.61	N/A	0.00	2,316.96
HQUST-526A	02/24/16	2,379.57	62.53	N/A	0.00	2,317.04
HQUST-526A	05/24/16	2,379.57	62.53	N/A	0.00	2,317.04
HQUST-526A	06/23/16	2,379.57	62.58	N/A	0.00	2,316.99
HQUST-526A	06/29/16	2,379.57	62.57	N/A	0.00	2,317.00
HQUST-531A	11/15/07	2,378.36	59.08	N/A	0.00	2,319.28
HQUST-531A	02/27/08	2,378.36	59.04	N/A	0.00	2,319.32
HQUST-531A	05/27/08	2,378.36	59.22	N/A	0.00	2,319.14
HQUST-531A	11/17/08	2,378.36	58.99	N/A	0.00	2,319.37
HQUST-531A	02/17/09	2,378.36	59.25	N/A	0.00	2,319.11
HQUST-531A	05/27/09	2,378.36	59.17	N/A	0.00	2,319.19
HQUST-531A	08/17/09	2,378.36	59.33	N/A	0.00	2,319.03
HQUST-531A	11/24/09	2,378.36	59.62	N/A	0.00	2,318.74
HQUST-531A	02/16/10	2,378.36	59.71	N/A	0.00	2,318.65

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-531A	05/26/10	2,378.36	59.79	N/A	0.00	2,318.57
HQUST-531A	08/30/10	2,378.36	59.45	N/A	0.00	2,318.91
HQUST-531A	11/23/10	2,378.36	58.97	N/A	0.00	2,319.39
HQUST-531A	02/14/11	2,378.36	59.15	N/A	0.00	2,319.21
HQUST-531A	05/25/11	2,378.36	59.84	N/A	0.00	2,318.52
HQUST-531A	08/29/11	2,378.36	60.05	N/A	0.00	2,318.31
HQUST-531A	11/29/11	2,378.36	60.18	N/A	0.00	2,318.18
HQUST-531A	02/28/12	2,378.36	60.35	N/A	0.00	2,318.01
HQUST-531A	05/23/12	2,378.36	60.43	N/A	0.00	2,317.93
HQUST-531A	08/28/12	2,378.36	60.41	N/A	0.00	2,317.95
HQUST-531A	11/19/12	2,378.36	61.51	N/A	0.00	2,316.85
HQUST-531A	02/28/13	2,378.36	60.70	N/A	0.00	2,317.66
HQUST-531A	05/30/13	2,378.36	60.82	N/A	0.00	2,317.54
HQUST-531A	08/15/13	2,378.36	60.90	N/A	0.00	2,317.46
HQUST-531A	11/21/13	2,378.36	60.91	N/A	0.00	2,317.45
HQUST-531A	02/26/14	2,378.36	60.08	N/A	0.00	2,318.28
HQUST-531A	05/28/14	2,378.36	61.19	N/A	0.00	2,317.17
HQUST-531A	08/14/14	2,378.36	61.07	N/A	0.00	2,317.29
HQUST-531A	11/13/14	2,378.36	61.15	N/A	0.00	2,317.21
HQUST-531A	02/26/15	2,378.36	61.25	N/A	0.00	2,317.11
HQUST-531A	05/28/15	2,378.36	61.02	N/A	0.00	2,317.34
HQUST-531A	08/13/15	2,378.36	62.10	N/A	0.00	2,316.26
HQUST-531A	11/04/15	2,378.36	61.24	N/A	0.00	2,317.12
HQUST-531A	02/24/16	2,378.36	61.14	N/A	0.00	2,317.22
HQUST-531A	05/24/16	2,378.36	61.09	N/A	0.00	2,317.27
HQUST-531A	06/21/16	2,378.36	61.09	N/A	0.00	2,317.27
HQUST-531A	06/28/16	2,378.36	61.14	N/A	0.00	2,317.22
HQUST-532A	11/15/07	2,382.75	62.35	N/A	0.00	2,320.40
HQUST-532A	02/28/08	2,382.75	63.15	N/A	0.00	2,319.60
HQUST-532A	05/27/08	2,382.75	63.20	N/A	0.00	2,319.55
HQUST-532A	08/28/08	2,382.75	63.24	N/A	0.00	2,319.51
HQUST-532A	02/17/09	2,382.75	63.35	N/A	0.00	2,319.40
HQUST-532A	05/27/09	2,382.75	63.55	N/A	0.00	2,319.20
HQUST-532A	08/17/09	2,382.75	63.51	N/A	0.00	2,319.24
HQUST-532A	11/24/09	2,382.75	63.69	N/A	0.00	2,319.06
HQUST-532A	02/16/10	2,382.75	63.75	N/A	0.00	2,319.00
HQUST-532A	05/26/10	2,382.75	63.80	N/A	0.00	2,318.95
HQUST-532A	08/30/10	2,382.75	63.41	N/A	0.00	2,319.34
HQUST-532A	11/23/10	2,382.75	62.98	N/A	0.00	2,319.77
HQUST-532A	02/14/11	2,382.75	63.24	N/A	0.00	2,319.51
HQUST-532A	05/25/11	2,382.75	63.96	N/A	0.00	2,318.79
HQUST-532A	08/30/11	2,382.75	64.14	N/A	0.00	2,318.61
HQUST-532A	11/29/11	2,382.75	64.28	N/A	0.00	2,318.47
HQUST-532A	02/28/12	2,382.75	64.42	N/A	0.00	2,318.33
HQUST-532A	05/23/12	2,382.75	64.54	N/A	0.00	2,318.21
HQUST-532A	08/28/12	2,382.75	64.53	N/A	0.00	2,318.22
HQUST-532A	11/19/12	2,382.75	64.60	N/A	0.00	2,318.15
HQUST-532A	02/27/13	2,382.75	64.73	N/A	0.00	2,318.02
HQUST-532A	05/29/13	2,382.75	64.85	N/A	0.00	2,317.90
HQUST-532A	08/14/13	2,382.75	64.95	N/A	0.00	2,317.80
HQUST-532A	11/20/13	2,382.75	65.05	N/A	0.00	2,317.70

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-532A	02/26/14	2,382.75	65.11	N/A	0.00	2,317.64
HQUST-532A	05/28/14	2,382.75	65.29	N/A	0.00	2,317.46
HQUST-532A	08/13/14	2,382.75	65.32	N/A	0.00	2,317.43
HQUST-532A	11/12/14	2,382.75	65.38	N/A	0.00	2,317.37
HQUST-532A	02/25/15	2,382.75	65.37	N/A	0.00	2,317.38
HQUST-532A	05/27/15	2,382.75	65.18	N/A	0.00	2,317.57
HQUST-532A	08/12/15	2,382.75	65.38	N/A	0.00	2,317.37
HQUST-532A	11/05/15	2,382.75	65.28	N/A	0.00	2,317.47
HQUST-532A	02/25/16	2,382.75	65.15	N/A	0.00	2,317.60
HQUST-532A	05/24/16	2,382.75	65.12	N/A	0.00	2,317.63
HQUST-532A	06/22/16	2,382.75	65.15	N/A	0.00	2,317.60
HQUST-532A	06/28/16	2,382.75	65.18	N/A	0.00	2,317.57
HQUST-533A	11/15/07	2,379.29	60.25	N/A	0.00	2,319.04
HQUST-533A	02/28/08	2,379.29	60.05	N/A	0.00	2,319.24
HQUST-533A	05/27/08	2,379.29	60.23	N/A	0.00	2,319.06
HQUST-533A	08/28/08	2,379.29	60.16	N/A	0.00	2,319.13
HQUST-533A	11/17/08	2,379.29	59.95	N/A	0.00	2,319.34
HQUST-533A	02/17/09	2,379.29	60.27	N/A	0.00	2,319.02
HQUST-533A	02/17/09	2,379.29	60.16	N/A	0.00	2,319.13
HQUST-533A	05/27/09	2,379.29	60.12	N/A	0.00	2,319.17
HQUST-533A	08/17/09	2,379.29	60.55	N/A	0.00	2,318.74
HQUST-533A	11/24/09	2,379.29	60.70	N/A	0.00	2,318.59
HQUST-533A	02/16/10	2,379.29	60.79	N/A	0.00	2,318.50
HQUST-533A	08/30/10	2,379.29	60.41	N/A	0.00	2,318.88
HQUST-533A	11/23/10	2,379.29	59.92	N/A	0.00	2,319.37
HQUST-533A	02/14/11	2,379.29	60.16	N/A	0.00	2,319.13
HQUST-533A	05/25/11	2,379.29	60.86	N/A	0.00	2,318.43
HQUST-533A	08/30/11	2,379.29	61.15	N/A	0.00	2,318.14
HQUST-533A	11/29/11	2,379.29	61.24	N/A	0.00	2,318.05
HQUST-533A	02/28/12	2,379.29	61.38	N/A	0.00	2,317.91
HQUST-533A	05/23/12	2,379.29	61.49	N/A	0.00	2,317.80
HQUST-533A	08/28/12	2,379.29	61.48	N/A	0.00	2,317.81
HQUST-533A	11/19/12	2,379.29	61.50	N/A	0.00	2,317.79
HQUST-533A	02/28/13	2,379.29	61.76	N/A	0.00	2,317.53
HQUST-533A	05/30/13	2,379.29	61.88	N/A	0.00	2,317.41
HQUST-533A	08/15/13	2,379.29	62.00	N/A	0.00	2,317.29
HQUST-533A	11/21/13	2,379.29	61.87	N/A	0.00	2,317.42
HQUST-533A	02/26/14	2,379.29	62.13	N/A	0.00	2,317.16
HQUST-533A	05/28/14	2,379.29	62.28	N/A	0.00	2,317.01
HQUST-533A	08/14/14	2,379.29	62.23	N/A	0.00	2,317.06
HQUST-533A	11/13/14	2,379.29	62.29	N/A	0.00	2,317.00
HQUST-533A	02/25/15	2,379.29	62.25	N/A	0.00	2,317.04
HQUST-533A	05/28/15	2,379.29	62.11	N/A	0.00	2,317.18
HQUST-533A	08/13/15	2,379.29	62.28	N/A	0.00	2,317.01
HQUST-533A	11/04/15	2,379.29	62.29	N/A	0.00	2,317.00
HQUST-533A	02/24/16	2,379.29	62.28	N/A	0.00	2,317.01
HQUST-533A	05/26/16	2,379.29	62.45	N/A	0.00	2,316.84
HQUST-533A	06/22/16	2,379.29	62.15	N/A	0.00	2,317.14
HQUST-533A	06/28/16	2,379.29	62.18	N/A	0.00	2,317.11
HQUST-547	11/22/10	2,389.95	70.44	N/A	0.00	2,319.51

TABLE 1
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Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-547 (4)	12/13/10	2,389.95	70.44	N/A	0.00	2,319.51
HQUST-547 (4)	01/07/11	2,389.95	70.38	N/A	0.00	2,319.57
HQUST-547 (4)	01/14/11	2,389.95	70.36	N/A	0.00	2,319.59
HQUST-547 (4)	01/23/11	2,389.95	70.41	N/A	0.00	2,319.54
HQUST-547 (4)	02/02/11	2,389.95	70.50	N/A	0.00	2,319.45
HQUST-547 (4)	02/11/11	2,389.95	70.66	N/A	0.00	2,319.29
HQUST-547	02/14/11	2,389.95	70.79	N/A	0.00	2,319.16
HQUST-547 (4)	02/18/11	2,389.95	70.77	N/A	0.00	2,319.18
HQUST-547 (4)	02/24/11	2,389.95	70.75	N/A	0.00	2,319.20
HQUST-547 (4)	03/03/11	2,389.95	70.81	N/A	0.00	2,319.14
HQUST-547 (4)	03/11/11	2,389.95	70.76	N/A	0.00	2,319.19
HQUST-547 (4)	03/21/11	2,389.95	70.97	N/A	0.00	2,318.98
HQUST-547 (4)	03/25/11	2,389.95	71.00	N/A	0.00	2,318.95
HQUST-547 (4)	05/06/11	2,389.95	71.20	N/A	0.00	2,318.75
HQUST-547	05/25/11	2,389.95	71.36	N/A	0.00	2,318.59
HQUST-547 (4)	07/26/11	2,389.95	71.51	N/A	0.00	2,318.44
HQUST-547 (4)	08/09/11	2,389.95	71.53	N/A	0.00	2,318.42
HQUST-547 (4)	08/19/11	2,389.95	71.54	N/A	0.00	2,318.41
HQUST-547	08/30/11	2,389.95	71.61	N/A	0.00	2,318.34
HQUST-547 (4)	09/09/11	2,389.95	71.54	N/A	0.00	2,318.41
HQUST-547 (4)	09/29/11	2,389.95	71.51	N/A	0.00	2,318.44
HQUST-547 (4)	10/20/11	2,389.95	71.65	N/A	0.00	2,318.30
HQUST-547 (4)	11/28/11	2,389.95	71.63	N/A	0.00	2,318.32
HQUST-547	11/30/11	2,389.95	71.72	N/A	0.00	2,318.23
HQUST-547 (4)	01/06/12	2,389.95	71.58	N/A	0.00	2,318.37
HQUST-547 (4)	02/15/12	2,389.95	71.60	N/A	0.00	2,318.35
HQUST-547	02/28/12	2,389.95	71.91	N/A	0.00	2,318.04
HQUST-547 (4)	03/14/12	2,389.95	71.79	N/A	0.00	2,318.16
HQUST-547 (4)	04/06/12	2,389.95	71.77	N/A	0.00	2,318.18
HQUST-547 (4)	04/17/12	2,389.95	71.60	N/A	0.00	2,318.35
HQUST-547 (4)	05/04/12	2,389.95	71.64	N/A	0.00	2,318.31
HQUST-547 (4)	05/23/12	2,389.95	72.03	N/A	0.00	2,317.92
HQUST-547 (4) (6)	05/25/12	2,389.95	71.39	N/A	0.00	2,318.56
HQUST-547 (4)	06/01/12	2,389.95	72.00	N/A	0.00	2,317.97
HQUST-547 (4)	06/08/12	2,389.95	72.05	N/A	0.00	2,317.90
HQUST-547 (4)	06/15/12	2,389.95	72.00	N/A	0.00	2,317.95
HQUST-547	08/28/12	2,389.95	72.09	N/A	0.00	2,317.86
HQUST-547	11/19/12	2,389.95	72.08	N/A	0.00	2,317.87
HQUST-547	02/28/13	2,389.95	72.38	N/A	0.00	2,317.57
HQUST-547	05/30/13	2,389.95	72.45	N/A	0.00	2,317.50
HQUST-547	08/15/13	2,389.95	72.50	N/A	0.00	2,317.45
HQUST-547	11/21/13	2,389.95	72.54	N/A	0.00	2,317.41
HQUST-547	02/27/14	2,389.95	72.78	N/A	0.00	2,317.17
HQUST-547	05/29/14	2,389.95	72.86	N/A	0.00	2,317.09
HQUST-547	08/14/14	2,389.95	72.83	N/A	0.00	2,317.12
HQUST-547	11/13/14	2,389.95	72.94	N/A	0.00	2,317.01
HQUST-547	02/26/15	2,389.95	72.99	N/A	0.00	2,316.96
HQUST-547	05/27/15	2,389.95	72.64	N/A	0.00	2,317.31
HQUST-547	08/13/15	2,389.95	72.77	N/A	0.00	2,317.18
HQUST-547	11/05/15	2,389.95	72.72	N/A	0.00	2,317.23
HQUST-547	02/24/16	2,389.95	72.65	N/A	0.00	2,317.30
HQUST-547	05/26/16	2,389.95	72.55	N/A	0.00	2,317.40

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-547	06/23/16	2,389.95	72.67	N/A	0.00	2,317.28
HQUST-547	06/29/16	2,389.95	72.65	N/A	0.00	2,317.30
HQUST-548	11/22/10	2,383.34	64.20	N/A	0.00	2,319.14
HQUST-548 (4)	12/13/10	2,383.34	64.10	N/A	0.00	2,319.24
HQUST-548 (4)	01/07/11	2,383.34	64.03	N/A	0.00	2,319.31
HQUST-548 (4)	01/14/11	2,383.34	63.98	N/A	0.00	2,319.36
HQUST-548 (4)	01/23/11	2,383.34	64.05	N/A	0.00	2,319.29
HQUST-548 (4)	02/02/11	2,383.34	64.16	N/A	0.00	2,319.18
HQUST-548	02/14/11	2,383.34	64.32	N/A	0.00	2,319.02
HQUST-548 (4)	02/18/11	2,383.34	64.43	N/A	0.00	2,318.91
HQUST-548 (4)	02/24/11	2,383.34	64.41	N/A	0.00	2,318.93
HQUST-548 (4)	03/03/11	2,383.34	64.48	N/A	0.00	2,318.86
HQUST-548 (4)	03/11/11	2,383.34	66.40	N/A	0.00	2,316.94
HQUST-548 (4)	03/21/11	2,383.34	64.66	N/A	0.00	2,318.68
HQUST-548 (4)	03/25/11	2,383.34	64.65	N/A	0.00	2,318.69
HQUST-548 (4)	05/06/11	2,383.34	64.94	N/A	0.00	2,318.40
HQUST-548	05/25/11	2,383.34	64.99	N/A	0.00	2,318.35
HQUST-548 (4)	06/24/11	2,383.34	65.15	N/A	0.00	2,318.19
HQUST-548 (4)	07/26/11	2,383.34	65.16	N/A	0.00	2,318.18
HQUST-548 (4)	08/09/11	2,383.34	65.18	N/A	0.00	2,318.16
HQUST-548 (4)	08/19/11	2,383.34	65.20	N/A	0.00	2,318.14
HQUST-548	08/30/11	2,383.34	65.23	N/A	0.00	2,318.11
HQUST-548 (4)	09/09/11	2,383.34	65.19	N/A	0.00	2,318.15
HQUST-548 (4)	09/29/11	2,383.34	65.17	N/A	0.00	2,318.17
HQUST-548 (4)	10/20/11	2,383.34	65.30	N/A	0.00	2,318.04
HQUST-548 (4)	11/28/11	2,383.34	65.40	N/A	0.00	2,317.94
HQUST-548	11/29/11	2,383.34	65.43	N/A	0.00	2,317.91
HQUST-548 (4)	01/06/12	2,383.34	65.37	N/A	0.00	2,317.97
HQUST-548 (4)	02/15/12	2,383.34	65.40	N/A	0.00	2,317.94
HQUST-548	02/28/12	2,383.34	65.55	N/A	0.00	2,317.79
HQUST-548 (4)	03/14/12	2,383.34	65.62	N/A	0.00	2,317.72
HQUST-548 (4)	04/06/12	2,383.34	65.60	N/A	0.00	2,317.74
HQUST-548 (4)	04/17/12	2,383.34	65.39	N/A	0.00	2,317.95
HQUST-548 (4)	05/04/12	2,383.34	65.42	N/A	0.00	2,317.92
HQUST-548 (4)	05/23/12	2,383.34	65.67	N/A	0.00	2,317.67
HQUST-548 (4) (6)	05/25/12	2,383.34	65.61	N/A	0.00	2,317.73
HQUST-548 (4)	06/01/12	2,383.34	65.64	N/A	0.00	2,317.70
HQUST-548 (4)	06/08/12	2,383.34	65.70	N/A	0.00	2,317.64
HQUST-548 (4)	06/15/12	2,383.34	65.65	N/A	0.00	2,317.69
HQUST-548	08/28/12	2,383.34	65.73	N/A	0.00	2,317.61
HQUST-548	11/19/12	2,383.34	65.72	N/A	0.00	2,317.62
HQUST-548	02/28/13	2,383.34	65.95	N/A	0.00	2,317.39
HQUST-548	05/30/13	2,383.34	66.07	N/A	0.00	2,317.27
HQUST-548	08/15/13	2,383.34	66.19	N/A	0.00	2,317.15
HQUST-548	11/21/13	2,383.34	66.14	N/A	0.00	2,317.20
HQUST-548	02/27/14	2,383.34	66.39	N/A	0.00	2,316.95
HQUST-548	05/29/14	2,383.34	66.49	N/A	0.00	2,316.85
HQUST-548	08/14/14	2,383.34	66.48	N/A	0.00	2,316.86
HQUST-548	11/13/14	2,383.34	66.55	N/A	0.00	2,316.79
HQUST-548	02/26/15	2,383.34	66.29	N/A	0.00	2,317.05
HQUST-548	05/27/15	2,383.34	66.31	N/A	0.00	2,317.03

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-548	08/13/15	2,383.34	66.40	N/A	0.00	2,316.94
HQUST-548	11/05/15	2,383.34	66.36	N/A	0.00	2,316.98
HQUST-548	02/24/16	2,383.34	56.30	N/A	0.00	2,327.04
HQUST-548	05/24/16	2,383.34	56.45	N/A	0.00	2,326.89
HQUST-548	06/23/16	2,383.34	66.31	N/A	0.00	2,317.03
HQUST-548	06/29/16	2,383.34	66.38	N/A	0.00	2,316.96

Notes:

TOC = Top of casing.
DTW = Depth to water.
DTP = Depth to product.
NM = Not measured.
(1) = Light non-aqueous phase liquids (LNAPL) bail-down test conducted at well.
(2) = Mobile vaccuum extraction event conducted at well.
(3) = An attempt was made to record with water level, but roots in the well prevented an accurate reading.
(4) = Data collected by Conestoga-Rovers & Associated (CRA) operator on these dates.
(5) = Data collected after the November 2011 ISCO injection event.
(6) = Data collected after the May 2012 ISCO injection event.
(7) = Data collected by Cardno on these dates.
(8) = Data collected for the sodium persulfate ISCO injection event.
* = Data prior to August 2012 was collected and prepared by Conestoga-Rovers and Associates. From August 2012 forward data provided by Cardno.
** = Groundwater elevation data prior to August 2012 was provided by Conestoga-Rovers and Associates. From August 2012 forward, groundwater elevation calculated from the following equation: [Top of Casing Elevation - DTW] + [LPH Thickness x 0.8581]. All elevations are in feet above mean sea level.

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
CEP-518A [2]	01/31/07	**1,000**	560	100	450	NA	<1	<0.5
CEP-518A [2]	06/25/07	**270**	64	13	130	<2	<1	<0.5
CEP-518A [2]	06/25/07	**280**	56	12	110	<2	<1	<0.5
CEP-518A [2]	11/14/07	**350**	180	45	170	2.1	<1	<0.5
CEP-518A [2]	02/27/08	**300**	100	35	61	<2	<1	<0.5
CEP-518A [2]	05/28/08	**230**	110	22	58	<10	<5	<5
CEP-518A [2]	08/27/08	**330**	270	57	160	2.3	<1	<0.5
CEP-518A [2]	11/24/08	**2,000**	440	280	250	11.0	<1	<0.5
CEP-518A [2]	02/19/09	**780**	140	89	170	3.8	<1	<0.5
CEP-518A [2]	05/28/09	**180**	54	11	80	<2	<1	<0.5
CEP-518A [2]	09/01/09	**150**	130	28	70	<2	<1	<0.5
CEP-518A [2]	11/24/09	**95**	76	23	47	<2	<1	<0.5
CEP-518A [2]	02/16/10	**430**	42	88	24	<2	<1	<0.5
CEP-518A [2]	05/26/10 to 08/13/15 not sampled.							
CEP-518A	11/09/15	<1.0	1.6	385	607	<1.0	<0.50	<0.50
CEP-518A	02/25/16	<10	<10	334	531	<10	<5.0	<5.0
CEP-518A	05/26/16	<20	<20	419	580	<20	<10	<10
CEP-518A [7]	06/29/16	<4.0	<4.0	351	436	<4.0	<4.0	<6.0
CEP-519A[3]	01/31/07	**1,900**	**6,900**	640	5,600	3.5	<1	<0.5
CEP-519A[3]	06/25/07 to 02/27/14 not sampled.							
CEP-519A	05/29/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-519A	08/14/14	2.4	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-519A	11/13/14	2.9	1.7	1.0	6.8	<1.0	<0.50	<0.50
CEP-519A	02/25/15	3.7	16.9	67.5	811	<1.0	<0.50	<0.50
CEP-519A	05/28/15	1.2	1.5	3.6	19.8	<1.0	<0.50	<0.50
CEP-519A	08/13/15	<1.0	<1.0	9.0	184	<1.0	<0.50	<0.50
CEP-519A	11/05/15	<2.0	<2.0	<2.0	32.4	<2.0	<1.0	<1.0
CEP-519A	02/25/16	<2.0	<2.0	<2.0	4.5	<2.0	<1.0	<1.0
CEP-519A	05/24/16	<1.0	<1.0	<1.0	2.3	<1.0	<0.50	<0.50
CEP-519A	06/28/16	<1.0	<1.0	<1.0	5.5	<1.0	<0.50	<0.50
CEP-519A	06/28/16 DUP	<1.0	<1.0	<1.0	6.7	<1.0	<0.50	<0.50
CEP-520A	01/31/07	1.3	<3	<2	<3	9.8	<1	<0.5
CEP-520A	01/31/07	1.4	<3	<2	<3	10.0	<1	<0.5
CEP-520A	06/26/07	3.9	<3	<2	<3	13.0	<1	<0.5
CEP-520A	11/14/07	3.4	<3	<2	<3	12.0	<1	<0.5
CEP-520A	11/14/07	3.4	<3	<2	<3	13.0	<1	<0.5
CEP-520A	02/27/08	1.9	<3	<2	<3	11.0	<1	<0.5
CEP-520A	05/29/08	3.2	<3	<2	3.9	7.4	<1	<0.5
CEP-520A	08/28/28	0.7	<2	<2	<3	7.4	<1	<0.5
CEP-520A	11/20/08	1.9	<2	<2	<3	9.6	<1	<0.5
CEP-520A	02/18/09	**14**	28	4.5	22	8.4	<1	<0.5
CEP-520A	05/27/09	0.7	<2	<2	<3	6.3	<1	<0.5

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
CEP-520A	08/19/09	1.3	<2	<2	<3	88.0	<1	<0.5
CEP-520A	11/24/09	0.7	<2	<2	<3	6.3	<1	<0.5
CEP-520A	02/16/10	<0.5	<2	<2	<3	22	<1	<0.5
CEP-520A	05/26/10	<0.5	<2	<2	<3	4.7	<0.5	<0.5
CEP-520A	08/30/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-520A	11/23/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-520A	02/14/11	<0.5	<2	<2	<1	9.19	<0.5	<0.5
CEP-520A	05/25/11	<0.5	<2	<2	<1	14.1	1	<0.5
CEP-520A	08/29/11	<0.5	<2	<2	<1	3.6	<0.5	<0.5
CEP-520A	11/30/11	<0.5	<2	<2	<1	4.7	<0.5	<0.5
CEP-520A	02/29/12	<0.5	<2	<2	<1	3.6	<0.5	<0.5
CEP-520A	05/23/12	<0.5	<2	<2	<1	10.1	<0.5	<0.5
CEP-520A	05/23/12 DUP	<0.5	<2	<2	<1	11.1	<0.5	<0.5
CEP-520A	08/29/12	<1	<1	<1	<2	1.9	<1	<1
CEP-520A	11/19/12	<1	<1	<1	<2	5.6	<1	<1
CEP-520A	02/27/13	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0
CEP-520A	05/29/13	<0.50	<0.50	<0.50	<1.5	0.79	<0.50	<0.50
CEP-520A	08/14/13	<1.0	<1.0	<1.0	<2.0	0.85 J	<1.0	<1.0
CEP-520A	11/20/13	<1.0	<1.0	<1.0	<2.0	1.8	<0.50	<0.50
CEP-520A	02/26/14	<1.0	<1.0	<1.0	<2.0	1.8	<0.50	<0.50
CEP-520A	05/28/14	<1.0	<1.0	<1.0	<2.0	2.6	<0.50	<0.50
CEP-520A	08/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	11/12/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	02/26/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	05/27/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	08/12/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	11/04/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	02/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	05/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-520A	06/28/16	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<0.50
CEP-527A	07/02/07	<0.5	<3	<2	<3	<2	<1	<0.5
CEP-527A	05/27/08	<1	<3	<2	<3	<2	<1	<1
CEP-527A	05/27/08	<1	<3	<2	<3	<2	<1	<1
CEP-527A	08/26/08	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	08/26/08	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	11/19/08	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	02/17/09	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	02/17/09	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	05/26/09	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	05/26/09	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	08/18/09	<0.5	<2	<2	<3	<2	<1	<0.5
CEP-527A	08/30/09	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-527A	11/23/09	<0.5	<2	<2	<1	<2	<0.5	<0.5

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
CEP-527A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-527A	06/02/11	<0.5	3.45	<2	<1	<2	<0.5	<0.5
CEP-527A	08/30/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-527A	11/30/11	<0.5	<2	<2	<1	<2	<0.5	<1
CEP-527A	02/28/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-527A	05/31/12	<0.5	3.42	<2	<1	<2	<0.5	<0.5
CEP-527A	08/29/12	<1	<1	<1	<2	1.4	<1	<1
CEP-527A	11/20/12	<1	3.2	<1	<2	1.5	<1	<1
CEP-527A	03/06/13	<1.0	2.8	<1.0	<3.0	1.5	<1.0	<1.0
CEP-527A	05/30/13	<0.50	<0.50	<0.50	<1.5	1.6	<0.50	<0.50
CEP-527A	08/15/13	<1.0	<1.0	<1.0	<2.0	1.8 a	<1.0	<1.0
CEP-527A	11/21/13	<1.0	<1.0	<1.0	<2.0	1.5	<0.50	<0.50
CEP-527A	02/26/14	<1.0	<1.0	<1.0	<2.0	1.6	<0.50	<0.50
CEP-527A	05/29/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	08/14/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	11/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	02/25/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	05/28/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	08/13/15	<5.0	<5.0	<5.0	<10	<5.0	<2.5	<2.5
CEP-527A	11/09/15	<1.0	12.9	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A	02/25/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-527A [6]	05/26/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CEP-527A [6]	06/29/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CEP-528A	07/02/07	<0.5	<3	<2	<3	9.7	<1	2
CEP-528A	05/27/08	<1	<3	<2	<3	<2	<1	1
CEP-528A	08/26/08	<0.5	<2	<2	<3	<2	<1	2
CEP-528A	11/19/08	<0.5	<2	<2	<3	<2	<1	3
CEP-528A	11/19/08	<0.5	<2	<2	<3	<2	<1	3
CEP-528A	02/17/09	<0.5	<2	<2	<3	<2	<1	3
CEP-528A	05/26/09	<0.5	<2	<2	<3	<2	<1	2
CEP-528A	08/18/09	<0.5	<2	<2	<3	<2	<1	2
CEP-528A	11/24/09	<0.5	<2	<2	<3	<2	<1	2
CEP-528A	02/16/10	<0.5	<2	<2	<3	<2	<1	2
CEP-528A	05/26/10	<0.5	<2	<2	<3	<2	<0.5	1
CEP-528A	08/30/10	<0.5	<2	<2	<1	<2	<0.5	<0.57
CEP-528A	11/23/10	<0.5	<2	<2	<1	<2	<0.5	1
CEP-528A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-528A	05/26/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-528A	08/30/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-528A	11/30/11	<0.5	<2	<2	<1	<2	<0.5	<1
CEP-528A	02/28/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-528A	05/23/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
CEP-528A	08/29/12	<1	<1	<1	<2	<1	<1	<1

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
CEP-528A	11/19/12	<1	<1	<1	<2	<1	<1	<1
CEP-528A	02/27/13	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0
CEP-528A	05/29/13	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50
CEP-528A	08/14/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
CEP-528A	11/20/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	02/27/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	05/28/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	05/28/14 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	08/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	08/13/14 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	11/12/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	02/25/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	0.54
CEP-528A	05/27/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	08/12/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	11/04/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	02/25/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	05/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
CEP-528A	06/29/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	2.3
HQUST-523A [4]	06/26/07	**1,900**	**1,100**	190	660	110.0	1	<0.5
HQUST-523A [4]	11/14/07 to 08/13/15 not sampled.							
HQUST-523A	11/09/15	<5.0	18.9	77.9	801	7.6	<2.5	<2.5
HQUST-523A	02/25/16	<40	<40	<40	193	<40	<20	<20
HQUST-523A	05/26/16	<5.0	7.7	119	506	<5.0	<2.5	<2.5
HQUST-523A [7]	06/29/16	<5.0	9.0	67.1	279	<5.0	<5.0	<7.5
HQUST-524A [4]	06/27/07 to 08/13/15 not sampled.							
HQUST-524A	11/09/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-524A	02/25/16	3.0	<1.0	2.2	5.4	<1.0	<0.50	<0.50
HQUST-524A	06/02/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-524A	06/29/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	06/26/07	<0.5	<3	<2	<3	<2	<1	<0.5
HQUST-525A	11/14/07	<0.5	<3	<2	<3	<2	<1	<0.5
HQUST-525A	02/26/08	<0.5	<3	<2	<3	<2	<1	<0.5
HQUST-525A	05/28/08	<1	<3	<2	6	<2	<1	<1
HQUST-525A	08/26/08	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	11/19/08	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	02/17/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	05/26/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	08/19/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	11/24/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	02/16/10	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-525A	05/26/10	<0.5	<2	<2	<3	<2	<0.5	<0.5

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-525A	08/30/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-525A	11/23/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-525A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-525A	05/26/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-525A	08/30/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-525A	11/30/11	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-525A	02/28/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-525A	05/24/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-525A	08/29/12	<1	<1	<1	<2	<1	<1	<1
HQUST-525A	11/19/12	<1	<1	<1	<2	<1	<1	<1
HQUST-525A	02/27/13	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0
HQUST-525A	05/29/13	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50
HQUST-525A	08/14/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
HQUST-525A	11/20/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	02/27/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	05/29/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	08/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	11/12/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	02/26/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	05/27/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	08/12/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	11/05/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	02/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	05/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-525A	06/29/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	06/25/07	**870**	<3	36	<3	80	2	<0.5
HQUST-526A	11/14/07	**2,600**	<3	39	<3	240	5	<0.5
HQUST-526A	02/28/08	**7**	<3	<2	<3	<2	<1	<0.5
HQUST-526A	05/29/08	**1,500**	<3	3	6	150	4	<0.5
HQUST-526A	08/27/08	**670**	<2	19	<3	82	1	<0.5
HQUST-526A	11/24/08	**19**	<2	<2	<3	2.6	<1	<0.5
HQUST-526A	02/18/09	**19**	<2	<2	<3	3.3	<1	<0.5
HQUST-526A	05/27/09	**1,000**	<2	<2	<3	190	3	<0.5
HQUST-526A	08/20/09	**1,000**	<2	<2	<3	180	2	<0.5
HQUST-526A	11/24/09	**250**	<2	<2	<3	53	<1	<0.5
HQUST-526A	02/16/10	**86**	<2	<2	<3	96	<1	<0.5
HQUST-526A	05/26/10	**320**	<2	<2	<3	180	1	<0.5
HQUST-526A	08/30/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-526A	11/23/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-526A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-526A	05/25/11	2	<2	<2	<1	48.5	<0.5	<0.5
HQUST-526A	08/30/11	**54**	<2	<2	<1	216	1.29	<0.5
HQUST-526A	11/29/11	**208**	<2	<2	<1	339	2.30	<1

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-526A	02/28/12	**577**	<2	<2	<1	358	2.80	<0.5
HQUST-526A	05/24/12	**656**	<2	<2	<1	320	<0.5	<0.5
HQUST-526A	08/29/12	**1,800**	<1	<1	<2	400	3.4	<1
HQUST-526A	11/20/12	**2,300**	<1	<1	<2	230	<20*	<1
HQUST-526A	02/27/13	**1,100**	<20	<20	<60	<20	<20	<20
HQUST-526A	02/27/13 DUP	**720**	<20	<20	<60	<20	<20	<20
HQUST-526A	05/29/13	**40**	<0.50	<0.50	<1.5	75	1.1	<0.50
HQUST-526A	05/29/13 DUP	**47**	<0.50	<0.50	<1.5	79	1.1	<0.50
HQUST-526A	08/14/13	**3,330**	<50	<50	<100	304	<50	<50
HQUST-526A	08/14/13 DUP	**3,210**	<50	<50	<100	295	<50	<50
HQUST-526A	11/20/13	**1,670**	<50	<50	<100	106	<25	<25
HQUST-526A	02/27/14	**3,120**	<50	<50	<100	175	<25	<25
HQUST-526A	05/29/14	**2,450**	<50	<50	<100	155	<25	<25
HQUST-526A	08/13/14	**3,080**	<50	<50	<100	240	<25	<25
HQUST-526A [5]	10/03/14	**4,400**	<50	<50	<100	290	<25	<25
HQUST-526A [5]	10/20/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	11/12/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	11/12/14 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	02/25/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	02/25/15 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	05/27/15	**1,920**	<25	<25	<50	180	<13	<13
HQUST-526A	08/12/15	<25	<25	<25	<50	<25	<13	<13
HQUST-526A	11/05/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A	02/24/16	1.8	<1.0	<1.0	<2.0	47.0	<0.50	<0.50
HQUST-526A	02/24/16 DUP	1.7	<1.0	<1.0	<2.0	42.0	<0.50	<0.50
HQUST-526A	05/24/16	<1.0	<1.0	<1.0	<2.0	6.2	<0.50	<0.50
HQUST-526A	06/29/16	2.9	<1.0	<1.0	<2.0	126	0.85	<0.50
HQUST-531A	11/15/07	**29**	11	<2	5	<2	<1	<0.5
HQUST-531A	02/27/08	1.4	<3	<2	<3	<2	<1	<0.5
HQUST-531A	05/28/08	2	3	<2	9	<2	<1	<0.5
HQUST-531A	08/27/08	**17**	4	<2	5	<2	<1	<0.5
HQUST-531A	11/20/08	**6.4**	<2	<2	<3	<2	<1	<0.5
HQUST-531A	02/18/09	3.2	<2	<2	<3	<2	<1	<0.5
HQUST-531A	05/27/09	1.2	<2	<2	<3	<2	<1	<0.5
HQUST-531A	08/19/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-531A	11/24/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-531A	02/16/10	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-531A	05/26/10	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-531A	08/30/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-531A	11/23/10	0.52	<2	<2	<1	<2	<0.5	<0.5
HQUST-531A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-531A	05/25/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-531A	08/29/11	<0.5	<2	<2	<1	<2	<0.5	<0.5

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-531A	11/29/11	<0.5	<2	<2	8	<2	<0.5	<1
HQUST-531A	02/29/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-531A	05/23/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-531A	08/29/12	<1	<1	<1	<2	<1	<1	<1
HQUST-531A	11/19/12	<1	<1	<1	<2	<1	<1	<1
HQUST-531A	02/28/13	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0
HQUST-531A	05/30/13	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50
HQUST-531A	08/15/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
HQUST-531A	11/21/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	02/26/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	05/28/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	08/14/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	11/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	02/26/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	05/28/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	08/13/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	11/04/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	02/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	05/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-531A	06/28/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	11/15/07	<0.5	<3	<2	<3	<2	<1	<0.5
HQUST-532A	02/28/08	<0.5	<3	<2	<3	<2	<1	<0.5
HQUST-532A	05/28/08	<1	<3	<2	11	<2	<1	<1
HQUST-532A	08/28/08	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	11/18/08	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	02/19/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	05/28/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	08/20/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	11/24/09	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	02/16/10	<0.5	<2	<2	<3	<2	<1	<0.5
HQUST-532A	05/26/10	<0.5	<2	<2	<3	<2	<0.5	<0.5
HQUST-532A	08/30/10	<0.5	<2	<2	<3	<2	<0.5	<0.5
HQUST-532A	11/23/10	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-532A	02/14/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-532A	05/25/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-532A	08/29/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-532A	11/29/11	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-532A	02/28/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-532A	05/23/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-532A	08/28/12	<1	<1	<1	<2	<1	<1	<1
HQUST-532A	08/28/12 DUP	<1	<1	<1	<2	<1	<1	<1
HQUST-532A	11/19/12	<1	<1	<1	<2	<1	<1	<1
HQUST-532A	11/19/12 DUP	<1	<1	<1	<2	<1	<1	<1

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-532A	02/27/13	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0
HQUST-532A	05/29/13	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50
HQUST-532A	08/14/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
HQUST-532A	11/20/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	02/26/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	02/26/14 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	05/28/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	08/13/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	11/12/14	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	02/25/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	05/27/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	05/27/15 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	08/12/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	08/12/15 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	11/05/15	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	02/25/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	05/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-532A	06/28/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-533A	11/15/07	**1,100**	9.3	<2	310	20	2.2	<0.5
HQUST-533A	02/28/08	**170**	<3	<2	62	16	1.8	<0.5
HQUST-533A	05/29/08	**80**	1.1	<0.5	190	29	1.9	<0.5
HQUST-533A	08/28/08	**87**	<2	<2	240	23	1.6	<0.5
HQUST-533A	11/20/08	**94**	<2	<2	60	24	2.1	<0.5
HQUST-533A	02/19/09	**87**	<2	<2	130	19	1.5	<0.5
HQUST-533A	05/28/09	**48**	<2	<2	210	24	1.3	<0.5
HQUST-533A	08/20/09	**19**	<2	<2	95	27	1.4	<0.5
HQUST-533A	02/16/09	**11**	<2	<2	53	16	<1.0	<0.5
HQUST-533A	02/16/09	**10**	<2	<2	55	14	<1.0	<0.5
HQUST-533A	05/26/10	**7.2**	<2	<2	31	11	0.77	<0.5
HQUST-533A	08/30/10	**10**	<2	<2	38.5	5.12	<0.5	<0.5
HQUST-533A	11/23/10	**272**	8.53	<2	234	6.92	0.64	<0.5
HQUST-533A	02/14/11	2.9	<2	<2	1.98	9.80	0.64	<0.5
HQUST-533A	05/25/11	1.6	<2	<2	1.43	11.8	0.63	<0.5
HQUST-533A	08/29/11	4.3	<2	<2	4.78	9.21	0.52	<0.5
HQUST-533A	11/29/11	2.7	<2	<2	<1	54.0	<0.5	<1
HQUST-533A	02/29/12	1	<2	<2	<1	4.00	<0.5	<1
HQUST-533A	05/23/12	1.58	<2	<2	<1	3.82	<0.5	<1
HQUST-533A	08/29/12	1.5	<1	<1	<2	4.3	<1	<1
HQUST-533A	11/20/12	<1	<1	<1	<2	3.3	<1	<1
HQUST-533A	02/28/13	1.7	<1.0	<1.0	<3.0	3.1	<1.0	<1.0
HQUST-533A	05/30/13	0.63	<0.50	<0.50	<1.5	2.6	<0.50	<0.50
HQUST-533A	08/15/13	0.88 J	<1.0	0.39 J	1.8 J	2.8 a	<1.0	<1.0
HQUST-533A	11/21/13	**115**	<1.0	3.6	11.8	2.5	<0.50	<0.50

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-533A	11/21/13 DUP	**122**	<1.0	3.3	11.4	2.2	<0.50	<0.50
HQUST-533A	02/26/14	<1.0	<1.0	<1.0	<2.0	2.3	<0.50	<0.50
HQUST-533A	05/28/14	<1.0	<1.0	<1.0	<2.0	2.9	<0.50	<0.50
HQUST-533A	08/14/14	1.0	<1.0	<1.0	<2.0	4.3	<0.50	<0.50
HQUST-533A	11/13/14	<1.0	<1.0	<1.0	<2.0	2.5	<0.50	<0.50
HQUST-533A	02/25/15	<1.0	<1.0	<1.0	<2.0	2.0	<0.50	<0.50
HQUST-533A	05/28/15	<1.0	<1.0	<1.0	<2.0	4.4	<0.50	<0.50
HQUST-533A	08/13/15	<1.0	<1.0	<1.0	<2.0	3.9	<0.50	<0.50
HQUST-533A	11/04/15	<1.0	<1.0	<1.0	<2.0	1.6	<0.50	<0.50
HQUST-533A	11/04/15 DUP	<1.0	<1.0	<1.0	<2.0	1.7	<0.50	<0.50
HQUST-533A	02/24/16	<1.0	<1.0	<1.0	<2.0	2.0	<0.50	<0.50
HQUST-533A	05/26/16	<1.0	<1.0	<1.0	<2.0	2.0	<0.50	<0.50
HQUST-533A	05/26/16 DUP	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-533A	06/28/16	<1.0	<1.0	<1.0	<2.0	2.0	<0.50	<0.50
HQUST-547	05/25/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-547	08/29/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-547	11/30/11	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-547	02/29/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-547	05/24/12	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-547	08/29/12	<1	<1	<1	<2	1.0	<1	<1
HQUST-547	11/20/12	<1	<1	<1	<2	1.6	<1	<1
HQUST-547	02/28/13	<1.0	<1.0	<1.0	<3.0	2.4	<1.0	<1.0
HQUST-547	05/30/13	<0.50	<0.50	<0.50	<1.5	2.0	<0.50	<0.50
HQUST-547	08/15/13	<1.0	<1.0	<1.0	<2.0	1.7 a	<1.0	<1.0
HQUST-547	11/21/13	<1.0	<1.0	<1.0	<2.0	1.5	<0.50	<0.50
HQUST-547	02/27/14	<1.0	<1.0	<1.0	<2.0	1.5	<0.50	<0.50
HQUST-547	05/29/14	<1.0	<1.0	<1.0	<2.0	1.7	<0.50	<0.50
HQUST-547	08/14/14	<1.0	<1.0	<1.0	<2.0	2.2	<0.50	<0.50
HQUST-547	11/13/14	<1.0	<1.0	<1.0	<2.0	2.2	<0.50	<0.50
HQUST-547	02/26/15	<1.0	<1.0	<1.0	<2.0	2.6	<0.50	<0.50
HQUST-547	05/27/15	<1.0	<1.0	<1.0	<2.0	2.7	<0.50	<0.50
HQUST-547	08/13/15	<1.0	<1.0	<1.0	<2.0	2.9	<0.50	<0.50
HQUST-547	11/05/15	<1.0	<1.0	<1.0	<2.0	1.8	<0.50	<0.50
HQUST-547	02/24/16	<1.0	<1.0	<1.0	<2.0	1.4	<0.50	<0.50
HQUST-547	05/26/16	<1.0	<1.0	<1.0	<2.0	2.4	<0.50	<0.50
HQUST-547	06/29/16	<1.0	<1.0	<1.0	<2.0	1.9	<0.50	<0.50
HQUST-548	05/25/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-548	08/30/11	<0.5	<2	<2	<1	<2	<0.5	<0.5
HQUST-548	11/29/11	<0.5	3	3	13	<2	<0.5	<1
HQUST-548	02/29/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-548	05/24/12	<0.5	<2	<2	<1	<2	<0.5	<1
HQUST-548	08/29/12	<1	<1	<1	<2	1.3	<1	<1

TABLE 2
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-548	11/20/12	<1	<1	<1	<2	1.0	<1	<1
HQUST-548	02/28/13	<1.0	<1.0	<1.0	<3.0	1.2	<1.0	<1.0
HQUST-548	05/30/13	<0.50	<0.50	<0.50	<1.5	0.69	<0.50	<0.50
HQUST-548	08/15/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
HQUST-548	11/21/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-548	02/27/14	<1.0	<1.0	<1.0	<2.0	1.9	<0.50	<0.50
HQUST-548	05/29/14	1.9	<1.0	<1.0	<2.0	6.7	<0.50	<0.50
HQUST-548	08/14/14	1.0	<1.0	<1.0	<2.0	9.0	<0.50	<0.50
HQUST-548	11/13/14	4.7	<1.0	<1.0	<2.0	28.3	<0.50	<0.50
HQUST-548	02/26/15	<1.0	<1.0	<1.0	<2.0	12.6	<0.50	<0.50
HQUST-548	05/27/15	<1.0	<1.0	<1.0	<2.0	7.4	<0.50	<0.50
HQUST-548	08/13/15	3.1	<1.0	<1.0	<2.0	5.2	<0.50	<0.50
HQUST-548	11/05/15	<1.0	<1.0	<1.0	<2.0	1.9	<0.50	<0.50
HQUST-548	02/24/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-548	05/26/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-548	06/29/16	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
ADEQ AWQS		**5.0**	**1,000**	**700**	**10,000**	**NE**	**5.0**	**5.0**

Notes:

µg/L	=	Micrograms per liter.
BOLD	=	Concentration exceeds ADEQ AWQS.
VOCs	=	Volatile organic compounds.
MTBE	=	Methyl-tert-butyl ether
<	=	Not reported above the specified laboratory reporting limits.
DUP	=	Duplicate sample.
N/A	=	Not analyzed.
ADEQ	=	Arizona Department of Environmental Quality
AWQS	=	Aquifer Water Quality Standard
NE	=	Not Established.
(1)	=	All wells are screened in the perched aquifer (approximately 75 feet below ground surface).
(2)	=	Well CEP-518A contains NAPL and was not sampled after February 2012.
(3)	=	Well CEP-519A contains NAPL and was not sampled from January 31, 2007 to February 27, 2014.
(4)	=	Wells HQUST-523A and HQUST-524A contained NAPL and were not sampled from June 2007 to August 2015.
(5)	=	Data collected for the sodium persulfate ISCO injection event.
(6)	=	An attempt was made to collect a water sample, but roots in the well prevented access.
(7)	=	Analytical results reported to the laboratory method detection limit per project specification.
*	=	Analyte reported to the method detection limit per project specification. Target analyte was not detected in the sample.
a	=	Analyte reported in Trip Blank.
J	=	Indicates an estimated value.

Reported concentrations are in micrograms per liter (µg/L), which is equivalent to parts per billion (ppb).

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
CEP-518 [2]	11/24/09	310	870	9.6	2.2	0.2
CEP-518 [2]	02/16/10	330	910	7.1	4.5	0.14
CEP-518 [2]	05/26/10 to 08/13/15 not sampled.					
CEP-518A	11/09/15	498	622	<0.25	15.4	<0.20
CEP-518A	02/25/16	462	1,020	0.11	14.2	2.06
CEP-518A	05/26/16	457	1,030	0.13	12.1	0.463
CEP-518A	06/29/16	358	1,110	1.0	12.8	5.51
CEP-519A[3]	01/31/07	N/A	N/A	N/A	N/A	N/A
CEP-519A[3]	06/25/07 to 02/27/14 not sampled.					
CEP-519A	05/29/14	249	710	36.2	2.7	0.352
CEP-519A	08/14/14	345	628	0.28	5.1	<0.20
CEP-519A	11/13/14	472	339	<0.25	13.4	1.08
CEP-519A	02/25/15	340	550	0.10	4.5	0.243
CEP-519A	05/28/15	254	661	0.53	10.1	0.350
CEP-519A	08/13/15	152	501	31.2	2.8	0.321
CEP-519A	11/05/15	176	472	26.2	3.2	0.389
CEP-519A	02/25/16	200	332	17.5	1.7	0.605
CEP-519A	05/24/16	167	292	14.0	4.3	0.265
CEP-519A	06/28/16	178	308	16.7	<1.0	<0.20
CEP-519A	06/28/16 DUP	176	310	18.2	1.8	<0.20
CEP-520A	11/24/09	330	620	0.53	0.92	0.12
CEP-520A	02/16/10	340	620	<0.50	1.1	<0.10
CEP-520A	05/26/10	220	220	0.12	0.84	0.34
CEP-520A	08/30/10	266	405	1.87	N/A	0.579
CEP-520A	11/23/10	240	257	3.05	N/A	0.901
CEP-520A	02/14/11	300	745	3	1.29	0.91
CEP-520A	05/25/11	320	552	3.01	1.03	0.693
CEP-520A	08/29/11	248	498	3.86	0.68	1.57
CEP-520A	11/30/11	241	602	4.3	0.69	0.21
CEP-520A	02/29/12	278	518	3.6	1.4	<0.20
CEP-520A	05/23/12	341	606	4.39	1.61	<0.20
CEP-520A	05/23/12 DUP	338	618	4.35	1.55	<0.20
CEP-520A	08/28/12	180	220	3.1	1.0	7.5
CEP-520A	11/19/12	270	550	5.5	1.0	2.1
CEP-520A	02/27/13	180	240	3.4	1.2	1.4
CEP-520A	05/29/13	270	760	5.1	<1.0	0.19
CEP-520A	08/14/13	234	514	6.0	1.4	0.712
CEP-520A	11/20/13	274	559	5.8	1.3	10.9
CEP-520A	02/26/14	286	558	5.4	1.4	0.958
CEP-520A	05/28/14	291	724	8.6	1.9	3.48
CEP-520A	08/13/14	123	112	2.5	1.9	11.1
CEP-520A	11/12/14	290	419	1.8 [4]	8.2	9.00
CEP-520A	02/26/15	94.8	51.8	<0.25	2.0	10.2
CEP-520A	05/27/15	238	301	0.13	1.8	8.35
CEP-520A	08/12/15	85.5	6.4	0.56	1.8	14.8
CEP-520A	11/04/15	102	64.6	0.14	1.4	16.1
CEP-520A	02/24/16	192	471	3.1	1.1	13.7
CEP-520A	05/24/16	216	404	0.11	1.1	4.58
CEP-520A	06/28/16	172	400	1.6	3.1	1.36
CEP-527A	08/30/10	760	N/A	391	N/A	4.07
CEP-527A	11/23/10	94	<3	20.6	N/A	3.57
CEP-527A	02/14/11	600	983	144	4.34	0.465
CEP-527A	06/02/11	630	1,740	87.1	3.78	84.1
CEP-527A	08/30/11	872	2,570	231	15	0.736

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
CEP-527A	11/30/11	844	2,820	175	29	3.7
CEP-527A	02/28/12	558	1,950	68.2	4.4	0.29
CEP-527A	05/31/12	605	1,740	52.2	8	<0.2
CEP-527A	08/29/12	990	3,500	280	<1.0	7.0
CEP-527A	11/20/12	610	2,300	170	13	81
CEP-527A	03/06/13	580	2,100	84	20	22
CEP-527A	05/30/13	480	190	3.7	3.7	3.9
CEP-527A	08/15/13	1,070	3,020	152	14.9	11.2
CEP-527A	11/21/13	1,400	3,400	134	27.1	20.9
CEP-527A	02/26/14	616	1,950	24.2	5.8	6.96
CEP-527A	05/29/14	871	2,320	50.4	8.8	1.12
CEP-527A	08/14/14	1,510	4,870	120	17.9	<0.20
CEP-527A	11/13/14	172	135	4.8	7.8	6.55
CEP-527A	02/25/15	391	429	8.2	2.1	1.62
CEP-527A	05/28/15	1,310	2,760	0.14	14.4	3.92
CEP-527A	08/13/15	501	514	<0.10	27.2	1.54
CEP-527A	11/09/15	620	1,220	2.0	12.9	4.60
CEP-527A	02/25/16	488	482	4.4	4.0	14.7
CEP-527A [6]	05/26/16	N/A	N/A	N/A	N/A	N/A
CEP-527A [6]	06/29/16	N/A	N/A	N/A	N/A	N/A
CEP-528A	11/24/09	270	870	22	0.52	<0.10
CEP-528A	02/16/10	270	940	23	0.72	<0.10
CEP-528A	05/26/10	280	720	26	3	3
CEP-528A	08/30/10	270	936	29.3	N/A	3
CEP-528A	11/23/10	272	942	30	N/A	13.2
CEP-528A	02/14/11	296	997	23.7	1.65	5.44
CEP-528A	05/26/11	308	968	14.8	1.12	64.4
CEP-528A	08/30/11	288	1,100	14.6	0.89	<2
CEP-528A	11/30/11	294	955	10.9	1.1	<2
CEP-528A	02/28/12	301	2,500	38.9	1.6	0.73
CEP-528A	05/23/12	314	846	13.3	1.16	<0.2
CEP-528A	08/29/12	280	990	21	<1.0	13
CEP-528A	11/19/12	270	1,000	22	1.1	13
CEP-528A	02/27/13	280	1,100	25	<1.0	43
CEP-528A	05/29/13	310	1,100	25	1.1	29
CEP-528A	08/14/13	346	1,010	23.3	1.3	0.793
CEP-528A	11/20/13	369	994	20.0	1.4	52.6
CEP-528A	02/27/14	369	1,070	18.4	1.7	102
CEP-528A	05/28/14	352	971	20.1	1.5	84.4
CEP-528A	05/28/14 DUP	376	977	19.8	1.6	46.0
CEP-528A	08/13/14	384	976	20.8	1.4	10.6
CEP-528A	08/13/14 DUP	408	966	22.1	1.8	30.8
CEP-528A	11/12/14	318	1,060	26.5	1.5	11.6
CEP-528A	02/25/15	330	1,100	26.3	1.3	16.8
CEP-528A	05/27/15	274	1,100	31.0	1.0	0.494
CEP-528A	08/12/15	293	954	26.4	1.5	10.8
CEP-528A	11/04/15	331	1,020	24.4	1.6	74.6
CEP-528A	02/25/16	324	1,010	24.8	1.1	36.8
CEP-528A	05/24/16	327	1,120	28.7	1.0	25.5
CEP-528A	06/29/16	315	1,110	28.5	1.6	13.1
HQUST-523A [5]	06/26/07	N/A	N/A	N/A	N/A	N/A
HQUST-523A [5]	11/14/07 to 08/13/15 not sampled.					
HQUST-523A	11/09/15	256	2,420	<0.25	65.9	9.39
HQUST-523A	02/25/16	326	842	5.0	9.4	0.408
HQUST-523A	05/26/16	553	505	0.12	38.1	11.8

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-523A	06/29/16	309	1,030	2.5	11.6	1.66
HQUST-524A [5]	06/27/07 to 08/13/15 not sampled.					
HQUST-524A	11/09/15	300	859	1.3	1.4	<0.20
HQUST-524A	02/25/16	322	759	0.59	9.2	1.65
HQUST-524A	06/02/16	315	758	2.8	1.6	<0.20
HQUST-524A	06/29/16	301	840	3.6	2.9	0.564
HQUST-525A	11/24/09	270	2,600	15	1.1	<0.10
HQUST-525A	02/16/10	240	1,800	6.8	0.78	<0.10
HQUST-525A	05/26/10	210	1,100	4.4	1	<0.1
HQUST-525A	08/30/10	162	469	2.5	N/A	1.17
HQUST-525A	11/23/10	152	364	2.37	N/A	0.441
HQUST-525A	02/14/11	174	407	2.38	1.6	<0.1
HQUST-525A	05/26/11	172	554	1.88	<1	0.819
HQUST-525A	08/30/11	186	1,210	11.3	0.53	<2
HQUST-525A	11/30/11	243	1,090	10.6	0.73	<2
HQUST-525A	02/28/12	285	973	9.08	1.6	<2
HQUST-525A	05/24/28	279	898	6.76	1.29	1.71
HQUST-525A	08/28/12	270	1,100	7.6	<1.0	0.24
HQUST-525A	11/19/12	250	790	5.4	<1.0	0.58
HQUST-525A	02/27/13	270	880	5.5	<1.0	0.25
HQUST-525A	05/29/13	270	870	5.4	<1.0	<0.10
HQUST-525A	08/14/13	246	787	4.9	<1.0	<0.20
HQUST-525A	11/20/13	268	694	4.3	<1.0	0.863
HQUST-525A	02/27/14	286	696	4.3	<1.0	3.86
HQUST-525A	05/29/14	230	702	4.5	1.0	1.17
HQUST-525A	08/13/14	273	708	4.2	<1.0	0.992
HQUST-525A	11/12/14	252	784	3.8	1.2	<0.20
HQUST-525A	02/26/15	258	765	4.6	1.3	2.85
HQUST-525A	05/27/15	263	787	5.1	<1.0	<0.20
HQUST-525A	08/12/15	244	629	4.5	<1.0	0.517
HQUST-525A	11/05/15	242	683	4.9	<1.0	0.417
HQUST-525A	02/24/16	246	620	4.4	<1.0	1.12
HQUST-525A	05/24/16	238	630	4.5	<1.0	<0.20
HQUST-525A	06/29/16	236	846	4.4	<1.0	0.415
HQUST-526A	11/24/09	310	1,100	0.82	1.3	<0.10
HQUST-526A	02/16/10	300	1,200	0.93	1.1	0.23
HQUST-526A	05/26/10	250	850	2.3	0.82	<0.1
HQUST-526A	08/30/10	150	587	7.76	N/A	0.413
HQUST-526A	11/23/10	232	942	2.63	N/A	0.19
HQUST-526A	02/14/11	180	1,460	3.24	1.18	<0.1
HQUST-526A	05/25/11	208	1,230	2.68	<1	0.309
HQUST-526A	08/30/11	418	902	0.29	1.9	<2
HQUST-526A	11/30/11	371	983	0.57	2.4	<2
HQUST-526A	02/28/12	450	2,350	0.42	3.3	<2
HQUST-526A	05/24/12	416	1,020	0.863	2.86	<0.2
HQUST-526A	08/29/12	460	710	<0.20	<1.0	0.27
HQUST-526A	11/20/12	370	600	1.4	3.5	2.9
HQUST-526A	02/27/13	380	630	2.0	2.1	0.41
HQUST-526A	02/27/13 DUP	410	710	1.6	2.1	0.42
HQUST-526A	05/29/13	270	720	4.4	2.0	0.15
HQUST-526A	05/29/13 DUP	340	880	4.1	2.1	<0.10
HQUST-526A	08/14/13	638	783	<0.25	5.5	0.266
HQUST-526A	08/14/13 DUP	609	752	<0.25	5.6	0.268
HQUST-526A	11/20/13	445	711	0.30	3.4	0.990

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-526A	02/27/14	676	664	<0.25	5.3	1.73
HQUST-526A	05/29/14	612	611	<0.25	4.8	0.869
HQUST-526A	08/13/14	707	517	<0.25	5.2	1.48
HQUST-526A	11/12/14	230	743	2.6	1.2	0.468
HQUST-526A	11/12/14 DUP	194	610	2.4	1.5	0.431
HQUST-526A	02/25/15	129	420	3.3	<1.0	0.214
HQUST-526A	02/25/15 DUP	125	432	3.3	<1.0	<0.20
HQUST-526A	05/27/15	566	651	0.28	4.0	<0.20
HQUST-526A	08/12/15	287	738	4.0	<1.0	1.51
HQUST-526A	11/05/15	304	446	4.1	<1.0	0.813
HQUST-526A	02/24/16	416	789	1.1	2.1	3.57
HQUST-526A	02/24/16 DUP	398	685	1.4	1.9	4.43
HQUST-526A	05/24/16	311	1,010	3.8	<1.0	0.296
HQUST-526A	06/29/16	414	793	1.2	2.2	1.67
HQUST-531A	11/24/09	250	750	8.1	0.81	0.11
HQUST-531A	02/16/10	250	780	8.3	1.5	<0.10
HQUST-531A	05/26/10	250	660	9.2	0.65	<0.10
HQUST-531A	08/30/10	196	528	6.01	N/A	14.1
HQUST-531A	11/23/10	248	716	8.55	N/A	3.47
HQUST-531A	02/14/11	260	805	6.79	1.66	0.789
HQUST-531A	05/25/11	236	909	8.92	1.32	10.8
HQUST-531A	08/29/11	258	877	2.05	0.57	1.21
HQUST-531A	11/29/11	239	952	9	ND	<0.2
HQUST-531A	02/29/12	245	865	8.9	1.5	<0.2
HQUST-531A	05/23/12	242	873	8.13	1.49	<0.2
HQUST-531A	08/28/12	230	990	11	<1.0	1.7
HQUST-531A	11/19/12	200	870	10	<1.0	0.50
HQUST-531A	02/28/13	230	850	12	1.2	1.10
HQUST-531A	05/30/13	250	1,000	17	<1.0	2.6
HQUST-531A	08/15/13	261	924	13.6	1.4	2.10
HQUST-531A	11/21/13	252	919	14.0	1.8	2.75
HQUST-531A	02/26/14	277	922	14.4	1.2	0.506
HQUST-531A	05/28/14	246	900	13.3	2.0	13.4
HQUST-531A	08/14/14	285	905	9.1	<1.0	4.88
HQUST-531A	11/13/14	100	56.2	2.4	4.7	2.14
HQUST-531A	02/26/15	259	890	10.1	1.4	4.32
HQUST-531A	05/28/15	224	933	10.9	<1.0	1.39
HQUST-531A	08/13/15	248	398	8.9	1.3	<0.20
HQUST-531A	11/04/15	230	791	9.6	1.3	2.46
HQUST-531A	02/24/16	223	772	7.8	<1.0	1.25
HQUST-531A	05/24/16	234	796	9.6	<1.0	<0.20
HQUST-531A	06/28/16	228	773	11.8	1.1	<0.20
HQUST-532A	11/24/09	220	700	6.9	0.53	<0.10
HQUST-532A	02/16/10	210	690	6.6	0.61	<0.10
HQUST-532A	08/30/10	212	608	6.48	N/A	0.922
HQUST-532A	11/23/11	130	126	1.93	N/A	3.91
HQUST-532A	02/14/11	230	760	6.22	1.89	<0.1
HQUST-532A	05/25/11	204	825	7.53	<1	0.13
HQUST-532A	08/29/11	219	785	6.66	0.63	1.02
HQUST-532A	11/29/11	200	841	6.5	0.5	<0.2
HQUST-532A	02/28/12	216	773	6.8	1.5	<0.2
HQUST-532A	05/23/12	218	763	6.28	1.26	<0.2
HQUST-532A	08/28/12	210	910	7.6	<1.0	<0.10
HQUST-532A	08/28/12 DUP	210	920	7.7	<1.0	<0.10
HQUST-532A	11/19/12	190	810	6.8	<1.0	<0.10

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-532A	11/19/12 DUP	200	810	6.8	<1.0	0.1
HQUST-532A	02/27/13	200	800	6.7	<1.0	0.14
HQUST-532A	05/29/13	210	810	6.7	1.4	<0.10
HQUST-532A	08/14/13	170	797	5.9	<1.0	<0.20
HQUST-532A	11/20/13	168	789	6.6	<1.0	0.389
HQUST-532A	02/26/14	230	804	6.3	1.2	2.11
HQUST-532A	02/26/14 DUP	212	750	5.8	1.0	2.84
HQUST-532A	05/28/14	218	824	6.1	3.1	4.41
HQUST-532A	08/13/14	218	634	5.7	1.6	2.51
HQUST-532A	11/12/14	194	787	6.1	1.4	1.19
HQUST-532A	02/25/15	208	761	6.1	<1.0	0.704
HQUST-532A	05/27/15	208	752	5.9	<1.0	<0.20
HQUST-532A	05/27/15 DUP	222	750	5.9	<1.0	<0.20
HQUST-532A	08/12/15	202	663	5.9	<1.0	2.13
HQUST-532A	08/12/15 DUP	202	692	6.0	1.1	1.44
HQUST-532A	11/05/15	210	722	6.1	<1.0	0.280
HQUST-532A	02/25/16	206	725	6.0	<1.0	0.645
HQUST-532A	05/24/16	212	731	6.4	<1.0	0.746
HQUST-532A	06/28/16	200	742	6.2	<1.0	<0.20
HQUST-533A	11/24/09	450	970	5.5	2.8	<0.10
HQUST-533A	02/16/10	410	890	7.4	2.6	<0.10
HQUST-533A	05/26/10	420	5	16	2.9	<0.10
HQUST-533A	08/30/10	416	1,470	61.6	N/A	0.124
HQUST-533A	11/23/11	272	942	30	N/A	13.2
HQUST-533A	02/14/11	440	1,160	11.9	1.89	<0.1
HQUST-533A	05/25/11	472	926	9.8	<1	<0.1
HQUST-533A	08/29/11	424	813	12.7	0.63	<0.1
HQUST-533A	11/29/11	401	841	18.3	1.5	<0.2
HQUST-533A	02/29/12	432	777	18.7	2.1	<0.2
HQUST-533A	05/23/12	435	744	18.4	2.11	<0.2
HQUST-533A	08/28/12	420	1,000	22	1.7	<0.10
HQUST-533A	11/20/12	390	1,000	27	2.1	<0.10
HQUST-533A	02/28/13	400	780	14	1.7	<0.10
HQUST-533A	05/30/13	400	800	14	1.8	<0.10
HQUST-533A	08/15/13	406	740	12.6	1.8	<0.20
HQUST-533A	11/21/13	489	1,560	26.0	3.4	<0.20
HQUST-533A	11/21/13 DUP	485	1,560	25.9	3.5	<0.20
HQUST-533A	02/26/14	412	673	9.6	1.6	<0.20
HQUST-533A	05/28/14	383	702	9.4	2.0	<0.20
HQUST-533A	08/14/14	444	753	18.8	1.7	<0.20
HQUST-533A	11/13/14	404	707	26.6	2.1	<0.20
HQUST-533A	02/25/15	379	675	26.2	1.5	<0.20
HQUST-533A	05/28/15	418	724	21.3	1.4	<0.20
HQUST-533A	08/13/15	420	582	21.5	1.7	<0.20
HQUST-533A	11/04/15	412	551	17.9	1.6	<0.20
HQUST-533A	11/04/15 DUP	410	552	17.5	1.5	<0.20
HQUST-533A	02/24/16	452	504	8.0	1.2	<0.20
HQUST-533A	05/26/16	459	519	6.3	1.6	<0.20
HQUST-533A	05/26/16 DUP	305	1,110	4.9	1.3	1.26
HQUST-533A	06/28/16	455	489	6.0	1.6	<0.20
HQUST-547	05/25/11	228	1,850	8.9	<1	1.46
HQUST-547	08/29/11	232	1,610	8.36	0.74	3.14
HQUST-547	11/30/11	187	1,360	8.6	0.68	3.1
HQUST-547	02/29/12	204	1,410	10	1.3	0.43
HQUST-547	05/24/12	209	1,410	10.7	1.15	0.818

TABLE 3
SELECT GROUNDWATER ANALYTICAL RESULTS - MNA PARAMETERS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-547	08/29/12	260	1,500	7.4	<1.0	<0.10
HQUST-547	11/20/12	220	1,300	10	1.0	15
HQUST-547	02/28/13	240	1,100	8.9	<1.0	2.5
HQUST-547	05/30/13	240	1,200	9.3	<1.0	16
HQUST-547	08/15/13	391	1,040	8.4	1.2	13.5
HQUST-547	11/21/13	264	1,120	7.9	1.5	1.53
HQUST-547	02/27/14	308	1,030	7.3	1.1	2.75
HQUST-547	05/29/14	256	867	7.2	1.1	0.296
HQUST-547	08/14/14	267	884	6.2	1.4	<0.20
HQUST-547	11/13/14	276	827	6.4	1.3	4.46
HQUST-547	02/26/15	253	857	5.8	<1.0	3.60
HQUST-547	05/27/15	260	815	5.7	<1.0	<0.20
HQUST-547	08/13/15	212	361	5.6	1.5	<0.20
HQUST-547	11/05/15	236	739	5.4	<1.0	0.401
HQUST-547	02/24/16	288	1,380	5.6	<1.0	1.96
HQUST-547	05/26/16	234	914	6.1	<1.0	0.484
HQUST-547	06/29/16	242	969	6.1	<1.0	0.421
HQUST-548	05/25/11	240	1,960	10.6	1.21	1.67
HQUST-548	08/30/11	308	1,900	7.23	0.95	0.579
HQUST-548	11/29/11	257	1,570	5.2	0.97	0.54
HQUST-548	02/29/12	243	1,600	6.9	2	1.1
HQUST-548	05/24/12	259	1,270	5.13	1.27	1.37
HQUST-548	08/29/12	230	1,500	12	<1.0	0.11
HQUST-548	11/20/12	250	1,300	7.6	1.2	10
HQUST-548	02/28/13	290	1,300	7.2	1.1	5.4
HQUST-548	05/30/13	320	1,200	6.7	<1.0	5.8
HQUST-548	08/15/13	391	1,030	5.4	1.3	3.18
HQUST-548	11/21/13	294	1,150	7.0	1.4	0.485
HQUST-548	02/27/14	416	976	5.6	1.7	9.75
HQUST-548	05/29/14	360	1,000	4.7	1.5	1.07
HQUST-548	08/14/14	400	1,050	3.1	2.1	0.392
HQUST-548	11/13/14	388	995	2.2	2.6	1.70
HQUST-548	02/26/15	377	1,020	4.1	2.0	15.2
HQUST-548	05/27/15	334	1,010	4.7	1.3	0.368
HQUST-548	08/13/15	351	390	1.5	3.7	<0.20
HQUST-548	11/05/15	326	909	4.9	1.6	0.518
HQUST-548	02/24/16	316	1,020	6.4	1.1	3.06
HQUST-548	05/26/16	297	1,100	4.9	1.6	1.11
HQUST-548	06/29/16	293	1,110	5.5	1.3	0.577

Notes:

MNA = Monitored natural attenuation.
mg/L = Milligrams per liter.
N/A = Not analyzed.
DUP = Duplicate sample.
< = Not reported above the specified laboratory reporting limits.
(1) = All wells are screened in the perched aquifer (approximately 75 feet below ground surface).
(2) = Well CEP-518A contains free product and was not sampled after February 2010.
(3) = Well CEP-519A contains NAPL and was not sampled from January 31, 2007 to February 27, 2014.
(4) = Sample analysis performed past 48-hour hold time.
(5) = Wells HQUST-523A and HQUST-524A contained NAPL and were not sampled from June 2007 to August 2015.
(6) = An attempt was made to collect a water sample, but roots in the well prevented access.

Reported concentrations are in milligrams per liter (mg/L), which is equivalent to parts per million (ppm).

TABLE 4
CUMULATIVE NAPL REMOVAL
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST #3208.01

Well Name	Date	Removal (liters)	Removal (gallons)	Cumulative Removal (liters)	Cumulative Removal (gallons)
CEP-518A	11/02/10	1.13	0.30	1.13	0.30
CEP-518A	11/04/10	3.78	1.00	4.91	1.30
CEP-518A	11/12/10	3.40	0.90	8.32	2.20
CEP-518A	11/15/10	1.89	0.50	10.21	2.70
CEP-518A	11/17/10	0.38	0.10	10.58	2.80
CEP-518A	12/10/10	1.13	0.30	11.72	3.10
CEP-518A	12/15/10	1.89	0.50	13.61	3.60
CEP-518A	12/30/10	0.38	0.10	13.99	3.70
CEP-518A	01/07/11	0.38	0.10	14.36	3.80
CEP-518A	01/20/11	1.89	0.50	16.25	4.30
CEP-518A	02/02/11	0.00	0.00	16.25	4.30
CEP-518A	02/11/11	0.38	0.10	16.63	4.40
CEP-518A	02/18/11	0.38	0.10	17.01	4.50
CEP-518A	02/24/11	0.38	0.10	17.39	4.60
CEP-518A	03/03/11	1.13	0.30	18.52	4.90
CEP-518A	03/11/11	0.38	0.10	18.90	5.00
CEP-518A	03/18/11	0.38	0.10	19.28	5.10
CEP-518A	03/21/11	0.38	0.10	19.66	5.20
CEP-518A	03/25/11	0.38	0.10	20.03	5.30
CEP-518A	04/08/11	0.38	0.10	20.41	5.40
CEP-518A	06/03/11	0.38	0.10	20.79	5.50
CEP-518A	06/17/11	4.16	1.10	24.95	6.60
CEP-518A	06/24/11	0.38	0.10	25.33	6.70
CEP-518A	07/11/11	3.02	0.80	28.35	7.50
CEP-518A	07/26/11	2.65	0.70	31.00	8.20
CEP-518A	08/12/11	6.05	1.60	37.04	9.80
CEP-518A	08/24/11	6.43	1.70	43.47	11.50
CEP-518A	09/29/11	3.40	0.90	46.87	12.40
CEP-518A	10/06/11	4.91	1.30	51.79	13.70
CEP-518A	10/17/11	4.54	1.20	56.32	14.90
CEP-518A	10/20/11	5.67	1.50	61.99	16.40
CEP-518A	10/28/11	4.91	1.30	66.91	17.70
CEP-518A	11/04/11	4.16	1.10	71.06	18.80
CEP-518A	11/21/11	3.40	0.90	74.47	19.70
CEP-518A	12/14/11	3.40	0.90	77.87	20.60
CEP-518A	01/06/12	5.67	1.50	83.54	22.10
CEP-518A	01/13/12	4.54	1.20	88.07	23.30
CEP-518A	02/10/12	4.54	1.20	92.61	24.50
CEP-518A	03/14/12	4.16	1.10	96.77	25.60
CEP-518A	04/06/12	3.40	0.90	100.17	26.50
CEP-518A	04/17/12	4.54	1.20	104.71	27.70
CEP-518A	05/10/12	4.16	1.10	108.86	28.80
CEP-518A	08/27/12	3.78	1.00	112.64	29.80
CEP-518A	09/05/12	7.56	2.00	120.20	31.80
CEP-518A	09/24/12	4.73	1.25	124.93	33.05
CEP-518A	10/08/12	5.67	1.50	130.60	34.55
CEP-518A	10/22/12	7.56	2.00	138.16	36.55
CEP-518A	11/06/12	4.73	1.25	142.88	37.80

TABLE 4
CUMULATIVE NAPL REMOVAL
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST #3208.01

Well Name	Date	Removal (liters)	Removal (gallons)	Cumulative Removal (liters)	Cumulative Removal (gallons)
CEP-518A	12/04/12	10.40	2.75	153.28	40.55
CEP-518A	12/18/12	6.62	1.75	159.89	42.30
CEP-518A	01/14/13	3.78	1.00	163.67	43.30
CEP-518A	02/25/13	9.45	2.50	173.12	45.80
CEP-518A [(b)]	03/26/13	7.56	2.00	180.68	47.80
CEP-519A [(a)]	09/05/12	5.67	1.50	5.67	1.50
CEP-519A [(a)]	09/25/12	3.78	1.00	9.45	2.50
HQUST-523A [(a)]	10/08/12	2.84	0.75	2.84	0.75
HQUST-523A [(a)]	11/06/12	3.78	1.00	6.62	1.75

Notes:

NAPL = Non-aqueous phase liquid.
(a) = Wells manually bailed due to the OWS system being inactive.
(b) = NAPL bailing was discontinued when the SVE system was started on April 8, 2013.

TABLE 5A
OPERATIONAL PERIOD - DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Operational Period (December 1, 2015 through June 30, 2016)

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
12/21/15	System down on arrival; system restarted and running on departure.																						
	90	45.0	788	1450	85	INF	---	---	943	<1.0	<1.0	<1.0	3.2	0.30	7.2	0.0003	0.008	0.000	0.01	0.0003	0.01	0.001	0.02
						EFF	---		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
12/28/15	System running on arrival and departure.																						
	90	40.0	785	1445	85	INF	---	---															
						EFF	---																
01/05/16	System running on arrival and departure.																						
	100	45.0	789	1452	126	INF	---	---	284	<1.0	<1.0	1.3	3.4	0.13	3.2	0.0005	0.011	0.000	0.01	0.0006	0.01	0.002	0.04
						EFF	---		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
01/13/16	System running on arrival and shutdown.																						
	94	42.0	790	1454	155	INF	34	93.5															
						EFF	2.2																
02/15/16	System down on arrival; system restarted and running on departure.																						
	---	---	---	---	---	INF	---	---															
						EFF	---																
02/16/16 (1)	System running on arrival and shutdown.																						
	112	35.0	784	1443	91	INF	65	98.2	839	<1.0	<1.0	3.2	6.2	0.29	6.9	0.0003	0.008	0.000	0.01	0.0011	0.03	0.002	0.05
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
Influent Averages									**689**	**1.0**	**1.0**	**1.8**	**4**	**0.24**	**5.8**	**0.0004**	**0.009**	**0.000**	**0.01**	**0.0007**	**0.02**	**0.002**	**0.04**

Notes:

INF	=	Influent vapor sample.
EFF	=	Effluent vapor sample.
TPH	=	Total petroleum hydrocarbons analyzed using EPA Method 8015D.
BTEX	=	Benzene, toluene, ethylbenzene and total xylenes analyzed using EPA Method 8260B.
Temp	=	Temperature of vapor stream.
Catox Temp.	=	Catalytic oxidizer catalyst inlet temperature.
deg C	=	Degrees Celsius
deg F	=	Degrees Fahrenheit
"H_2O	=	Inches of water column.
PID	=	Photo ionization detector measurement.
scfm	=	Standard cubic feet per minute.
ppm	=	Parts per million.
mg/M^3	=	Milligrams per cubic meter.
lbs	=	Pounds
---	=	Not calculated.
<	=	Less than the specified laboratory reporting limit.
(1)	=	Remediation system was shutdown on February 16, 2016 and removed on March 9, 2016.

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
04/08/13	System started and operating on departure. Initial operating hours 16,690.																						
	115	2.0	414	777	57	INF	404	100	3,640	19	45	16	54	0.78	18.7	0.0041	0.097	0.010	0.23	0.0034	0.08	0.012	0.28
						EFF	0.0		<200	<2.0	<2.0	<2.0	<10	---	---	---	---	---	---	---	---	---	---
04/18/13	System down on arrival and departure.																						
	---	---	---	---	---	INF	---	---															
						EFF	---																
04/30/13	System restarted and running on departure.																						
	---	---	---	---	---	INF	---	---															
						EFF	---																
05/02/13	System running on arrival and departure.																						
	131	4.0	427	801	57	INF	416	100	3,600	29	67	25	63	0.77	18.5	0.0062	0.149	0.014	0.34	0.0053	0.13	0.013	0.32
						EFF	0.4		<200	<2.0	<2.0	<2.0	<10	---	---	---	---	---	---	---	---	---	---
05/07/13	System running on arrival and departure.																						
	112	5.0	361	682	54	INF	474	100															
						EFF	0.0																
05/14/13	System running on arrival and departure.																						
	127	6.0	349	660	51	INF	428	100	4,900	34	84	51	130	0.94	22.5	0.0065	0.156	0.016	0.39	0.0097	0.23	0.025	0.60
						EFF	0.0		<200	<2.0	<2.0	<2.0	<10	---	---	---	---	---	---	---	---	---	---
05/20/13	System running on arrival and departure.																						
	130	6.0	398	748	53	INF	436	100															
						EFF	0.0																
05/30/13	System running on arrival and departure.																						
	136	8.0	364	687	53	INF	430	100															
						EFF	0.0																
06/06/13	System down on arrival; system restarted and running on departure.																						
	141	7.0	364	687	47	INF	370	100															
						EFF	0.6																
06/11/13	System running on arrival and departure.																						
	144	8.0	382	720	54	INF	443	100															
						EFF	0.0																
06/21/13	System running on arrival and departure.																						
	143	8.0	337	639	47	INF	520	100															
						EFF	0.0																
06/25/13	System running on arrival and departure.																						
	140	13.0	418	784	50	INF	481	100	4,300	20	45	30	<43	0.81	19.3	0.0037	0.090	0.008	0.20	0.0056	0.13	<0.008	<0.19
						EFF	2.0		<200	<2.0	<2.0	<2.0	<10	---	---	---	---	---	---	---	---	---	---
07/01/13	System running on arrival and departure.																						
	142	11.0	402	756	49	INF	437	100															
						EFF	0.0																
07/08/13	System running on arrival and departure.																						
	156	14.0	388	730	39	INF	418	100															
						EFF	0.0																
07/19/13	System running on arrival and departure.																						
	145	15.0	357	675	39	INF	463	100															
						EFF	0.0																
07/25/13	System running on arrival and departure.																						
	146	23.0	374	705	42	INF	1,253	100	11,900	42	126	102	251	1.87	44.9	0.0066	0.159	0.020	0.48	0.0161	0.39	0.040	0.95
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
07/30/13	System running on arrival and departure.																						
	154	28.0	405	761	36	INF	573	100															
						EFF	0.0																
08/05/13	System running on arrival and departure.																						
	146	28.0	385	725	38	INF	472	100															
						EFF	2.0																

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
08/12/13	System running on arrival and departure.																						
	151	22.0	416	781	38	INF	509	100															
						EFF	0.0																
08/19/13	System running on arrival and departure.																						
	154	22.0	---	---	42	INF	726	100	8,690	28	77	65	213	1.37	32.8	0.0044	0.106	0.012	0.29	0.0102	0.25	0.034	0.80
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
08/27/13	System running on arrival and departure.																						
	148	24.0	356	673	40	INF	512	100															
						EFF	0.0																
09/04/13	System running on arrival and departure.																						
	150	24.0	367	693	41	INF	648	100															
						EFF	0.0																
09/10/13	System running on arrival and departure.																						
	145	34.0	405	761	35	INF	768	100															
						EFF	0.0																
09/17/13	System running on arrival and departure.																						
	149	36.0	384	723	35	INF	664	100															
						EFF	0.0																
09/26/13	System running on arrival and departure.																						
	145	30.0	331	628	37	INF	---	NA	4,780	12	30	40	102	0.66	15.9	0.0017	0.040	0.004	0.10	0.0055	0.13	0.014	0.34
						EFF	---		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
10/03/13	System running on arrival and departure.																						
	130	30.0	330	626	39	INF	---	NA															
						EFF	---																
10/07/13	System running on arrival and departure.																						
	144	32.0	330	626	38	INF	710	100															
						EFF	0.0																
10/14/13	System running on arrival and departure.																						
	137	35.0	423	793	35	INF	609	100															
						EFF	0.0																
10/21/13	System running on arrival and departure.																						
	126	28.0	330	626	41	INF	619	100	4,240	11	26	43	125	0.65	15.6	0.0017	0.041	0.004	0.10	0.0066	0.16	0.019	0.46
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
10/30/13	System running on arrival and departure.																						
	111	31.0	332	630	40	INF	632	100															
						EFF	0.0																
11/07/13	System down on arrival; system restarted and running on departure.																						
	128	29.0	---	---	41	INF	612	100															
						EFF	0.0																
11/11/13	System running on arrival and departure.																						
	123	25.0	355	671	43	INF	696	100	7,180	16	34	41	118	1.16	27.8	0.0026	0.062	0.005	0.13	0.0066	0.16	0.019	0.46
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
11/19/13	System running on arrival and departure.																						
	---	---	---	---	---	INF	---	NA															
						EFF	---																
11/25/13	System running on arrival and departure.																						
	104	30.0	377	711	42	INF	744	100															
						EFF	0.0																
12/02/13	System running on arrival and departure.																						
	118	26.0	331	628	51	INF	634	100															
						EFF	0.0																
12/12/13	System running on arrival and departure.																						
	125	32.0	331	628	43	INF	507	100	4,010	8.8	21	30	85	0.65	15.5	0.0014	0.034	0.003	0.08	0.0048	0.12	0.014	0.33
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
12/18/13	System running on arrival and departure.																						
	121	31.0	331	628	44	INF	616	100															
						EFF	0.0																
12/24/13	System running on arrival and departure.																						
	115	43.0	332	630	37	INF	1,049	100															
						EFF	0.0																
01/02/14	System running on arrival and departure.																						
	123	45.0	339	642	34	INF	1,218	100															
						EFF	0.0																
01/08/14	System running on arrival and departure.																						
	117	45.0	332	630	42	INF	495	100															
						EFF	0.0																
01/14/14	System running on arrival and departure.																						
	119	46.0	331	628	41	INF	746	100	5,510	14	20	29	83	0.85	20.3	0.0022	0.052	0.003	0.07	0.0045	0.11	0.013	0.31
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
01/22/14	System running on arrival and departure.																						
	123	45.0	332	630	41	INF	622	100															
						EFF	0.0																
01/28/14	System running on arrival and departure.																						
	136	53.0	331	628	34	INF	571	100															
						EFF	0.0																
02/04/14	System running on arrival and departure.																						
	129	55.0	330	626	33	INF	425	100															
						EFF	0.0																
02/10/14	System down on arrival; system restarted and running on departure.																						
	114	20.0	329	624	45	INF	732	100															
						EFF	0.0																
02/19/14	System running on arrival and departure.																						
	107	26.0	364	687	42	INF	626	100	5,180	11	20	23	78	0.82	19.6	0.0017	0.042	0.003	0.08	0.0036	0.09	0.012	0.29
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
02/24/14	System running on arrival and departure.																						
	122	23.0	331	628	42	INF	719	100															
						EFF	0.0																
03/04/14	System running on arrival and departure.																						
	120	23.0	331	628	39	INF	2,530	100															
						EFF	0.0																
03/12/14	System running on arrival and departure.																						
	118	22.0	331	628	40	INF	3,100	96															
						EFF	110.0																
03/20/14	System running on arrival and departure.																						
	121	30.0	362	684	32	INF	342	100															
						EFF	0.0																
03/27/14	System running on arrival and departure.																						
	121	37.0	373	703	25	INF	968	100	10,100	10	18	27	128	0.95	22.7	0.0009	0.022	0.002	0.04	0.0025	0.06	0.012	0.29
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
04/03/14	System running on arrival and departure.																						
	110	30.0	337	639	36	INF	822	100															
						EFF	0.0																
04/07/14	System running on arrival and departure.																						
	113	33.0	357	675	32	INF	743	100															
						EFF	0.0																
04/14/14	System running on arrival and departure.																						
	136	30.0	334	633	25	INF	676	100	8,330	17	28	49	152	0.78	18.7	0.0016	0.038	0.003	0.06	0.0046	0.11	0.014	0.34
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
04/25/14	System running on arrival and departure.																						
	148	34.0	411	772	22	INF	541	100															
						EFF	0.0																
05/01/14	System running on arrival and departure.																						
	129	38.0	427	801	22	INF	696	100															
						EFF	0.0																
05/07/14	System running on arrival and departure.																						
	145	36.0	407	765	23	INF	523	100															
						EFF	0.0																
05/15/14	System running on arrival and departure.																						
	150	35.0	406	763	20	INF	517	100	7,340	16	23	29	95	0.55	13.2	0.0012	0.029	0.002	0.04	0.0022	0.05	0.007	0.17
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
05/19/14	System running on arrival and departure.																						
	157	38.0	424	795	20	INF	602	100															
						EFF	0.0																
05/27/14	System running on arrival and departure.																						
	161	38.0	418	784	20	INF	534	100															
						EFF	0.0																
06/05/14	System running on arrival and departure.																						
	163	34.0	404	759	20	INF	532	100	4,900	12	17	18	65	0.37	8.8	0.0009	0.022	0.001	0.03	0.0013	0.03	0.005	0.12
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
06/12/14	System running on arrival and departure.																						
	146	34.0	383	721	21	INF	458	100															
						EFF	0.0																
06/16/14	System running on arrival and departure.																						
	156	35.0	378	712	20	INF	387	100															
						EFF	0.0																
06/26/14 (1)	System running on arrival and shutdown.																						
	161	35.0	366	691	20	INF	403	100															
						EFF	0.0																
08/28/14 (2)	System started and operating on departure. Initial operating hours 6134.																						
	145	50.0	769	1416	155	INF	364	100	3,070	6.9	12	13	74	1.78	42.8	0.0040	0.096	0.007	0.17	0.0076	0.18	0.043	1.03
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
09/02/14	System running on arrival and departure.																						
	152	45.0	770	1418	149	INF	506	99.9															
						EFF	0.7																
09/10/14	System running on arrival and departure.																						
	122	54.0	773	1423	157	INF	446	99.8	4,430	8.0	14	18	104	2.61	62.5	0.0047	0.113	0.008	0.20	0.0106	0.25	0.061	1.47
						EFF	1.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
09/16/14	System running on arrival and departure.																						
	134	54.0	769	1416	154	INF	381	100															
						EFF	0.0																
09/23/14	System running on arrival and departure.																						
	118	55.0	770	1418	162	INF	260	100															
						EFF	0.0																
10/02/14	System running on arrival and departure.																						
	135	42.0	769	1417	140	INF	425	100	1,960	3.7	7.7	6.0	39	1.03	24.7	0.0019	0.047	0.004	0.10	0.0031	0.08	0.020	0.49
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
10/08/14	System down on arrival; system restarted and running on departure.																						
	120	45.0	787	1448	144	INF	468	99.7															
						EFF	1.4																
10/17/14	System running on arrival and departure.																						
	108	46.0	768	1415	138	INF	334																
						EFF	0.0																

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
10/20/14	System running on arrival and departure.																						
	120	46.0	770	1418	135	INF	424	99.9															
						EFF	0.3																
10/31/14	System running on arrival and departure.																						
	125	46.0	767	1412	134	INF	421	99.7															
						EFF	1.3																
11/07/14	System running on arrival and departure.																						
	122	48.0	769	1416	139	INF	396	100															
						EFF	0.0																
11/12/14	System running on arrival and departure.																						
	115	48.0	772	1421	140	INF	241	100	1,750	3.2	5.5	5.4	33	0.92	22.0	0.0017	0.040	0.003	0.07	0.0028	0.07	0.017	0.42
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
11/17/14	System running on arrival and departure.																						
	100	48.0	773	1424	144	INF	1,100	98.0															
						EFF	22.0																
11/24/14	System running on arrival and departure.																						
	98	48.0	772	1422	149	INF	291	99.1															
						EFF	2.7																
12/03/14	System running on arrival and departure.																						
	110	46.0	404	1421	146	INF	380	100															
						EFF	1.7																
12/08/14	System running on arrival and departure.																						
	100	46.0	383	1412	177	INF	246	100															
						EFF	0.5																
12/15/14	System running on arrival and departure.																						
	108	55.0	378	1418	156	INF	246	95	2,130	3.3	6.4	6.2	43	1.31	31.4	0.0020	0.049	0.004	0.09	0.0038	0.09	0.026	0.63
						EFF	12.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
12/24/14	System running on arrival and departure.																						
	107	55.0	366	1410	156	INF	266	97															
						EFF	9.0																
12/29/14	System running on arrival and departure.																						
	81	50.0	764	1408	164	INF	281	95															
						EFF	15.0																
01/07/15	System running on arrival and departure.																						
	108	50.0	767	1413	128	INF	316	92.7															
						EFF	23.0																
01/14/15	System running on arrival and departure.																						
	97	55.0	769	1417	117	INF	257	98.9	2,000	3.3	6.9	6.2	34	0.88	21.0	0.0014	0.035	0.003	0.07	0.0027	0.07	0.015	0.36
						EFF	2.9		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
01/20/15	System running on arrival and departure.																						
	114	55.0	770	1418	116	INF	257	99															
						EFF	2.9																
01/30/15	System running on arrival and departure.																						
	103	55.0	768	1414	120	INF	426	100															
						EFF	1.6																
02/06/15	System running on arrival and departure.																						
	100	50.0	768	1414	135	INF	377	100															
						EFF	0.6																
02/12/15	System running on arrival and departure.																						
	92	45.0	769	1417	141	INF	363	97.8															
						EFF	8.0																
02/16/15	System running on arrival and departure.																						
	104	52.0	768	1414	139	INF	301	95.7	2,390	1.5	3.4	5.9	39	1.24	29.9	0.0008	0.019	0.002	0.04	0.0031	0.07	0.020	0.49
						EFF	13.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
02/26/15	System running on arrival and departure.																						
	91	55.0	769	1417	123	INF	286	97.2															
						EFF	8.0																
03/04/15	System running on arrival and departure.																						
	88	60.0	768	1414	124	INF	303	95.4															
						EFF	14.0																
03/13/15	System running on arrival and departure.																						
	125	58.0	786	1446	125	INF	254	100															
						EFF	1.2																
03/24/15	System running on arrival and departure.																						
	130	58.0	790	1454	124	INF	261	100	2,830	3.0	7.5	7.9	34	1.31	31.6	0.0014	0.033	0.003	0.08	0.0037	0.09	0.016	0.38
						EFF	0.1		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
04/01/15	System running on arrival and departure.																						
	133	58.0	788	1451	123	INF	256	100.0															
						EFF	0.1																
04/06/15	System running on arrival and departure.																						
	125	58.0	784	1443	125	INF	262	100															
						EFF	1.0																
04/13/15	System running on arrival and departure.																						
	123	60.0	784	1444	125	INF	291	100															
						EFF	1.4																
04/22/15	System running on arrival and departure.																						
	135	59.0	787	1448	127	INF	312	99															
						EFF	2.4																
04/27/15	System running on arrival and departure.																						
	125	55.0	789	1453	120	INF	264	100	2,440	2.5	6.9	7.2	35	1.10	26.3	0.0011	0.027	0.003	0.07	0.0032	0.08	0.016	0.38
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
05/04/15	System running on arrival and departure.																						
	130	59.0	788	1450	124	INF	212	100															
						EFF	0.5																
05/11/15	System running on arrival and departure.																						
	133	55.0	791	1456	123	INF	238	99															
						EFF	1.2																
05/19/15	System running on arrival and departure.																						
	130	57.0	785	1445	124	INF	224	100															
						EFF	0.6																
05/26/15	System running on arrival and departure.																						
	138	57.0	791	1456	122	INF	200	99.6	2,440	2.1	6.0	5.9	30	1.12	26.8	0.0010	0.023	0.003	0.07	0.0027	0.06	0.014	0.33
						EFF	0.8		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
06/01/15	System running on arrival and departure.																						
	150	57.0	789	1453	128	INF	160	99.8															
						EFF	0.4																
06/08/15	System running on arrival and departure.																						
	143	57.0	788	1451	125	INF	170	99.4															
						EFF	1.0																
06/16/15	System running on arrival and departure.																						
	145	55.0	789	1452	129	INF	107	99.2															
						EFF	0.9																
06/24/15	System running on arrival and departure.																						
	137	55.0	789	1453	137	INF	150	99.7	1,870	1.4	4.4	4.3	26	0.96	23.0	0.0007	0.017	0.002	0.05	0.0022	0.05	0.013	0.32
						EFF	0.4		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
07/01/15	System running on arrival and departure.																						
	140	53.0	784	1443	130	INF	147	99.0															
						EFF	1.5																

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
07/06/15	System running on arrival and departure.																						
	147	53.0	792	1457	129	INF	149	99.2															
						EFF	1.2																
07/16/15	System running on arrival and departure.																						
	150	53.0	788	1451	128	INF	86	91.0															
						EFF	7.7																
07/21/15	System running on arrival and departure.																						
	144	53.0	786	1447	125	INF	139	94.8															
						EFF	7.2																
07/28/15	System running on arrival and departure.																						
	141	54.0	786	1446	169	INF	123	94.5	1,080	<1.0	2.4	2.4	15	0.68	16.4	0.0006	0.015	0.002	0.04	0.0015	0.04	0.009	0.23
						EFF	6.8		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
08/07/15	System running on arrival and departure.																						
	145	50.0	789	1452	129	INF	114	94.5															
						EFF	6.3																
08/11/15	System running on arrival and departure.																						
	110	52.0	951	1744	128	INF	109	95.9															
						EFF	4.5																
08/21/15	System running on arrival and departure.																						
	132	52.0	1062	1944	123	INF	111	96.4															
						EFF	4.0																
08/28/15	System running on arrival and departure.																						
	140	52.0	788	1450	122	INF	46	100															
						EFF	0.0																
08/31/15	System running on arrival and departure.																						
	146	52.0	787	1449	125	INF	40	100	1,560	<1.0	2.9	2.0	12	0.73	17.5	0.0005	0.011	0.001	0.03	0.0009	0.02	0.006	0.13
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
09/09/15	System running on arrival and departure.																						
	139	51.0	788	1450	126	INF	90.9	100															
						EFF	0.0																
09/15/15	System running on arrival and departure.																						
	133	51.0	788	1450	149	INF	92.7	98.6															
						EFF	1.3																
09/23/15	System running on arrival and departure.																						
	120	50.0	788	1450	144	INF	---	---															
						EFF	---																
09/24/15	System running on arrival and departure.																						
	121	50.0	789	1452	148	INF	130	96.3															
						EFF	4.8																
09/28/15	System running on arrival and departure.																						
	130	55.0	790	1454	141	INF	112	98.5	1,600	<1.0	3.0	2.8	19	0.85	20.3	0.0005	0.013	0.002	0.04	0.0015	0.04	0.010	0.24
						EFF	1.7		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
10/05/15	System running on arrival and departure.																						
	128	55.0	791	1456	142	INF	108	98.6															
						EFF	1.5																
10/12/15	System running on arrival and departure.																						
	125	55.0	791	1455	140	INF	99.6	98.2															
						EFF	1.8																
10/19/15	System running on arrival and departure.																						
	123	55.0	794	1461	139	INF	105	98.7															
						EFF	1.4																
10/26/15	System running on arrival and departure.																						
	118	50.0	793	1459	126	INF	114	98.9	1,490	<1.0	2.9	2.1	15	0.70	16.9	0.0005	0.011	0.001	0.03	0.0010	0.02	0.007	0.17
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---

TABLE 5B
HISTORICAL DATA FOR SVE SYSTEM OPERATION AND PERFORMANCE
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethlybenzene Removal		Xylenes Removal	
	Temp (deg F)	Vacuum ("H_2O)	Catox Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
11/02/15	System running on arrival and shutdown.																						
	110	50.0	789	1452	119	INF	440	98.9															
						EFF	4.9																
12/21/15	System down on arrival; system restarted and running on departure.																						
	90	45.0	788	1450	85	INF	---	---	943	<1.0	<1.0	<1.0	3.2	0.30	7.2	0.0003	0.008	0.000	0.01	0.0003	0.01	0.001	0.02
						EFF	---		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
12/28/15	System running on arrival and departure.																						
	90	40.0	785	1445	85	INF	---	---															
						EFF	---																
01/05/16	System running on arrival and departure.																						
	100	45.0	789	1452	126	INF	---	---	284	<1.0	<1.0	1.3	3.4	0.13	3.2	0.0005	0.011	0.000	0.01	0.0006	0.01	0.002	0.04
						EFF	---		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
01/13/16	System running on arrival and shutdown.																						
	94	42.0	790	1454	155	INF	34	93.5															
						EFF	2.2																
02/15/16	System down on arrival; system restarted and running on departure.																						
	---	---	---	---	---	INF	---	---															
						EFF	---																
02/16/16 (3)	System running on arrival and shutdown.																						
	112	35.0	784	1443	91	INF	65	98.2	839	<1.0	<1.0	3.2	6.2	0.29	6.9	0.0003	0.008	0.000	0.01	0.0011	0.03	0.002	0.05
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
Influent Averages									**3,933**	**10**	**11**	**21**	**69**	**0.94**	**22.5**	**0.0021**	**0.050**	**0.005**	**0.11**	**0.0043**	**0.10**	**0.016**	**0.39**

Notes:

INF	=	Influent vapor sample.
EFF	=	Effluent vapor sample.
TPH	=	Total petroleum hydrocarbons analyzed using EPA Method 8015D.
BTEX	=	Benzene, toluene, ethylbenzene and total xylenes analyzed using EPA Method 8260B.
Temp	=	Temperature of vapor stream.
Catox Temp.	=	Catalytic oxidizer catalyst inlet temperature.
deg C	=	Degrees Celsius
deg F	=	Degrees Fahrenheit
"H_2O	=	Inches of water column.
PID	=	Photo ionization detector measurement.
scfm	=	Standard cubic feet per minute.
ppm	=	Parts per million.
mg/M³	=	Milligrams per cubic meter.
lbs	=	Pounds
---	=	Not calculated.
<	=	Less than the specified laboratory reporting limit.
(1)	=	Falco 100 scfm catalytic oxidizer was shutdown and removed.
(2)	=	250 scfm Solleco TCAT thermal/catalytic oxidizer was installed on August 25, 2014 and started on August 28, 2014.
(3)	=	Remediation system was shutdown on February 16, 2016 and removed on March 9, 2016.

TABLE 6
ESTIMATED PETROLEUM HYDROCARBON MASS REMOVAL
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Reporting	OP	Cumulative	TPH Removal (lbs)		Benzene Removal (lbs)		Toluene Removal (lbs)		Ethlybenzene Removal (lbs)		Xylenes Removal (lbs)	
Period	Hours	OP Hours	Period	Cumulative	Period	Cumulative	Period	Cumulative	Period	Cumulative	Period	Cumulative
12/01/12 - 05/31/13	1,368	1,368	1,132	1,132	7.64	7.64	18.2	18.2	8.44	8.44	22.7	22.7
06/01/13 - 11/30/13	4,080	5,448	4,432	5,564	14.1	21.7	36.7	55.0	34.45	42.9	90.7	113.5
12/01/13 - 05/31/14	4,224	9,672	3,228	8,791	6.36	28.1	11.0	66.0	15.63	58.5	50.7	164.2
06/01/14 - 06/30/14	722	10,394	265	9,057	0.65	28.7	0.92	66.9	0.97	59.5	3.5	167.7
07/01/14 - 11/30/14	2,184	12,578	3,459	12,516	6.73	35.5	12.1	79.0	13.17	72.7	77.5	245.2
12/01/14 - 05/31/15	4,313	16,891	5,002	17,518	5.56	41.0	13.0	92.0	13.81	86.5	76.8	322.1
06/01/15 - 11/30/15	3,693	20,584	2,898	20,416	2.08	43.1	6.0	97.9	5.27	91.7	33.7	355.7
12/01/15 - 05/31/16	579	21,163	139	20,555	0.22	43.3	0.2	98.1	0.39	92.1	0.9	356.6

Notes:

TPH = Total petroleum hydrocarbons.
OP Hours = System operating hours during the reporting period.
lbs = Pounds

TPH and BTEX mass removal calculated using average mass removal during the reporting period.

TABLE 7
PT/OWS REMEDIATION SYSTEM RUNTIME
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Week	***Groundwater Wells Utilizied***		***Flow Total***	***Notes***
	HQUST-523A	***HQUST-524A***	***(Gallons)***	
12/07/15 - 12/13/15	OFF	OFF	0	The system was shut down and groundwater pumps were removed from monitor wells HQUST-523A and HQUST-524A to asses free product recovery, groundwater conditions, and collect quarterly groundwater samples.
12/14/15 - 12/20/15	OFF	OFF	0	
12/21/15 - 12/27/15	OFF	ON	1,430	
12/28/15 - 01/03/16	OFF	ON	391	
01/04/16 - 01/10/16	OFF	ON	11	
01/11/16 - 01/17/16	OFF	ON	105	On January 5, 2016 the system was shut down due to prolonged freezing temperatures, and was cycled on for Pima County inspection and sampling. The system was restarted on January 26, 2016.
01/18/16 - 01/24/16	OFF	OFF	0	
01/25/16 - 01/31/16	OFF	ON	0	
02/01/16 - 02/07/16	OFF	ON	140	
02/08/16 - 02/14/16	OFF	ON	4,540	
02/15/16 - 02/21/16	OFF	ON	1,638	
02/22/16 - 02/28/16	OFF	ON	3,434	On February 22, 2016 the system was shut down for routine maintenance, and was restarted on March 1, 2016.
02/29/16 - 03/06/16	OFF	ON	0	
03/07/16 - 03/13/16	OFF	ON	3,884	
03/14/16 - 03/20/16	OFF	ON	184	
03/21/16 - 03/27/16	OFF	OFF	0	
03/28/16 - 04/03/16	OFF	OFF	0	
04/04/16 - 04/10/16	OFF	OFF	0	
04/11/16 - 04/17/16	OFF	OFF	0	On March 18, 2016, the system was shut down due to the low volatile organic compounds observed during the quarterly groundwater sampling event conducted on February 24 and 26, 2016. The system will remain down for approximately 12 months to continue evaluating groundwater conditions.
04/18/16 - 04/24/16	OFF	OFF	0	
04/25/16 - 05/01/16	OFF	OFF	0	
05/02/16 - 05/08/16	OFF	OFF	0	
05/09/16 - 05/15/16	OFF	OFF	0	
05/16/16 - 05/22/16	OFF	OFF	0	
05/23/16 - 05/29/16	OFF	OFF	0	
05/30/16 - 06/05/16	OFF	OFF	0	
Total			***15,757***	

TABLE 8
SELECT PT/OWS ANALYTICAL RESULTS
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Date	Influent						
	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	HEM (mg/L)	COD (mg/L)	TSS (mg/L)
02/19/13	320	1,100	390	---	<5.0	36	<10
05/07/13	500	2,600	990	---	6.2	65	<10
08/27/13	43.3	40.7	<10	1,345	<5.0	28.6	<5.0
11/25/13(1)	---	---	---	---	---	---	---
02/18/14	27.8	40	<10	1,166	<5.0	54.2	<5.0
05/29/14	36.8	68.3	95.7	1,172	<5.0	24.7	<5.0
08/28/14	3.2	1.3	5.7	123	<5.0	19.0	<5.0
11/12/14	14.6	2.5	37.4	79.5	<5.0	32.3	<5.0
02/16/15	<1.0	<1.0	<1.0	8.9	<5.0	<10	<5.0
05/26/15	15.1	<2.5	13.2	14.0	<5.0	36.9	<5.0
08/21/15	<2.5	<2.5	<2.5	<5.0	<5.0	<20	450
11/24/15	<1.0	<1.0	<1.0	<2.0	<5.0	<20	<5.0
12/21/15	<1.0	1.7	13.1	141	<5.0	29.5	5.0

Notes:

µg/L	=	Micrograms per liter.
mg/L	=	Milligrams per liter.
B	=	Benzene
T	=	Toluene
E	=	Ethylbenzene
X	=	Total xylenes calculated by adding m,p-xylenes and o-xylene.
HEM	=	Hexane extractable material, represents oil/grease and total petroleum hydrocarbons.
COD	=	Chemical oxygen demand.
TSS	=	Total suspended solids.
<	=	Not reported above the specified laboratory reporting limits.
---	=	Not measured, not sampled, not analyzed.
BTEX	=	Analyzed using EPA Method 624.
HEM	=	Analyzed using EPA Method 1664A.
COD	=	Analyzed using HACH 8000.
TSS	=	Analyzed using SM 2540D.
(1)	=	Samples not collected due to system shut down on October 21, 2013 for replacement of well pumps.

TABLE 9
PT/OWS DISSOLVED PHASE PETROLEUM HYDROCARBON MASS REMOVAL
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Reporting Period	**Average Dissolved Phase Hydrocarbon Concentration**				**Volume of Water Treated During the Reporting Period**	**Average Dissolved Phase Hydrocarbon Removed During the Reporting Period (1)**			
	B (μg/L)	T (μg/L)	E (μg/L)	X (μg/L)	(gallons)	B (gallons)	T (gallons)	E (gallons)	X (gallons)
12/01/12 - 05/31/13	410	1,850	690	---	209,051	**0.71**	**3.23**	**1.20**	**---**
06/01/13 - 11/30/13	43.3	40.7	10.0	1,345	81,241	**0.029**	**0.0276**	**0.007**	**0.911**
12/01/13 - 05/31/14	32.3	54.2	52.9	1,169	171,632	**0.046**	**0.0775**	**0.076**	**1.67**
06/01/14 - 11/30/14	8.9	1.9	21.6	101	126,762	**0.009**	**0.0020**	**0.023**	**0.107**
12/01/14 - 05/31/15	8.1	1.0	7.1	11.5	147,579	**0.010**	**0.0012**	**0.009**	**0.014**
06/01/15 - 11/30/15 (3)	0.0	0.0	0.0	0.0	55,312	**0.000**	**0.0000**	**0.000**	**0.000**
12/01/15 - 05/31/16	1.0	1.7	13.1	141	15,757	**0.0001**	**0.0002**	**0.002**	**0.018**

Notes:

μg/L = Micrograms per liter.
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total xylenes calculated by adding m,p-xylenes and o-xylene.
(1) = Dissolved phase hydrocarbons removed during the reporting period is calculated using the following equation:
[8.34 lbs (2) x Gallons of water treated x Hydrocarbon Concentration (μg/L) x $1/10^9$ lbs].
(2) = 8.34 lbs = 1 gallon of water.
(3) = During the reporting period dissolved phase hydrocarbons were not calculated because hydrocarbons were not reported above the specified laboratory reporting limits.

TABLE 10
CUMULATIVE PT/OWS DISSOLVED PHASE PETROLEUM HYDROCARBON MASS REMOVAL
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ Facility ID 0-005176; ADEQ LUST #3208.01

Reporting Period	Duration of PT/OWS (days)	NAPL Hand Bailed (gallons)	Dissolved Phase from PT/OWS (gallons) (1)	Dissolved Phase Period (gallons)	Cumulative Dissolved Phase (gallons)
07/01/07 - 11/30/12 (2)	664	287	832	1,119	1,119
12/01/12 - 05/31/13 (3)	124	10	638	648	1,767
06/01/13 - 11/30/13	130	0	127	127	1,894
12/01/13 - 05/31/14	131	0	245	245	2,139
06/01/14 - 11/30/14	131	0	18.5	18.5	2,157
12/01/14 - 05/31/15	144	0	4.9	4.9	2,162
06/01/15 - 11/30/15 (4)	71	0	0.0	0.0	2,162
12/01/15 - 05/31/16 (5)	47	0	1.0	1.0	2,163

Notes:

PT/OWS = Pump and treat / Oil-water separator system.

NAPL = Non-aqueous phase liquid.

days = Number of days the PT/OWS was operating.

(1) = Dissolved phase removed from the PT/OWS during the reporting period are calculated from the following equation: [Total BTEX constituents x Number of days the PT/OWS operated].

(2) = NAPL removal activities provided by Conestoga-Rovers & Associates.

(3) = NAPL bailing was discontinued when the SVE system was started on April 8, 2013.

(4) = During the reporting period dissolved phase hydrocarbons were not calculated because hydrocarbons were not reported above the specified laboratory reporting limits.

(5) = On March 18, 2016, the system was shut down due to the low volatile organic compounds observed during the quarterly groundwater sampling event conducted on February 24 and 25, 2016. The system will remain down for approximately 12 months to continue evaluating groundwater conditions.

APPENDIX A

SELF-MONITORING AND REPORTING FORMS

Cardno

9977 North 90th Street,
Suite 150
Scottsdale, AZ 85258
USA

Phone 602 977 8000
Fax 602 977 8099
www.cardno.com

March 24, 2016
Cardno I052000015.S15

Mr. Doug Kirkland

Pima County – Regional Wastewater Reclamation Department

Technical Services Section, Industrial Wastewater Control

2955 West Calle Agua Nueva

Tucson, Arizona 85745

SUBJECT **Industrial Wastewater Discharge Permit Self-Monitoring Report Form**
City of Tucson Fire and Police Headquarters
UST Facility ID 0-005176
LUST File No. 3208.01
PCWW Permit No. 12916
265 South Church Avenue, Tucson, Arizona

Mr. Kirkland:

Cardno, on behalf of the City of Tucson – Environmental Services (COT-ES), hereby submits this Industrial Wastewater Discharge Permit Self-monitoring Report Form (SMRF) for discharge of treated water at the above-noted Site (Appendix A). This SMRF is submitted for discharges at the permitted discharge location (Permit No. 12916) for the reporting period of December 1, 2015 through February 29, 2016. Compliance samples were collected on December 21, 2015, and submitted to Accutest Laboratories of Phoenix, Arizona, a state-certified laboratory, under chain of custody protocol (Appendix B). Monitored parameters did not exceed the permit limits during the reporting period (Appendix C).

Discharge sample collection and a site inspection were conducted on January 5, 2016 by Pima County staff. An Inspection Report form was completed by Pima County and submitted to COT-ES with no issues noted in the Inspection Report (Appendix D).

LIMITATIONS

For any documents cited that were not generated by Cardno, the data taken from those documents is used “as is” and is assumed to be accurate. Cardno does not guarantee the accuracy of this data and makes no warranties for the referenced work performed nor the inferences or conclusions stated in these documents.

This document was prepared in accordance with generally accepted standards of environmental, geological, and engineering practices in Arizona at the time of investigation. No soil engineering geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

Please call Mr. Justin T. Patton with Cardno at (602) 909-3448 or Mr. Richard Byrd with the City of Tucson at (520) 837-3710 with questions regarding this Site.

Respectfully submitted,

Justin T. Patton
Project Manager
for Cardno
Direct Line 602 909 3448
Email: justin.patton@cardno.com

Enclosures:

Table 1	Flow Calculations
Table 2	Historical Data
Appendix A	Pima County Regional Wastewater Reclamation Department Industrial Waste Water Control Self-Monitoring Reporting Form
Appendix B	Laboratory Analytical Report and Chain-of-Custody Record
Appendix C	Field Data Sheet
Appendix D	Pima County Regional Wastewater Reclamation Department Industrial Waste Water Control Inspection Report

cc: Richard Byrd, COT-ES

TABLE 1
FLOW CALCULATIONS
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Operational Period (December 1, 2015 through February 29, 2016)

Week No.	***Dates***	***Previous Weeks' Total (Gallons)***	***Weeks' Total (Gallons)***	***Total Volume for Week(s) (Gallons)***	***Well Pump Run Time (Days)***	***Average Daily Flow Rate (GPD)***
337-339[1]	11/30/15 - 12/20/15	1,970,960	1,970,960	0	0	0
340	12/21/15 - 12/27/15	1,970,960	1,972,390	1,430	7	204
341	12/28/15 - 01/03/16	1,972,390	1,972,781	391	3	130
342	01/04/16 - 01/10/16	1,972,781	1,972,792	11	1	11
343-345[2]	01/11/16 - 01/31/16	1,972,792	1,972,897	105	1	105
346	02/01/16 - 02/07/16	1,972,897	1,973,037	140	1	140
347	02/08/16 - 02/14/16	1,973,037	1,977,577	4,540	7	649
348	02/15/16 - 02/21/16	1,977,577	1,979,215	1,638	4	410
349-350[3]	02/22/16 - 03/06/16	1,979,215	1,982,649	3,434	6	572
				Operational Period Average Flowrate (GPD)		247

Notes:

GPD = gallons per day

[1] On September 9, 2015, the system was shut down and groundwater pumps were removed from monitor wells HQUST-523A and HQUST-524A to asses free product recovery, groundwater conditions, and collect quarterly groundwater samples. The system was restarted on December 14, 2015.

[2] On January 5, 2016 the system was shut down due to prolonged freezing temperatures, and was restarted on January 26, 2016.

[3] On February 22, 2016 the system was shut down for routine maintenance, and was restarted on March 1, 2016.

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
1 thru 4 [1]	6/11/09 - 7/5/09	0	6,099	6,099	6	1,017
5 [2]	7/6/09 - 7/12/09	6,099	8,897	2,798	2	1,399
6 [3]	7/13/09 - 7/19/09	8,897	26,264	17,367	5	3,473
7 [4]	7/20/09 - 7/26/09	17,367	39,543	22,176	5	4,435
8 [5]	7/27/09 - 8/2/09	39,543	42,685	3,142	2	1,571
9 [6]	8/3/09 - 8/9/09	42,685	42,685	0	0	0
10 [7]	8/10/09 - 8/23/09	42,685	42,685	0	0	0
11 [8]	8/24/09 - 8/31/09	42,685	43,179	494	3	165
12 thru 15[9]	9/1/09 - 9/28/09	43,178	43,178	0	0	0
16	9/29/09 - 10/5/09	43,178	48,812	5,634	6	1,024
17	10/6/09 - 10/12/09	48,812	56,291	7,479	7	1,151
18[10]	10/13/09 - 10/19/09	56,291	56,391	100	1	200
19[11]	10/20/09 - 10/26/09	56,391	60,202	3,811	3	1,270
20	10/27/09 - 11/2/09	60,202	69,162	8,960	6	1,493
21[12]	11/3/09 - 11/9/09	69,162	81,224	12,062	3	4,021
22[13]	11/10/09 - 11/16/09	81,224	83,198	1,974	1	1,974
23-24[14]	11/17/09 - 11/30/09	60,202	83,198	22,996	0	0
25-26[15]	12/1/09 - 12/14/09	83,198	83,198	0	0	0
27-28	12/15/09 - 12/28/09	83,198	107,435	24,237	12	2,020
29-37[16]	12/29/09 - 2/28/10	107,435	107,435	0	0	0
38-41[17]	3/1/10 - 3/28/10	107,435	107,897	462	1	462
42-43[18]	3/29/10 - 4/11/10	107,897	137,822	29,925	8	3,741
44-45[19]	4/12/10 - 4/25/10	137,822	156,941	19,119	5	3,824
46-47	4/26/10 - 5/9/10	156,941	208,684	51,743	12	4,312
48-49	5/10/10 - 5/23/10	208,684	239,591	30,907	10	3,091
50	5/24/10 - 5/30/10	239,591	247,010	7,419	2	3,710
51	6/1/10 - 6/6/10	247,010	250,100	3,090	6	515
52	6/7/10 - 6/13/10	250,100	257,200	7,100	7	1,014

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
53	6/14/10 - 6/20/10	257,200	274,200	17,000	7	2,429
54	6/21/10 - 6/27/10	274,200	284,100	9,900	7	1,414
55	6/28/10 - 7/4/10	284,100	298,400	14,300	7	2,043
56	7/5/10 - 7/11/10	298,400	326,000	27,600	7	3,943
57	7/18/10 - 7/25/10	326,000	356,700	30,700	7	4,386
58	7/26/10 - 8/1/10	356,700	380,000	23,300	7	3,329
59-63[20]	8/1/10 - 8/27/10	380,000	383,468	3,468	2	2,312
64	9/06/10 - 9/12/10	383,468	420,192	36,724	7	5,246
65	9/13/10 -9/19/10	420,192	431,481	11,289	4	2,822
66	9/20/10 - 9/26/10	431,481	443,113	11,632	6	1,939
67	9/27/10 - 10/3/10	443,113	462,381	19,268	2	9,634
68	10/4/10 - 10/10/10	462,381	466,814	4,433	4	1,108
69[21]	10/11/10 - 10/17/10	466,814	467,868	1,054	7	151
70[21]	10/18/10 - 10/24/10	467,868	472,010	4,142	7	592
71	10/25/10 - 10/31/10	472,010	475,563	3,553	7	508
72	11/1/10 - 11/7/10	475,563	476,500	937	7	134
73	11/8/10 - 11/14/10	476,500	478,638	2,138	2	1,069
74	11/15/10 - 11/21/10	478,638	478,638	0	0	0
75	11/22/10 - 11/28/10	478,638	482,211	3,573	6	596
76	11/29/10 - 12/5/10	478,638	482,211	3,573	7	510
77	12/6/2010 - 12/12/10	482,211	488,222	6,011	6.5	925
78	12/13/10 - 12/19/10	488,222	492,024	3,802	7	543
79	12/20/10 - 12/26/10	492,024	492,838	814	7	116
80	12/27/10 - 01/02/11	492,838	498,188	5,350	7	764
81	1/03/11 - 1/09/11	498,188	498,853	665	7	95
82	1/10/11 - 1/16/11	498,853	502,826	3,973	7	568
83	1/17/11 - 1/23/11	502,826	505,253	2,427	7	347
84-85	1/24/11 - 2/06/11	505,253	507,480	2,227	14	159

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
86[22]	2/07/11 - 2/13/11	507,480	507,624	144	0	0
87	2/14/11 - 2/20/11	507,624	519,500	11,876	7	1,697
88[23]	2/21/11 - 2/27/11	519,500	520,935	1,435	1	1,435
89[24]	2/28/11 - 3/06/11	520,935	520,935	0	0	0
90[24]	3/07/11 - 3/13/11	520,935	520,935	0	0	0
91[24]	3/14/11 - 3/20/11	520,935	520,935	0	0	0
92	3/21/11 - 3/27/11	520,935	524,743	3,808	2	1,731
93	3/28/11 - 4/03/11	524,743	535,683	10,940	7	1,563
94	4/04/11 - 4/10/11	535,683	547,289	11,606	7	1,658
95	4/11/11 - 4/17/11	547,289	557,001	9,712	7	1,387
96	4/18/11 - 4/24/11	557,001	565,437	8,436	7	1,205
97	4/25/11 - 5/01/11	565,437	572,853	7,416	7	1,059
98	5/02/11 - 5/08/11	572,853	576,644	3,791	7	542
99-101[25]	5/9/11 - 5/29/11	576,644	576,984	340	3	113
102	5/30/11 - 6/05/11	576,984	594,342	17,358	7	2,480
103	6/06/11 - 6/12/11	594,342	604,988	10,646	7	1,521
104	6/13/11 - 6/19/11	604,988	615,449	10,460	7	1,494
105	6/20/11 - 6/26/11	615,449	626,388	10,940	7	1,563
106	6/27/11 - 7/03/11	626,388	637,170	10,782	7	1,540
107	7/04/11 - 7/10/11	637,170	648,171	11,001	7	1,572
108	7/11/11 - 7/17/11	648,171	660,652	12,481	7	1,783
109	7/18/11 - 7/24/11	660,652	673,118	12,466	7	1,781
110	7/25/11 - 7/31/11	673,118	686,024	12,906	7	1,844
111	8/01/11 - 8/07/11	686,024	698,681	12,657	7	1,808
112	8/08/11 - 8/14/11	698,681	706,220	7,539	7	1,077
113	8/15/11 - 8/21/11	706,220	711,929	5,709	7	816
114[26]	8/22/11 - 8/28/11	711,929	713,612	1,683	7	240
115-116[27]	08/29/11 - 09/11/11	713,612	715,787	2,175	14	155

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HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
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117[28]	09/12/11 - 09/18/11	715,787	716,366	578	7	83
118[28]	09/19/11 - 09/25/11	716,366	717,136	771	7	110
119[28]	09/26/11 - 10/02/11	717,136	717,597	461	7	66
120[28]	10/03/11 - 10/09/11	717,597	717,639	41	7	6
121[28]	10/10/11 - 10/16/11	717,639	717,767	128	7	18
122	10/17/11 - 10/23/11	717,767	728,705	10,938	7	1,563
123	10/24/11 - 10/30/11	728,705	743,617	14,912	7	2,130
124	10/31/11 - 11/06/11	743,617	752,756	9,139	7	1,306
125	11/07/11 - 11/13/11	752,756	766,463	13,707	7	1,958
126[29]	11/14/11 - 11/20/11	766,463	768,288	1,825	1	1,825
127[29]	11/21/11 - 11/27/11	768,288	768,288	0	0	0
128[29]	11/28/11 - 12/04/11	768,288	768,288	0	0	0
129[29]	12/05/11 - 12/11/11	768,288	778,260	9,972	6	1662
130	12/12/11 - 12/18/11	778,260	786,866	8,606	7	1229
131	12/19/11 - 12/25/11	786,866	801,536	14,671	7	2157
132	12/26/11 - 01/01/12	801,536	816,699	15,163	7	2166
133	01/02/12 - 01/08/12	816,699	834,132	17,432	7	2490
134	01/09/12 - 01/15/12	834,132	849,913	15,781	7	2254
135-136	01/16/12 - 01/29/12	849,913	881,200	31,287	14	2235
137	01/30/12 - 02/05/12	881,200	896,731	15,531	7	2219
138	02/06/12 - 02/12/12	896,731	909,539	12,808	7	1830
139	02/13/12 - 02/19/12	909,539	921,154	11,615	7	1659
140[30]	02/20/12 - 02/26/12	921,154	936,511	15,356	7	2194
141[31]	02/27/12 - 03/04/12	936,511	951,910	15,399	7	2,200
142[31]	03/05/12 - 03/11/12	951,910	967,310	15,400	7	2,200
143	03/12/12 - 03/18/12	967,310	991,742	24,432	7	3,490
144	03/19/12 - 03/25/12	991,742	1,019,635	27,893	7	3,985
145	03/26/12 - 04/01/12	1,019,635	1,048,934	29,299	7	4,186

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146	04/02/12 - 04/08/12	1,048,934	1,073,527	24,593	7	3,513
147	04/09/12 - 04/15/12	1,073,527	1,098,624	25,097	7	3,585
148	04/16/12 - 04/22/12	1,098,624	1,119,880	21,256	7	3,037
149	04/23/12 - 04/29/12	1,119,880	1,134,604	14,724	7	2,103
150	04/30/12 - 05/06/12	1,134,604	1,159,385	24,781	7	3,540
151[32]	05/07/12 - 05/13/12	1,159,385	1,175,193	15,808	3	5,269
152-180[32]	05/14/12 - 12/02/12	1,175,193	1,175,193	0	0	0
181	12/03/12 - 12/09/12	1,175,193	1,177,608	2,415	2	1,208
182	12/10/12 - 12/16/12	1,177,608	1,192,146	14,538	7	2,077
183	12/17/12 - 12/23/12	1,192,146	1,205,512	13,366	7	1,909
184	12/24/12 - 12/30/12	1,205,512	1,223,296	17,784	7	2,541
185	12/31/12 - 01/06/13	1,223,296	1,234,797	11,501	7	1,643
186[33]	01/07/13 - 01/13/13	1,234,797	1,248,826	14,029	4	3,507
187[33]	01/14/13 - 01/20/13	1,248,826	1,248,826	0	0	0
188[33]	01/21/13 - 01/27/13	1,248,826	1,248,826	0	0	0
189	01/28/13 - 02/03/13	1,248,826	1,251,438	2,612	7	373
190-191	02/04/13 - 02/17/13	1,251,438	1,274,104	22,666	14	1,619
192	02/18/13 - 02/24/13	1,274,104	1,294,556	20,452	7	2,922
193	02/25/13 - 03/03/13	1,294,556	1,296,842	2,286	7	327
194-197[34]	03/04/13 - 03/31/13	1,296,842	1,296,842	0	0	0
198	04/01/13 - 04/07/13	1,296,842	1,315,743	18,901	10	1,890
199	04/08/13 - 04/14/13	1,315,743	1,321,002	5,259	3	1,753
200	04/15/13 - 04/21/13	1,321,002	1,338,303	17,301	10	1,730
201	04/22/13 - 04/28/13	1,338,303	1,350,271	11,968	7	1,710
202[35]	04/29/13 - 05/05/13	1,350,271	1,350,384	113	1	113
203[35]	05/06/13 - 05/12/13	1,350,384	1,350,520	136	1	136
204	05/13/13 - 05/19/13	1,350,520	1,361,086	10,566	7	1,509
205	05/20/13 - 05/26/13	1,361,086	1,371,441	10,355	6	1,726

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206	05/27/13 - 06/02/13	1,371,441	1,384,244	12,803	10	1,280
207	06/03/13 - 06/09/13	1,384,244	1,387,673	3,429	5	686
208[36]	06/10/13 - 06/16/13	1,387,673	1,387,673	0	0	0
209	06/17/13 - 06/23/13	1,387,673	1,404,318	16,645	10	1,665
210	06/24/13 - 06/30/13	1,404,318	1,411,709	7,391	4	1,848
211	07/01/13 - 07/07/13	1,411,709	1,421,303	9,594	6	1,599
212	07/08/13 - 07/14/13	1,421,303	1,427,382	6,079	7	868
213	07/15/13 - 07/21/13	1,427,382	1,427,803	421	11	38
214	07/22/13 - 07/28/13	1,427,803	1,428,778	975	6	163
215	07/29/13 - 08/04/13	1,428,778	1,429,568	790	5	158
216	08/05/13 - 08/11/13	1,429,568	1,443,307	13,739	6	2,290
217	08/12/13 - 08/18/13	1,443,307	1,443,783	476	7	68
218	08/19/13 - 08/25/13	1,443,783	1,451,604	7,821	7	1,117
219	08/26/13 - 09/01/13	1,451,604	1,451,756	152	8	19
220	09/02/13 - 09/08/13	1,451,756	1,452,079	323	8	40
221	09/09/13 - 09/15/13	1,452,079	1,452,309	230	6	0
222	09/16/13 - 09/22/13	1,452,309	1,452,571	262	7	37
223	09/23/13 - 09/29/13	1,452,571	1,457,893	5,322	9	591
224[37]	09/30/13 - 10/06/13	1,457,893	1,457,893	0	0	0
225	10/07/13 - 10/13/13	1,457,893	1,457,921	28	4	7
226	10/14/13 - 10/20/13	1,457,921	1,458,318	397	7	57
227	10/21/13 - 10/27/13	1,458,318	1,465,485	7,167	7	1,024
228-232[38]	10/28/13 - 12/01/13	1,465,485	1,465,485	0	0	0
233	12/02/13 - 12/08/13	1,465,485	1,487,150	21,665	7	3,095
234	12/09/13 - 12/15/13	1,487,150	1,501,268	14,118	10	1,412
235	12/16/13 - 12/22/13	1,501,268	1,509,669	8,401	6	1,400
236	12/23/13 - 12/29/13	1,509,669	1,517,976	8,307	6	1,385
237	12/30/13 - 01/05/14	1,517,976	1,530,691	12,715	9	1,413

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238	01/06/14 - 01/12/14	1,530,691	1,538,973	8,282	6	1,380
239	01/13/14 - 01/19/14	1,538,973	1,545,515	6,542	6	1,090
240	01/20/14 - 01/26/14	1,545,515	1,556,550	11,035	8	1,379
241	01/27/14 - 02/02/14	1,556,550	1,564,560	8,010	6	1,335
242-243[39]	02/03/14 - 02/16/14	1,564,560	1,564,762	202	7	29
244[40]	02/17/14 - 02/23/14	1,564,762	1,564,825	63	1	63
245-249[39]	02/24/14 - 03/30/14	1,564,825	1,564,825	0	0	0
250	03/31/14 - 04/06/14	1,564,825	1,569,015	4,190	3	1,397
251	04/07/14 - 04/13/14	1,569,015	1,574,555	5,540	4	1,385
252	04/14/14 - 04/20/14	1,574,555	1,584,173	9,618	7	1,374
253	04/21/14 - 04/27/14	1,584,173	1,599,135	14,962	11	1,360
254	04/28/14 - 05/04/14	1,599,135	1,607,115	7,980	6	1,330
255	05/05/14 - 05/11/14	1,607,115	1,615,156	8,041	6	1,340
256	05/12/14 - 05/18/14	1,615,156	1,625,283	10,127	8	1,266
257	05/19/14 - 05/25/14	1,625,283	1,630,365	5,082	4	1,271
258	05/26/14 - 06/01/14	1,630,365	1,641,307	10,942	10	1,094
259	06/02/14 - 06/08/14	1,641,307	1,650,187	8,880	7	1,269
260	06/09/14 - 06/15/14	1,650,187	1,658,291	8,104	7	1,158
261	06/16/14 - 06/22/14	1,658,291	1,663,401	5,110	4	1,278
262	06/23/14 - 06/29/14	1,663,401	1,675,837	12,436	10	1,244
263[41]	06/30/14 - 07/06/14	1,675,837	1,680,617	4,780	7	683
264-265[41]	07/07/14 - 07/20/14	1,680,617	1,680,617	0	0	0
266	07/21/14 - 07/27/14	1,680,617	1,687,513	6,896	9	766
267	07/28/14 - 08/03/14	1,687,513	1,694,891	7,378	6	1,230
268	08/04/14 - 08/10/14	1,694,891	1,704,692	9,801	8	1,225
269[42]	08/11/14 - 08/17/14	1,704,692	1,705,240	548	8	69
270[42]	08/18/14 - 08/24/14	1,705,240	1,705,240	0	0	0
271	08/25/14 - 08/31/14	1,705,240	1,711,210	5,970	9	663

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272	09/01/14 - 09/07/14	1,711,210	1,722,842	11,632	5	2,326
273	09/08/14 - 09/14/14	1,722,842	1,731,915	9,073	8	1,134
274	09/15/14 - 09/21/14	1,731,915	1,741,505	9,590	6	1,598
275	09/22/14 - 09/28/14	1,741,505	1,751,876	10,371	7	1,482
276	09/29/14 - 10/05/14	1,751,876	1,764,479	12,603	9	1,400
277	10/06/14 - 10/12/14	1,764,479	1,764,590	111	6	19
278-281[43]	10/13/14 - 11/09/14	1,764,590	1,764,590	0	0	0
282	11/10/14 - 11/16/14	1,764,590	1,764,939	349	2	175
283	11/17/14 - 11/23/14	1,764,939	1,765,072	133	6	22
284	11/24/14 - 11/30/14	1,765,072	1,768,069	2,997	7	428
285	12/01/14 - 12/07/14	1,768,069	1,776,776	8,707	9	967
286	12/08/14 - 12/14/14	1,776,776	1,783,699	6,923	5	1,385
287	12/15/14 - 12/21/14	1,783,699	1,794,167	10,468	7	1,495
288	12/22/14 - 12/28/14	1,794,167	1,807,424	13,257	7	1,894
289	12/29/14 - 01/04/15	1,807,424	1,814,099	6,675	5	1,335
290	01/05/15 - 01/11/15	1,814,099	1,826,744	12,645	9	1,405
291	01/12/15 - 01/18/15	1,826,744	1,827,037	293	7	42
292	01/19/15 - 01/25/15	1,827,037	1,835,990	8,953	6	1,492
293	01/26/15 - 02/01/15	1,835,990	1,846,014	10,024	7	1,432
294	02/02/15 - 02/08/15	1,846,014	1,853,780	7,766	7	1,109
295[44]	02/09/15 - 02/15/15	1,853,780	1,853,780	0	0	0
296	02/16/15 - 02/22/15	1,853,780	1,859,970	6,190	5	1,238
297	02/23/15 - 03/01/15	1,859,970	1,869,717	9,747	9	1,083
298	03/02/15 - 03/08/15	1,869,717	1,875,196	5,479	6	913
299	03/09/15 - 03/15/15	1,875,196	1,884,662	9,466	9	1,052
300	03/16/15 - 03/22/15	1,884,662	1,885,340	678	3	226
301	03/23/15 - 03/29/15	1,885,340	1,886,690	1,350	8	169
302	03/30/15 - 04/05/15	1,886,690	1,889,727	3,037	8	380

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303	04/06/15 - 04/12/15	1,889,727	1,893,945	4,218	5	844
304	04/13/15 - 04/19/15	1,893,945	1,898,374	4,429	7	633
305	04/20/15 - 04/26/15	1,898,374	1,906,409	8,035	9	893
306-307[45]	04/27/15 - 05/10/15	1,906,409	1,911,604	5,195	5	1,039
308	05/11/15 - 05/17/15	1,911,604	1,915,491	3,887	7	555
309[46]	05/18/15 - 05/24/15	1,915,491	1,915,501	10	1	10
310-312[46]	05/25/15 - 06/14/15	1,915,501	1,915,648	147	1	147
313	06/15/15 - 06/21/15	1,915,648	1,923,673	8,025	8	1,003
314	06/22/15 - 06/28/15	1,923,673	1,931,556	7,883	8	985
315	06/29/15 - 07/05/15	1,931,556	1,937,904	6,348	7	907
316-317[47]	07/06/15 - 07/19/15	1,937,904	1,942,214	4,310	5	862
317	07/13/15 - 07/19/15	1,942,214	1,942,214	0	0	0
318	07/20/15 - 07/26/15	1,942,214	1,948,458	6,244	7	892
319	07/27/15 - 08/02/15	1,948,458	1,953,256	4,798	7	685
320	08/03/15 - 08/09/15	1,953,256	1,959,514	6,258	10	626
321	08/10/15 - 08/16/15	1,959,514	1,962,004	2,490	4	623
322	08/17/15 - 08/23/15	1,962,004	1,964,557	2,553	10	255
323	08/24/15 - 08/30/15	1,964,557	1,964,604	47	7	7
324	08/31/15 - 09/06/15	1,964,604	1,969,005	4,401	3	1,467
325	09/07/15 - 09/13/15	1,969,005	1,970,949	1,944	9	216
326-335[48]	09/14/15 - 11/22/15	1,970,949	1,970,949	0	0	0
336[49]	11/23/15 - 11/29/15	1,970,949	1,970,960	11	1	11
337-339[48]	11/30/15 - 12/20/15	1,970,960	1,970,960	0	0	0
340	12/21/15 - 12/27/15	1,970,960	1,972,390	1,430	7	204
341	12/28/15 - 01/03/16	1,972,390	1,972,781	391	3	130
342	01/04/16 - 01/10/16	1,972,781	1,972,792	11	1	11
343-345[50]	01/11/16 - 01/31/16	1,972,792	1,972,897	105	1	105
346	02/01/16 - 02/07/16	1,972,897	1,973,037	140	1	140

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347	02/08/16 - 02/14/16	1,973,037	1,977,577	4,540	7	649
348	02/15/16 - 02/21/16	1,977,577	1,979,215	1,638	4	410
349-350[51]	02/22/16 - 03/06/16	1,979,215	1,982,649	3,434	6	572
					Total Average Flowrate (GPD)	1,226

Notes:

GPD = gallons per day

[1] Well water extraction was not turned on until 6/30/09 due to air leaks needing repairs. Actual Well Pump Run-time from 6/11 to 7/5 is 6 days.

[2] Well water extraction was turned off for 5 days for maintenance of system and pumps. Well Pump Run-time from 7/6 to 7/12 is 2 days.

[3] Well water extraction was turned off for 2 days to for maintenance inspection. Well Pump Run-time from 7/13 to 7/19 is 5 days.

[4] Well water extraction was turned off for 2 days to replace cam locks and maintenance. Well Pump Run-time from 7/20 to 7/26 is 5 days.

[5] Well water extraction was on for only 2 days to open up wells DIW & DIE and to conduct light non-aqueous phase liquids (LNAPL) readings. Well Pump Run-time from 7/27 to 8/2 is 2 days.

[6] Well water extraction was off to open up wells DIW & DIE and to conduct LNAPL readings. Well Pump Run-time from 8/3 to 8/9 is 0 days.

[7] Well water extraction was off to open up wells DIW & DIE and to conduct LNAPL readings. Well Pump Run-time from 8/10 to 8/23 is 0 days.

[8] Well water extraction was on for 3 days due to needed repairs for pumps and maintenance inspection. Well Pump Run-time from 7/27 to 8/2 is 3 days.

[9] Well water extraction was off due to extraction pump malfunctioning.

[10] Extraction from water wells was terminated to measure LNAPL rebound. Well Pump Run-time from 10/13 to 10/19 is 1 day.

[11] Extraction from water wells was terminated to measure LNAPL rebound. Well Pump Run-time from 10/20 to 10/26 is 3 days.

[12] Well water extraction was turned off for maintenance of system. Well Pump Run-time from 11/3 to 11/9 is 3 days.

[13] Well water extraction was turned off for maintenance of system and to relocate RSI ICE Unit to Area of Concern 2 (AOC2) at well CEP-519A. Well Pump Run-time from 11/10 to 11/16 is 1 day.

[14] RSI unit was relocated to AOC2 for vapor extraction at well CEP-519A.

[15] No groundwater extraction was conducted during this period (soil vapor extraction was conducted at AOC2).

[16] The vapor extraction/groundwater extraction (VEGE) system was shutdown on 12/29/09 and not operated thereafter. The unit was returned to the equipment vendor on 1/6/10.

[17] System construction of the oil/water seperator (OWS) remediation system was conducted in March 2010. The system began operation on 3/24/10.

[18] Periodic operation during system start-up and commissioning.

[19] Periodic operation during system start-up and commissioning. System was shut down for several days beginning on 4/20/10 to review and implement modifications.

[20] System was shut down for most of the time during this period due to needed maintenance and repairs to the OWS, remediation system, and pump air lines.
The system was operational on 8/26 and 8/27.

[21] Pump in well HQUST 524A was turned off by City of Tucson (COT) maintenance for a 5-day period.

Notes:

[22] System was shut down for repairs (pipes burst due to the extremely long freezing temperatures).

[23] System was shut down on 2/21/11 so LNAPL rebound monitoring could be conducted.

[24] System was shut down on 2/21/11 to 3/25/11 so LNAPL rebound monitoring could be conducted.

[25] The pumps had plugged and were not pumping groundwater during a 3-week period. The final totalizer reading was collected on 5/26/11 when system maintenance was conducted. The number of days of Run-time is estimated.

[26] The pump in well HQUST-523A was plugged and was pulled for maintenance on 8/24/11.

[27] Extraction well HQUST-524A was taken off line due to a faulty air regulator.

[28] Extraction well HQUST-523A was taken off line, pump had become non-functional due to mechanical failure, new pump on order.

[29] System shut down for ISCO pilot test and COT quarterly sampling event.

[30] Extraction well HQUST-523A was taken off line, pump had become non-functional due to mechanical failure.

[31] Extraction well HQUST-524A was taken off line, pump had become non-functional due to mechanical failure.

[32] System was initially shut down for May 2012 ISCO pilot test, COT second quarterly sampling event, and for remedial technology evaluation.

[33] System was shut down on January 11, 2013 due to freezing tempratures.

[34] System was shut down on March 1, 2013 for soil vapor extraction remedial equipment install. The system was restarted the week of April 1, 2013.

[35] System was shut down on April 30, 2013 for pump manifold replacement. System was cycled manualy during the repair phase and re-started on May 7, 2013.

[36] System was shut down on June 4, 2013 due to an observed leak in the carbon vessel hose. The hose was replaced and the system was restarted on June 11, 2013.

[37] System was shut down for maintenance of well pumps.

[38] System was shut down on October 21, 2013 for replacement of well pumps.

[39] System was shut down on February 4, 2014 due to an observed leak in carbon vessel CV2. The vessel was repaired and the system was restarted on March 31, 2014.

[40] On February 18, 2014 the system was cycled on to collect discharge compliance samples.

[41] System was shut down on July 3, 2014 due to damaged transfer pump fittings. Transfer pump fittings were replaced and the system was restarted the week of July 14, 2014.

[42] System was shut down on August 11, 2014 to replace the transfer pump, and was restarted on August 21, 2014.

[43] System was shut down the week of October 13, 2014 to repair the air compressor. The air compressor was repaired and the system was restarted on November 12, 2014.

[44] The system was shut down on February 6, 2015 for routine maintenance, and was restarted on February 12, 2015.

[45] The system was shut down on April 27, 2015 for routine maintenance, and was restarted on May 4, 2015.

[46] The system was shut down on May 12, 2015 for transfer pump maintenance, and was cycled on to collect discharge compliance samples on May 26, 2015. The system was restared on June 8, 2015.

[47] The system was shut down on July 6, 2015 for well pump maintenance, and was restarted on July 14, 2015.

[48] On September 9, 2015, the system was shut down and groundwater pumps were removed from monitor wells HQUST-523A and HQUST-524A to asses free product recovery, groundwater conditions, and collect quarterly groundwater samples. The system was restarted on December 14, 2015.

[49] On November 24, 2015 the system was cycled on to collect discharge compliance samples.

[50] On January 5, 2016 the system was shut down due to prolonged freezing temperatures, and was restarted on January 26, 2016.

[51] On February 22, 2016 the system was shut down for routine maintenance, and was restarted on March 1, 2016.

APPENDIX A

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT INDUSTRIAL WASTE WATER CONTROL SELF-MONITORING REPORTING FORM

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
INDUSTRIAL WASTEWATER CONTROL
SELF-MONITORING REPORT FORM

PART I. BUSINESS INFORMATION (Make necessary corrections)

FACILITY NAME: City of Tucson Environmental Services

PERMIT NO.: 12916

MAILING ADDRESS PO Box 27210
Tucson, AZ 85701

SERVICE ADDRESS: 265 South Church Avenue
Tucson, AZ 85710

PART II. REPORT INFORMATION

SAMPLING PERIOD: 12/01/2015 to 02/29/2016 **REPORT DUE:** 03/28/2016

PERMIT EXPIRATION PERIOD: 06/07/2017

PERMIT RENEWAL DATE: 12/09/2016

PART III. MONITORING REQUIREMENTS (Fill in the blanks)

A. ANALYSIS LIMITS AND RESULTS

SAMPLE LOCATION: 100 Collected at a sample port located down stream from the process water carbon vessels.

PARAMETER	LIMITS	SAMPLE FREQ	PERMITTED SAMPLE TYPE	ACTUAL SAMPLE TYPE	NAME OF SAMPLER	SAMPLE DATE	RESULTS
Chemical Oxygen Demand	***	QUARTERLY	COMPOS	Composite	John Manley	12/21/15	<20 mg/L
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Grab	John Manley	12/21/15	<5.0 mg/L
pH	5.0-11 S.U.	QUARTERLY	GRAB	Grab	John Manley	12/21/15	7.00
Purgeable Aromatics	***	QUARTERLY	GRAB	Grab	John Manley	12/21/15	ND
Purgeable Halocarbons	***	QUARTERLY	GRAB	Grab	John Manley	12/21/15	ND
Total Suspended Solids	***	QUARTERLY	COMPOS	Composite	John Manley	12/21/15	<5.0 mg/L

***** = Monitoring and reporting required. No limits set at this time.**

Sample Location: 100 Collected at a sample port located down stream from the process water carbon vessels.

Were any additional compliance samples taken? **YES [ ]** **NO [X]**

FACILITY NAME:	City of Tucson Environmental Services		
PERMIT NO.:	12916	**SAMPLING PERIOD:**	12/01/2015 to 02/29/2016
MAILING ADDRESS	PO Box 27210 Tucson, AZ 85701	**SERVICE ADDRESS:**	265 South Church Avenue Tucson, AZ 85710

B. LABORATORY INFORMATION (check which one is applicable and fill in the blank)

Samples were taken by an independent lab [X]

Samples <u>were NOT</u> taken by an independent lab [ ]

Name of Lab Performing Analysis: Accutest Laboratories

C. WASTEWATER FLOW INFORMATION (Fill in the blanks)

NOTE: 1 CCF = 100 Cubic Feet = 748 Gallons

SAMPLE LOCATION: 100 Collected at a sample port located down stream from the process water carbon vessels.

MEASRD Flow (total)

Date: 12/21/2015 ** Flow is monitored weekly for permit compliance.

Flow (Gallons): **247

PART IV. REPORT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Richard M. Byrd

Authorized Representative: Richard Byrd

Date: 03 / 24 / 2016

Mail completed Report to: Pima County Regional Wastewater Reclamation Department
Industrial Wastewater Control
2955 West Calle Agua Nueva
Tucson, AZ 85745

Pima County Regional Wastewater Reclamation Department
Industrial Wastewater Control Section

INSTRUCTIONS FOR COMPLETING THE SELF-MONITORING REPORT FORM (SMRF)

Part I. Business Information

Review information and make any changes or corrections on the Self-Monitoring Report Form (SMRF).

Part II. Report Information

This part lists the Sampling Period for the SMRF. All required industrial wastewater samples shall be taken during normal operations within the sampling period. Return the completed SMRF to Industrial Wastewater Control Section no later than the report due date.

Part III. Monitoring Requirements

This part of the report form provides blanks for submittal of sampling and flow data collected for the sampling period. A blank is provided for each analysis result required to be reported.

A. Transfer (type or print) the following information from the laboratory analysis report into the blanks provided:

   1. Actual Sample Type (grab or composite)

   2. Name of Sampler (name of the person who collected sample)

   3. Sample Date (dale the sample was collected, not analysis date)

   4. Analysis Results (from the report by an independent laboratory.) If the results are "ND" or "Not Detected", please indicate the detection limit in parenthesis; i.e., "ND (0.001)"

   5. Sample Location (that part of your system where the sample was collected, i.e., "Cleanout on the discharge side of the grease trap.")

   Refer to Part 1.A.3. of your permit if you are not sure of the sampling requirements. <u>Do not send laboratory analysis reports.</u> Keep all records for a minimum of three years.

B. Check the box next to the appropriate statement to indicate whether the person who collected the sample(s) is an employee of your business or an employee of the independent laboratory that performed the sample analysis. Write in the name of the independent laboratory that performed the sample analysis.

C. A blank is provided for each flow value requirement. Type or print the flow data into the blanks provided. Note: if flow monitoring is not required for your permit this part will not appear on the SMRF.

Part IV. Report Certification

Please read carefully. The only acceptable signature is that of the Authorized Representative whose name is printed under the signature line. If this person is no longer the Authorized Representative, indicate the new Authorized Representative.

Refer to your permit for clarification of the requirements. SMRFs are provided as a courtesy. Every effort has been made to verify that they accurately reflect your permit requirements. In the event it does not, you are required to submit the information required by your permit. For further information or help completing the SMRF, please call (520) 724-6200.

APPENDIX B

LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD

Northern California
ACCUTEST
LABORATORIES

12/28/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C43415

Sampling Date: 12/21/15

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@cardno.com; justin.patton@cardno.com;
ATTN: Richard Byrd

Total number of pages in report: **37**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C43415

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: P01152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C43415-1	12/21/15	12:00	FM	12/22/15	AQ	Ground Water	HQUST-GW-EFF
C43415-2	12/21/15	13:00	FM	12/22/15	AQ	Ground Water	HQUST-GW-CV1
C43415-3	12/21/15	12:15	FM	12/22/15	AQ	Ground Water	HQUST-GW-INF
C43415-4	12/21/15	00:00	FM	12/22/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C43415
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	12/28/2015 8:08:19 P

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 12/21/2015 and were received at Accutest on 12/22/2015 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of C43415. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method EPA 624

Matrix: AQ **Batch ID:** VV1258

- All method blanks and blank spikes for this batch meet method specific criteria.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP8834

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C43415-1MS were used as the QC samples for HEM Oil and Grease.
- Matrix Spike Recovery(s) for HEM Oil and Grease are outside control limits. Spike recovery indicates possible matrix interference.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP8837

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C43415-1MSD, C43415-1MS were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN18139

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C43399-2DUP were used as the QC samples for Solids, Total Suspended.
- RPD(s) for Duplicate for Solids, Total Suspended are outside control limits due to sample nonhomogeneity.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C43415
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 12/21/15

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C43415-1	**HQUST-GW-EFF**					
No hits reported in this sample.						
C43415-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C43415-3	**HQUST-GW-INF**					
Ethylbenzene		13.1	1.0		ug/l	EPA 624
Isopropylbenzene		2.2	1.0		ug/l	EPA 624
Naphthalene		45.5	5.0		ug/l	EPA 624
n-Propylbenzene		3.0	2.0		ug/l	EPA 624
1,2,4-Trimethylbenzene [a]		118	5.0		ug/l	EPA 624
1,3,5-Trimethylbenzene		60.2	2.0		ug/l	EPA 624
Toluene		1.7	1.0		ug/l	EPA 624
m,p-Xylene		81.3	1.0		ug/l	EPA 624
o-Xylene		59.2	1.0		ug/l	EPA 624
Chemical Oxygen Demand		29.5	20		mg/l	HACH 8000
Solids, Total Suspended		5.0	5.0		mg/l	SM2540 D-07
C43415-4	**TRIP BLANK**					
No hits reported in this sample.						

(a) AZ:D2

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C43415-1	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30797.D	1	12/28/15	KZ	n/a	n/a	VV1258
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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:	HQUST-GW-EFF		
Lab Sample ID:	C43415-1	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%
2037-26-5	Toluene-D8	100%		70-130%

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:	HQUST-GW-EFF		
Lab Sample ID:	C43415-1	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		70-130%

(a) AZ:T2,T6

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:	HQUST-GW-EFF		
Lab Sample ID:	C43415-1	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chemical Oxygen Demand	< 20	20	mg/l	1	12/28/15 10:27	EB	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	12/26/15 20:00	PH	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	12/24/15 09:13	EA	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C43415-2	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30798.D	1	12/28/15	KZ	n/a	n/a	VV1258
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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:	HQUST-GW-CV1		
Lab Sample ID:	C43415-2	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	102%		70-130%

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:	HQUST-GW-CV1		
Lab Sample ID:	C43415-2	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		70-130%

(a) AZ:T2,T6

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:	HQUST-GW-INF		
Lab Sample ID:	C43415-3	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30799.D	1	12/28/15	KZ	n/a	n/a	VV1258
Run #2	V30802.D	2.5	12/28/15	KZ	n/a	n/a	VV1258

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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:	HQUST-GW-INF		
Lab Sample ID:	C43415-3	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	13.1	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	2.2	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	45.5	5.0	ug/l	
103-65-1	n-Propylbenzene	3.0	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene [b]	118 [c]	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	60.2	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	1.7	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
	m,p-Xylene	81.3	1.0	ug/l	
95-47-6	o-Xylene	59.2	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%	99%	70-130%
2037-26-5	Toluene-D8	101%	100%	70-130%

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:	HQUST-GW-INF		
Lab Sample ID:	C43415-3	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	70-130%

(a) AZ:T2,T6
(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:	HQUST-GW-INF		
Lab Sample ID:	C43415-3	**Date Sampled:**	12/21/15
Matrix:	AQ - Ground Water	**Date Received:**	12/22/15
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chemical Oxygen Demand	29.5	20	mg/l	1	12/28/15 10:27	EB	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	12/26/15 20:00	PH	EPA 1664A
Solids, Total Suspended	5.0	5.0	mg/l	1	12/24/15 09:13	EA	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C43415-4	**Date Sampled:**	12/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V30796.D	1	12/28/15	KZ	n/a	n/a	VV1258
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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:	C43415-4	**Date Sampled:**	12/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	103%		70-130%

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:	C43415-4	**Date Sampled:**	12/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	12/22/15
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		70-130%

(a) AZ:T2,T6

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

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, 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.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
R9	Sample RPD exceeded the laboratory acceptance limit.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

CHAIN OF CUSTODY

ACCUTEST® LABORATORIES

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

Page 1 of 1

FED-EX Tracking # 2752 6841 0218
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C43415

Client / Reporting Information

Company Name: City of Tucson Environmental Services
Address: 4004 South Park Avenue
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520.837.3710
Samplers's Name: J. Manley

Project Information

Project Name: HQUST P01152
Street: 260 South Stone Avenue
City: Tucson State: AZ
Project #:
EMAIL: richard.byrd@tucsonaz.gov; justin.patton@cardno.com
Client Purchase Order #

Requested Analysis

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	NONE	COD	VOC 624	O&G 1664	TSS	LAB USE ONLY
1	HQUST-GW-EFF	12-21-15	12:00	J.M	GW	8	3			4				1	X	X	X	X	
2	HQUST-GW-CV1	12-21-15	13:00	J.M	GW	3	3									X			
3	HQUST-GW-INF	12-21-15	12:15	J.M	GW	8	3			4				1	X	X	X	X	
4	Trip Blank					2	2									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)

3 DAYS

Turnaround Time (Business days)

Approved By:/ Date:

- [ ] 10 Day
- [ ] 5 Day
- [x] 3 Day (125% markup)
- [ ] 2 Day (150% markup)
- [ ] 1 Day (200% markup)
- [ ] Same Day (300% markup)

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [x] 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 J. Manley	12-21-15 1600	1	2	12-21-15 1700	2 Fed-Ex
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
FED X	12/22/15 1240		4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N	On Ice Y / N	Cooler Temp.
		5		Labels match Coc? Y / N	Separate Receiving Check List used: Y / N		4.1/3.2

C43415: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C43415 **Client:** CITY OF TUCSON ENVIRONMENTAL SE **Project:** HQUST P01152

Date / Time Received: 12/22/2015 12:40:00 PM **Delivery Method:** FedEx **Airbill #'s:** 775268440218

Cooler Temps (Initial/Adjusted): #1: (4.1/3.2);

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. Therm ID:	IR3;		
3. Cooler media:	Ice (Bag)		
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

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www/accutest.com

5.2

5

C43415: Chain of Custody
Page 2 of 2

Northern California ACCUTEST LABORATORIES

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: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-MB	V30795.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	

Method Blank Summary

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-MB	V30795.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Compound	Result	RL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	70-130%

Method Blank Summary

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-MB	V30795.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-BS	V30792.D	1	12/28/15	KZ	n/a	n/a	VV1258
VV1258-BSD	V30793.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	17.6	88	17.9	90	2	77-122/25
108-86-1	Bromobenzene	20	18.9	95	19.1	96	1	76-126/17
74-97-5	Bromochloromethane	20	18.8	94	19.0	95	1	77-130/17
75-27-4	Bromodichloromethane	20	18.2	91	18.4	92	1	75-127/16
75-25-2	Bromoform	20	18.5	93	18.9	95	2	69-141/17
104-51-8	n-Butylbenzene	20	19.5	98	19.2	96	2	72-129/18
135-98-8	sec-Butylbenzene	20	19.1	96	18.9	95	1	74-128/18
98-06-6	tert-Butylbenzene	20	18.6	93	18.6	93	0	73-127/18
108-90-7	Chlorobenzene	20	18.0	90	18.2	91	1	77-122/16
75-00-3	Chloroethane	20	16.7	84	16.9	85	1	69-133/18
67-66-3	Chloroform	20	17.8	89	17.8	89	0	74-126/17
95-49-8	o-Chlorotoluene	20	18.8	94	17.8	89	5	72-127/20
106-43-4	p-Chlorotoluene	20	18.6	93	18.5	93	1	68-127/18
56-23-5	Carbon tetrachloride	20	18.7	94	17.9	90	4	71-133/19
75-34-3	1,1-Dichloroethane	20	17.0	85	17.0	85	0	71-125/17
75-35-4	1,1-Dichloroethylene	20	17.0	85	16.4	82	4	66-125/20
563-58-6	1,1-Dichloropropene	20	16.2	81	15.9	80	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	18.9	95	18.7	94	1	65-131/20
106-93-4	1,2-Dibromoethane	20	18.6	93	18.9	95	2	75-135/17
107-06-2	1,2-Dichloroethane	20	18.1	91	18.2	91	1	71-131/17
78-87-5	1,2-Dichloropropane	20	18.5	93	18.6	93	1	78-124/16
142-28-9	1,3-Dichloropropane	20	19.4	97	19.7	99	2	78-123/16
108-20-3	Di-Isopropyl ether	20	17.9	90	18.1	91	1	68-129/17
594-20-7	2,2-Dichloropropane	20	19.6	98	18.9	95	4	70-131/19
124-48-1	Dibromochloromethane	20	18.4	92	18.6	93	1	76-132/16
75-71-8	Dichlorodifluoromethane	20	18.5	93	17.8	89	4	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	18.8	94	18.9	95	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	19.5	98	19.8	99	2	72-130/16
541-73-1	m-Dichlorobenzene	20	18.7	94	18.8	94	1	75-124/16
95-50-1	o-Dichlorobenzene	20	18.7	94	19.0	95	2	76-124/16
106-46-7	p-Dichlorobenzene	20	18.6	93	19.0	95	2	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	16.1	81	15.8	79	2	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	18.7	94	18.8	94	1	71-126/16
100-41-4	Ethylbenzene	20	18.5	93	18.6	93	1	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	18.1	91	18.2	91	1	75-134/17
591-78-6	2-Hexanone	80	72.6	91	76.0	95	5	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-BS	V30792.D	1	12/28/15	KZ	n/a	n/a	VV1258
VV1258-BSD	V30793.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	20.2	101	20.5	103	1	69-135/20
98-82-8	Isopropylbenzene	20	18.5	93	18.7	94	1	61-125/17
99-87-6	p-Isopropyltoluene	20	19.0	95	19.1	96	1	68-127/18
108-10-1	4-Methyl-2-pentanone	80	72.2	90	74.6	93	3	71-142/21
74-83-9	Methyl bromide	20	19.1	96	19.1	96	0	68-132/18
74-87-3	Methyl chloride	20	17.2	86	17.8	89	3	39-150/28
74-95-3	Methylene bromide	20	19.1	96	19.3	97	1	77-127/16
75-09-2	Methylene chloride	20	17.1	86	17.4	87	2	67-128/18
78-93-3	Methyl ethyl ketone	80	72.4	91	71.2	89	2	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	17.2	86	17.3	87	1	73-132/17
91-20-3	Naphthalene	20	17.1	86	17.3	87	1	70-136/20
103-65-1	n-Propylbenzene	20	18.5	93	18.4	92	1	71-127/17
100-42-5	Styrene	20	19.1	96	19.3	97	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	18.5	93	18.6	93	1	73-133/17
75-65-0	Tert-Butyl Alcohol	100	79.0	79	74.9	75	5	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	19.2	96	19.7	99	3	77-130/16
71-55-6	1,1,1-Trichloroethane	20	18.0	90	17.7	89	2	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	18.2	91	18.8	94	3	77-129/17
79-00-5	1,1,2-Trichloroethane	20	18.4	92	18.9	95	3	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	18.8	94	19.2	96	2	70-133/18
96-18-4	1,2,3-Trichloropropane	20	17.9	90	18.3	92	2	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	19.2	96	19.5	98	2	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	18.5	93	18.7	94	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	19.3	97	19.4	97	1	77-129/17
127-18-4	Tetrachloroethylene	20	17.7	89	17.4	87	2	69-127/20
108-88-3	Toluene	20	18.2	91	18.5	93	2	75-122/17
79-01-6	Trichloroethylene	20	17.7	89	17.5	88	1	78-123/17
75-69-4	Trichlorofluoromethane	20	20.2	101	19.8	99	2	65-136/23
75-01-4	Vinyl chloride	20	18.4	92	18.4	92	0	57-146/22
	m,p-Xylene	40	36.8	92	36.9	92	0	76-125/17
95-47-6	o-Xylene	20	18.2	91	18.4	92	1	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	99%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43415
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1258-BS	V30792.D	1	12/28/15	KZ	n/a	n/a	VV1258
VV1258-BSD	V30793.D	1	12/28/15	KZ	n/a	n/a	VV1258

The QC reported here applies to the following samples: **Method:** EPA 624

C43415-1, C43415-2, C43415-3, C43415-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	100%	101%	70-130%
460-00-4	4-Bromofluorobenzene	99%	99%	70-130%

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43415
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chemical Oxygen Demand	GP8837/GN18152	20	0.0	mg/l	500	461	92.1	90-110%
HEM Oil and Grease	GP8834/GN18148	5.0	0.0	mg/l	40	35.9	89.8	78-114%
Solids, Total Suspended	GN18139	5.0	0.0	mg/l	1000	801	80.1	80-120%

Associated Samples:
Batch GP8834: C43415-1, C43415-3
Batch GP8837: C43415-1, C43415-3
Batch GN18139: C43415-1, C43415-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43415
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Chemical Oxygen Demand	GP8837/GN18152	mg/l	500	457	0.9	25%
HEM Oil and Grease	GP8834/GN18148	mg/l	40	36.2	0.8	18%

Associated Samples:
Batch GP8834: C43415-1, C43415-3
Batch GP8837: C43415-1, C43415-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43415
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Suspended	GN18139	C43399-2	mg/l	165	180	8.7*(a)	0-5%

Associated Samples:
Batch GN18139: C43415-1, C43415-3
(*) Outside of QC limits
(a) High RPD due to sample nonhomogeneity. AZ:R9

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43415
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chemical Oxygen Demand	GP8837/GN18152	C43415-1	mg/l	15.4	250	236	88.2(a)	90-110%
HEM Oil and Grease	GP8834/GN18148	C43415-1	mg/l	1.3	38.1	22.3	55.0*(b)	78-114%

Associated Samples:
Batch GP8834: C43415-1, C43415-3
Batch GP8837: C43415-1, C43415-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Within 75-125% criteria for method COD HACH 8000.
(b) Spike recovery indicates possible matrix interference. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43415
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Chemical Oxygen Demand	GP8837/GN18152	C43415-1	mg/l	15.4	250	238	0.9	25%

Associated Samples:
Batch GP8837: C43415-1, C43415-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APPENDIX C

FIELD DATA SHEET

OPERATION AND MAINTENANCE PUMP AND TREAT SYSTEM READINGS

City of Tucson Fire and Police Headquarters

265 South Church Avenue, Tucson, Arizona

UST Facility ID 0-005176; LUST File No. 3208.01

PCWW Permit No. 12916

		Water Filters			Carbon vessels			Air compressor		Water Parameters			Well Pumps			
		INF	EFF	Discharge	CV1	CV2	CV2	Tank	Outlet	HQUST-GW-EFF			523A	523A	524A	524A
Date	Discharge Totalizer	Filter (PSI)	Filter (PSI)	Filter (PSI)	Top gauge (PSI)	Top gauge (PSI)	Lower gauge (PSI)	(PSI)	(PSI)	pH	Temp. (^{o}F)	Conductivity (µS/cm)	Counter	Pressure (PSI)	Counter	Pressure (PSI)
12/21/15	1,972,390	8	8	7	17	8	9	115	60	7.00	78.4	2.89	NT	65	NT	NT

Notes:

INF = Influent
EFF = Effluent
CV1 = 1,000-pound liquid carbon vessel
CV2 = 1,000-pound liquid carbon vessel
PSI = Pounds per square inch
Temp. = Temperature
^{o}F = Fahrenheit
µS/cm = Micro-siemens per centimeter
NT = Not Taken

APPENDIX D

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT INDUSTRIAL WASTE WATER CONTROL INSPECTION REPORT

PIMA COUNTY
WASTEWATER RECLAMATION

January 20, 2016

Mr. Richard Byrd
City of Tucson – Environmental Services
100 North Stone Avenue, 2nd Floor
Tucson, Arizona 85701

PERMIT NO. 12916

Dear Mr. Byrd:

RE: INSPECTION REPORT NO. 16-002C

Pima County's Industrial Wastewater Control Section (IWC) inspected your facility on January 5, 2016. A copy of the report regarding this inspection is attached for your information and files.

If you have any questions regarding the inspection report, please contact the Industrial Wastewater Control staff at (520) 724-6200. Thank you for your assistance in completing this information.

Sincerely,

Douglas Kirkland
Supervisor – IWC

DK:dg
Enclosure

RECEIVED
FEB 04 2016
ENVIRONMENTAL SERVICES

Industrial Wastewater Control

Jackson Jenkins, Director
2955 West Calle Agua Nueva Tucson, AZ 85745 • Phone: 520-724-6200 • Fax: 520-724-6211

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
INDUSTRIAL WASTEWATER CONTROL SECTION
INSPECTION REPORT

PERMIT NO.
12916

IWC INSPECTION NO.
16-002C

NAME AND MAILING ADDRESS
City of Tucson – Environmental Services
100 North Stone Avenue, 2nd Floor
Tucson, Arizona 85701

INSPECTION DATE AND TIME
January 05, 2016 @ 1000 Hrs.

SERVICE ADDRESS OF FACILITY
265 South Church Avenue
Tucson, Arizona 85701

NAME OF AUTHORIZED REPRESENTATIVE
Mr. Richard Byrd

NAME, TITLE AND PHONE NO. OF ON-SITE REPRESENTATIVE
Mr. John Manley, Technician, (480) 363-2915

NAME AND SIGNATURE OF INSPECTOR		**DATE**
Robert Speir		1.14.16
Francisco Martinez		1/14/16
Stan Way	Stanley R. Way	Jan 19, 2016

NAME AND SIGNATURE OF REVIEWER		**DATE**
Doug Kirkland		1-19-16

RECEIVED
FEB 04 2016
ENVIRONMENTAL SERVICES

INSPECTION TYPE

Significant Industrial User, Compliance (C).

I. PURPOSE OF INSPECTION

This inspection was conducted to evaluate compliance with the requirements of Pima County Code, Title 13, Chapter 36, Industrial Wastewater Discharge Permit No. 12916, and Federal Regulations defined in 40 CFR Part 403.8.

II. FINDINGS OF INSPECTION

Type of Business

The City of Tucson has contracted ATC Group Services to operate a soil and groundwater remediation facility at this location. There are two methods employed to remediate the groundwater: groundwater extraction wells, and soil vapor extraction (SVE). Extraction wells are used to draw contaminated groundwater and run it through an oil and water separator. Vapor extraction air is run through granular activated carbon (GAC). An automated package plant is housed in a fenced enclosure. The facility operates 24-hours a day, seven days a week. The facility has been determined to be an Industrial User that meets the criteria for inclusion to the list of Significant Industrial Users as defined by CFR 403.3(v). Operations at the facility have been identified as having the North American Industry Classification (NAICS) Code of 562910.

Industrial Wastewater Generated

The byproducts of processing the air and groundwater produces industrial wastewater. This site has subsurface contamination of gasoline and diesel fuels from a former City of Tucson fueling station. After removal or destruction of the petroleum hydrocarbons from the adjacent remediation wells at the site, industrial wastewater is discharged to the Pima County POTW.

Pretreatment Equipment and Process

Two of the three extraction wells are involved in vapor extraction and utilize incineration. The other well, designated as 523A, utilizes a small air powered pump submerged in the well casing to lift water to the processing system.

The SVE process creates no wastewater directly. A vacuum is placed upon the two well columns, drawing in organic compounds with the air. During the winter months, condensates will form within the system. The vacuum is decreased during the winter to minimize this condensation. Condensates from this process go to the oil and water separator. The drawn in air is then passed through an oxidation vessel and vented to the atmosphere. Any remaining organics from this process are then incinerated on site.

Well water is pumped directly to the oil and water separator. Oil is collected in a 55-gallon drum, while the water with traces of organics is collected in the 300-gallon black poly tank. The black poly holding tank automatically transfers water for processing in 50-gallon increments, triggered via a float switch. The flow from the holding tank is filtered through two 50-micron socks, passed through two GAC vessels in series, and filtered again through another 50-micron sock before collections system discharge.

Sample Location

Samples shall be taken at the sampling valve, on the discharge side of the package treatment plant, immediately following the second filter sock.

Spill and Slug-load Control

On June 7, 2012, the Permittee submitted a comprehensive Spill Protection and Slug Discharge Control Plan to Pima County that contains the minimum program elements required by 40 CFR 403.8(f)(2)(vi).

III. SUMMARY OF FINDINGS

The onsite representative, Mr. Manley, was met at the plant by IWC Personnel. Mr. Manley stated that Cardno ERI was acquired by ATC Group Services recently based out of Tempe Arizona, and that they will be fulfilling the contract with the City of Tucson. A detailed tour of the facility showed that the entire compound is contained within a berm. All of the equipment was in good working order – there were no leaks observed or indicators of leaks or spills.

Sump with the discharge pipe leading to the black poly tank.

There was a sump located within the compound with some standing water in it. A trace of the plumbing and an inquiry to Mr. Manley showed that this sump was float switch activated, and that it followed to the black poly tank to treat any water collected. There would be some storm water intrusion because of this, but it would be limited to the footprint of the compound due to the berm.

Discrete samples were collected from the designated sample location. The reason for the discrete samples versus composite sample was due to the duration of the 105 gallon discharge, which lasted less than ten minutes. The typical automated discharge is 50 gallons.

IV. FOLLOW-UP REQUIRED

Determine the frequency in which the 55-gallon black oil drum fills and is emptied.

Cardno

9977 North 90th Street,
Suite 150
Scottsdale, AZ 85258
USA

Phone 602 977 8000
Fax 602 977 8099
www.cardno.com

June 27, 2016
Cardno I052000015.S16

Mr. Doug Kirkland
Pima County – Regional Wastewater Reclamation Department
Technical Services Section, Industrial Wastewater Control
2955 West Calle Agua Nueva
Tucson, Arizona 85745

SUBJECT **Industrial Wastewater Discharge Permit Self-Monitoring Report Form**
City of Tucson Fire and Police Headquarters
UST Facility ID 0-005176
LUST File No. 3208.01
PCWW Permit No. 12916
265 South Church Avenue, Tucson, Arizona

Mr. Kirkland:

Cardno, on behalf of the City of Tucson – Environmental Services (COT-ES), hereby submits this Industrial Wastewater Discharge Permit Self-monitoring Report Form (SMRF) for discharge of treated water at the above-noted Site (Appendix A). This SMRF is submitted for discharges at the permitted discharge location (Permit No. 12916) for the reporting period of March 1, 2016 through May 31, 2016. Compliance samples were not collected during the reporting period, due to the low volatile organic compounds (VOC) observed during the quarterly groundwater sampling event conducted on February 24 and 26, 2016. The system will remain down for approximately 12 months to continue evaluating groundwater conditions.

LIMITATIONS

For any documents cited that were not generated by Cardno, the data taken from those documents is used “as is” and is assumed to be accurate. Cardno does not guarantee the accuracy of this data and makes no warranties for the referenced work performed nor the inferences or conclusions stated in these document.

This document was prepared in accordance with generally accepted standards of environmental, geological, and engineering practices in Arizona at the time of investigation. No soil engineering geotechnical references are implied or should be inferred. The evaluation of the geologic conditions at the site for this investigation is made from a limited number of data points. Subsurface conditions may vary away from these data points.

Please call Mr. Justin T. Patton with Cardno at (602) 909-3448 or Mr. Richard Byrd with the City of Tucson at (520) 837-3710 with questions regarding this Site.

Respectfully submitted,

Justin T. Patton
Project Manager
for Cardno
Direct Line 602 909 3448
Email: justin.patton@cardno.com

Enclosures:

Table 1	Flow Calculations
Table 2	Historical Data
Appendix A	Pima County Regional Wastewater Reclamation Department Industrial Waste Water Control Self-Monitoring Reporting Form

cc: Richard Byrd, COT-ES

TABLE 1
FLOW CALCULATIONS
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Operational Period (March 1, 2016 through May 31, 2016)

Week No.	***Dates***	***Previous Weeks' Total (Gallons)***	***Weeks' Total (Gallons)***	***Total Volume for Week(s) (Gallons)***	***Well Pump Run Time (Days)***	***Average Daily Flow Rate (GPD)***
351	03/07/16 - 03/13/16	1,982,649	1,986,533	3,884	7	555
352	03/14/16 - 03/20/16	1,986,533	1,986,717	184	10	18
353-363[1]	03/21/16 - 06/05/16	1,986,717	1,986,717	0	0	0
				Operational Period Average Flowrate (GPD)		191

Notes:

GPD = gallons per day

[1] On March 18, 2016, the system was shut down due to the low volatile organic compounds observed during the quarterly groundwater sampling event conducted on February 24 and 26, 2016.

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
1 thru 4 [1]	6/11/09 - 7/5/09	0	6,099	6,099	6	1,017
5 [2]	7/6/09 - 7/12/09	6,099	8,897	2,798	2	1,399
6 [3]	7/13/09 - 7/19/09	8,897	26,264	17,367	5	3,473
7 [4]	7/20/09 - 7/26/09	17,367	39,543	22,176	5	4,435
8 [5]	7/27/09 - 8/2/09	39,543	42,685	3,142	2	1,571
9 [6]	8/3/09 - 8/9/09	42,685	42,685	0	0	0
10 [7]	8/10/09 - 8/23/09	42,685	42,685	0	0	0
11 [8]	8/24/09 - 8/31/09	42,685	43,179	494	3	165
12 thru 15[9]	9/1/09 - 9/28/09	43,178	43,178	0	0	0
16	9/29/09 - 10/5/09	43,178	48,812	5,634	6	1,024
17	10/6/09 - 10/12/09	48,812	56,291	7,479	7	1,151
18[10]	10/13/09 - 10/19/09	56,291	56,391	100	1	200
19[11]	10/20/09 - 10/26/09	56,391	60,202	3,811	3	1,270
20	10/27/09 - 11/2/09	60,202	69,162	8,960	6	1,493
21[12]	11/3/09 - 11/9/09	69,162	81,224	12,062	3	4,021
22[13]	11/10/09 - 11/16/09	81,224	83,198	1,974	1	1,974
23-24[14]	11/17/09 - 11/30/09	60,202	83,198	22,996	0	0
25-26[15]	12/1/09 - 12/14/09	83,198	83,198	0	0	0
27-28	12/15/09 - 12/28/09	83,198	107,435	24,237	12	2,020
29-37[16]	12/29/09 - 2/28/10	107,435	107,435	0	0	0
38-41[17]	3/1/10 - 3/28/10	107,435	107,897	462	1	462
42-43[18]	3/29/10 - 4/11/10	107,897	137,822	29,925	8	3,741
44-45[19]	4/12/10 - 4/25/10	137,822	156,941	19,119	5	3,824
46-47	4/26/10 - 5/9/10	156,941	208,684	51,743	12	4,312
48-49	5/10/10 - 5/23/10	208,684	239,591	30,907	10	3,091
50	5/24/10 - 5/30/10	239,591	247,010	7,419	2	3,710
51	6/1/10 - 6/6/10	247,010	250,100	3,090	6	515
52	6/7/10 - 6/13/10	250,100	257,200	7,100	7	1,014

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53	6/14/10 - 6/20/10	257,200	274,200	17,000	7	2,429
54	6/21/10 - 6/27/10	274,200	284,100	9,900	7	1,414
55	6/28/10 - 7/4/10	284,100	298,400	14,300	7	2,043
56	7/5/10 - 7/11/10	298,400	326,000	27,600	7	3,943
57	7/18/10 - 7/25/10	326,000	356,700	30,700	7	4,386
58	7/26/10 - 8/1/10	356,700	380,000	23,300	7	3,329
59-63[20]	8/1/10 - 8/27/10	380,000	383,468	3,468	2	2,312
64	9/06/10 - 9/12/10	383,468	420,192	36,724	7	5,246
65	9/13/10 -9/19/10	420,192	431,481	11,289	4	2,822
66	9/20/10 - 9/26/10	431,481	443,113	11,632	6	1,939
67	9/27/10 - 10/3/10	443,113	462,381	19,268	2	9,634
68	10/4/10 - 10/10/10	462,381	466,814	4,433	4	1,108
69[21]	10/11/10 - 10/17/10	466,814	467,868	1,054	7	151
70[21]	10/18/10 - 10/24/10	467,868	472,010	4,142	7	592
71	10/25/10 - 10/31/10	472,010	475,563	3,553	7	508
72	11/1/10 - 11/7/10	475,563	476,500	937	7	134
73	11/8/10 - 11/14/10	476,500	478,638	2,138	2	1,069
74	11/15/10 - 11/21/10	478,638	478,638	0	0	0
75	11/22/10 - 11/28/10	478,638	482,211	3,573	6	596
76	11/29/10 - 12/5/10	478,638	482,211	3,573	7	510
77	12/6/2010 - 12/12/10	482,211	488,222	6,011	6.5	925
78	12/13/10 - 12/19/10	488,222	492,024	3,802	7	543
79	12/20/10 - 12/26/10	492,024	492,838	814	7	116
80	12/27/10 - 01/02/11	492,838	498,188	5,350	7	764
81	1/03/11 - 1/09/11	498,188	498,853	665	7	95
82	1/10/11 - 1/16/11	498,853	502,826	3,973	7	568
83	1/17/11 - 1/23/11	502,826	505,253	2,427	7	347
84-85	1/24/11 - 2/06/11	505,253	507,480	2,227	14	159

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Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
86[22]	2/07/11 - 2/13/11	507,480	507,624	144	0	0
87	2/14/11 - 2/20/11	507,624	519,500	11,876	7	1,697
88[23]	2/21/11 - 2/27/11	519,500	520,935	1,435	1	1,435
89[24]	2/28/11 - 3/06/11	520,935	520,935	0	0	0
90[24]	3/07/11 - 3/13/11	520,935	520,935	0	0	0
91[24]	3/14/11 - 3/20/11	520,935	520,935	0	0	0
92	3/21/11 - 3/27/11	520,935	524,743	3,808	2	1,731
93	3/28/11 - 4/03/11	524,743	535,683	10,940	7	1,563
94	4/04/11 - 4/10/11	535,683	547,289	11,606	7	1,658
95	4/11/11 - 4/17/11	547,289	557,001	9,712	7	1,387
96	4/18/11 - 4/24/11	557,001	565,437	8,436	7	1,205
97	4/25/11 - 5/01/11	565,437	572,853	7,416	7	1,059
98	5/02/11 - 5/08/11	572,853	576,644	3,791	7	542
99-101[25]	5/9/11 - 5/29/11	576,644	576,984	340	3	113
102	5/30/11 - 6/05/11	576,984	594,342	17,358	7	2,480
103	6/06/11 - 6/12/11	594,342	604,988	10,646	7	1,521
104	6/13/11 - 6/19/11	604,988	615,449	10,460	7	1,494
105	6/20/11 - 6/26/11	615,449	626,388	10,940	7	1,563
106	6/27/11 - 7/03/11	626,388	637,170	10,782	7	1,540
107	7/04/11 - 7/10/11	637,170	648,171	11,001	7	1,572
108	7/11/11 - 7/17/11	648,171	660,652	12,481	7	1,783
109	7/18/11 - 7/24/11	660,652	673,118	12,466	7	1,781
110	7/25/11 - 7/31/11	673,118	686,024	12,906	7	1,844
111	8/01/11 - 8/07/11	686,024	698,681	12,657	7	1,808
112	8/08/11 - 8/14/11	698,681	706,220	7,539	7	1,077
113	8/15/11 - 8/21/11	706,220	711,929	5,709	7	816
114[26]	8/22/11 - 8/28/11	711,929	713,612	1,683	7	240
115-116[27]	08/29/11 - 09/11/11	713,612	715,787	2,175	14	155

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117[28]	09/12/11 - 09/18/11	715,787	716,366	578	7	83
118[28]	09/19/11 - 09/25/11	716,366	717,136	771	7	110
119[28]	09/26/11 - 10/02/11	717,136	717,597	461	7	66
120[28]	10/03/11 - 10/09/11	717,597	717,639	41	7	6
121[28]	10/10/11 - 10/16/11	717,639	717,767	128	7	18
122	10/17/11 - 10/23/11	717,767	728,705	10,938	7	1,563
123	10/24/11 - 10/30/11	728,705	743,617	14,912	7	2,130
124	10/31/11 - 11/06/11	743,617	752,756	9,139	7	1,306
125	11/07/11 - 11/13/11	752,756	766,463	13,707	7	1,958
126[29]	11/14/11 - 11/20/11	766,463	768,288	1,825	1	1,825
127[29]	11/21/11 - 11/27/11	768,288	768,288	0	0	0
128[29]	11/28/11 - 12/04/11	768,288	768,288	0	0	0
129[29]	12/05/11 - 12/11/11	768,288	778,260	9,972	6	1662
130	12/12/11 - 12/18/11	778,260	786,866	8,606	7	1229
131	12/19/11 - 12/25/11	786,866	801,536	14,671	7	2157
132	12/26/11 - 01/01/12	801,536	816,699	15,163	7	2166
133	01/02/12 - 01/08/12	816,699	834,132	17,432	7	2490
134	01/09/12 - 01/15/12	834,132	849,913	15,781	7	2254
135-136	01/16/12 - 01/29/12	849,913	881,200	31,287	14	2235
137	01/30/12 - 02/05/12	881,200	896,731	15,531	7	2219
138	02/06/12 - 02/12/12	896,731	909,539	12,808	7	1830
139	02/13/12 - 02/19/12	909,539	921,154	11,615	7	1659
140[30]	02/20/12 - 02/26/12	921,154	936,511	15,356	7	2194
141[31]	02/27/12 - 03/04/12	936,511	951,910	15,399	7	2,200
142[31]	03/05/12 - 03/11/12	951,910	967,310	15,400	7	2,200
143	03/12/12 - 03/18/12	967,310	991,742	24,432	7	3,490
144	03/19/12 - 03/25/12	991,742	1,019,635	27,893	7	3,985
145	03/26/12 - 04/01/12	1,019,635	1,048,934	29,299	7	4,186

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146	04/02/12 - 04/08/12	1,048,934	1,073,527	24,593	7	3,513
147	04/09/12 - 04/15/12	1,073,527	1,098,624	25,097	7	3,585
148	04/16/12 - 04/22/12	1,098,624	1,119,880	21,256	7	3,037
149	04/23/12 - 04/29/12	1,119,880	1,134,604	14,724	7	2,103
150	04/30/12 - 05/06/12	1,134,604	1,159,385	24,781	7	3,540
151[32]	05/07/12 - 05/13/12	1,159,385	1,175,193	15,808	3	5,269
152-180[32]	05/14/12 - 12/02/12	1,175,193	1,175,193	0	0	0
181	12/03/12 - 12/09/12	1,175,193	1,177,608	2,415	2	1,208
182	12/10/12 - 12/16/12	1,177,608	1,192,146	14,538	7	2,077
183	12/17/12 - 12/23/12	1,192,146	1,205,512	13,366	7	1,909
184	12/24/12 - 12/30/12	1,205,512	1,223,296	17,784	7	2,541
185	12/31/12 - 01/06/13	1,223,296	1,234,797	11,501	7	1,643
186[33]	01/07/13 - 01/13/13	1,234,797	1,248,826	14,029	4	3,507
187[33]	01/14/13 - 01/20/13	1,248,826	1,248,826	0	0	0
188[33]	01/21/13 - 01/27/13	1,248,826	1,248,826	0	0	0
189	01/28/13 - 02/03/13	1,248,826	1,251,438	2,612	7	373
190-191	02/04/13 - 02/17/13	1,251,438	1,274,104	22,666	14	1,619
192	02/18/13 - 02/24/13	1,274,104	1,294,556	20,452	7	2,922
193	02/25/13 - 03/03/13	1,294,556	1,296,842	2,286	7	327
194-197[34]	03/04/13 - 03/31/13	1,296,842	1,296,842	0	0	0
198	04/01/13 - 04/07/13	1,296,842	1,315,743	18,901	10	1,890
199	04/08/13 - 04/14/13	1,315,743	1,321,002	5,259	3	1,753
200	04/15/13 - 04/21/13	1,321,002	1,338,303	17,301	10	1,730
201	04/22/13 - 04/28/13	1,338,303	1,350,271	11,968	7	1,710
202[35]	04/29/13 - 05/05/13	1,350,271	1,350,384	113	1	113
203[35]	05/06/13 - 05/12/13	1,350,384	1,350,520	136	1	136
204	05/13/13 - 05/19/13	1,350,520	1,361,086	10,566	7	1,509
205	05/20/13 - 05/26/13	1,361,086	1,371,441	10,355	6	1,726

TABLE 2
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206	05/27/13 - 06/02/13	1,371,441	1,384,244	12,803	10	1,280
207	06/03/13 - 06/09/13	1,384,244	1,387,673	3,429	5	686
208[36]	06/10/13 - 06/16/13	1,387,673	1,387,673	0	0	0
209	06/17/13 - 06/23/13	1,387,673	1,404,318	16,645	10	1,665
210	06/24/13 - 06/30/13	1,404,318	1,411,709	7,391	4	1,848
211	07/01/13 - 07/07/13	1,411,709	1,421,303	9,594	6	1,599
212	07/08/13 - 07/14/13	1,421,303	1,427,382	6,079	7	868
213	07/15/13 - 07/21/13	1,427,382	1,427,803	421	11	38
214	07/22/13 - 07/28/13	1,427,803	1,428,778	975	6	163
215	07/29/13 - 08/04/13	1,428,778	1,429,568	790	5	158
216	08/05/13 - 08/11/13	1,429,568	1,443,307	13,739	6	2,290
217	08/12/13 - 08/18/13	1,443,307	1,443,783	476	7	68
218	08/19/13 - 08/25/13	1,443,783	1,451,604	7,821	7	1,117
219	08/26/13 - 09/01/13	1,451,604	1,451,756	152	8	19
220	09/02/13 - 09/08/13	1,451,756	1,452,079	323	8	40
221	09/09/13 - 09/15/13	1,452,079	1,452,309	230	6	0
222	09/16/13 - 09/22/13	1,452,309	1,452,571	262	7	37
223	09/23/13 - 09/29/13	1,452,571	1,457,893	5,322	9	591
224[37]	09/30/13 - 10/06/13	1,457,893	1,457,893	0	0	0
225	10/07/13 - 10/13/13	1,457,893	1,457,921	28	4	7
226	10/14/13 - 10/20/13	1,457,921	1,458,318	397	7	57
227	10/21/13 - 10/27/13	1,458,318	1,465,485	7,167	7	1,024
228-232[38]	10/28/13 - 12/01/13	1,465,485	1,465,485	0	0	0
233	12/02/13 - 12/08/13	1,465,485	1,487,150	21,665	7	3,095
234	12/09/13 - 12/15/13	1,487,150	1,501,268	14,118	10	1,412
235	12/16/13 - 12/22/13	1,501,268	1,509,669	8,401	6	1,400
236	12/23/13 - 12/29/13	1,509,669	1,517,976	8,307	6	1,385
237	12/30/13 - 01/05/14	1,517,976	1,530,691	12,715	9	1,413

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
238	01/06/14 - 01/12/14	1,530,691	1,538,973	8,282	6	1,380
239	01/13/14 - 01/19/14	1,538,973	1,545,515	6,542	6	1,090
240	01/20/14 - 01/26/14	1,545,515	1,556,550	11,035	8	1,379
241	01/27/14 - 02/02/14	1,556,550	1,564,560	8,010	6	1,335
242-243[39]	02/03/14 - 02/16/14	1,564,560	1,564,762	202	7	29
244[40]	02/17/14 - 02/23/14	1,564,762	1,564,825	63	1	63
245-249[39]	02/24/14 - 03/30/14	1,564,825	1,564,825	0	0	0
250	03/31/14 - 04/06/14	1,564,825	1,569,015	4,190	3	1,397
251	04/07/14 - 04/13/14	1,569,015	1,574,555	5,540	4	1,385
252	04/14/14 - 04/20/14	1,574,555	1,584,173	9,618	7	1,374
253	04/21/14 - 04/27/14	1,584,173	1,599,135	14,962	11	1,360
254	04/28/14 - 05/04/14	1,599,135	1,607,115	7,980	6	1,330
255	05/05/14 - 05/11/14	1,607,115	1,615,156	8,041	6	1,340
256	05/12/14 - 05/18/14	1,615,156	1,625,283	10,127	8	1,266
257	05/19/14 - 05/25/14	1,625,283	1,630,365	5,082	4	1,271
258	05/26/14 - 06/01/14	1,630,365	1,641,307	10,942	10	1,094
259	06/02/14 - 06/08/14	1,641,307	1,650,187	8,880	7	1,269
260	06/09/14 - 06/15/14	1,650,187	1,658,291	8,104	7	1,158
261	06/16/14 - 06/22/14	1,658,291	1,663,401	5,110	4	1,278
262	06/23/14 - 06/29/14	1,663,401	1,675,837	12,436	10	1,244
263[41]	06/30/14 - 07/06/14	1,675,837	1,680,617	4,780	7	683
264-265[41]	07/07/14 - 07/20/14	1,680,617	1,680,617	0	0	0
266	07/21/14 - 07/27/14	1,680,617	1,687,513	6,896	9	766
267	07/28/14 - 08/03/14	1,687,513	1,694,891	7,378	6	1,230
268	08/04/14 - 08/10/14	1,694,891	1,704,692	9,801	8	1,225
269[42]	08/11/14 - 08/17/14	1,704,692	1,705,240	548	8	69
270[42]	08/18/14 - 08/24/14	1,705,240	1,705,240	0	0	0
271	08/25/14 - 08/31/14	1,705,240	1,711,210	5,970	9	663

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
272	09/01/14 - 09/07/14	1,711,210	1,722,842	11,632	5	2,326
273	09/08/14 - 09/14/14	1,722,842	1,731,915	9,073	8	1,134
274	09/15/14 - 09/21/14	1,731,915	1,741,505	9,590	6	1,598
275	09/22/14 - 09/28/14	1,741,505	1,751,876	10,371	7	1,482
276	09/29/14 - 10/05/14	1,751,876	1,764,479	12,603	9	1,400
277	10/06/14 - 10/12/14	1,764,479	1,764,590	111	6	19
278-281[43]	10/13/14 - 11/09/14	1,764,590	1,764,590	0	0	0
282	11/10/14 - 11/16/14	1,764,590	1,764,939	349	2	175
283	11/17/14 - 11/23/14	1,764,939	1,765,072	133	6	22
284	11/24/14 - 11/30/14	1,765,072	1,768,069	2,997	7	428
285	12/01/14 - 12/07/14	1,768,069	1,776,776	8,707	9	967
286	12/08/14 - 12/14/14	1,776,776	1,783,699	6,923	5	1,385
287	12/15/14 - 12/21/14	1,783,699	1,794,167	10,468	7	1,495
288	12/22/14 - 12/28/14	1,794,167	1,807,424	13,257	7	1,894
289	12/29/14 - 01/04/15	1,807,424	1,814,099	6,675	5	1,335
290	01/05/15 - 01/11/15	1,814,099	1,826,744	12,645	9	1,405
291	01/12/15 - 01/18/15	1,826,744	1,827,037	293	7	42
292	01/19/15 - 01/25/15	1,827,037	1,835,990	8,953	6	1,492
293	01/26/15 - 02/01/15	1,835,990	1,846,014	10,024	7	1,432
294	02/02/15 - 02/08/15	1,846,014	1,853,780	7,766	7	1,109
295[44]	02/09/15 - 02/15/15	1,853,780	1,853,780	0	0	0
296	02/16/15 - 02/22/15	1,853,780	1,859,970	6,190	5	1,238
297	02/23/15 - 03/01/15	1,859,970	1,869,717	9,747	9	1,083
298	03/02/15 - 03/08/15	1,869,717	1,875,196	5,479	6	913
299	03/09/15 - 03/15/15	1,875,196	1,884,662	9,466	9	1,052
300	03/16/15 - 03/22/15	1,884,662	1,885,340	678	3	226
301	03/23/15 - 03/29/15	1,885,340	1,886,690	1,350	8	169
302	03/30/15 - 04/05/15	1,886,690	1,889,727	3,037	8	380

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
303	04/06/15 - 04/12/15	1,889,727	1,893,945	4,218	5	844
304	04/13/15 - 04/19/15	1,893,945	1,898,374	4,429	7	633
305	04/20/15 - 04/26/15	1,898,374	1,906,409	8,035	9	893
306-307[45]	04/27/15 - 05/10/15	1,906,409	1,911,604	5,195	5	1,039
308	05/11/15 - 05/17/15	1,911,604	1,915,491	3,887	7	555
309[46]	05/18/15 - 05/24/15	1,915,491	1,915,501	10	1	10
310-312[46]	05/25/15 - 06/14/15	1,915,501	1,915,648	147	1	147
313	06/15/15 - 06/21/15	1,915,648	1,923,673	8,025	8	1,003
314	06/22/15 - 06/28/15	1,923,673	1,931,556	7,883	8	985
315	06/29/15 - 07/05/15	1,931,556	1,937,904	6,348	7	907
316-317[47]	07/06/15 - 07/19/15	1,937,904	1,942,214	4,310	5	862
317	07/13/15 - 07/19/15	1,942,214	1,942,214	0	0	0
318	07/20/15 - 07/26/15	1,942,214	1,948,458	6,244	7	892
319	07/27/15 - 08/02/15	1,948,458	1,953,256	4,798	7	685
320	08/03/15 - 08/09/15	1,953,256	1,959,514	6,258	10	626
321	08/10/15 - 08/16/15	1,959,514	1,962,004	2,490	4	623
322	08/17/15 - 08/23/15	1,962,004	1,964,557	2,553	10	255
323	08/24/15 - 08/30/15	1,964,557	1,964,604	47	7	7
324	08/31/15 - 09/06/15	1,964,604	1,969,005	4,401	3	1,467
325	09/07/15 - 09/13/15	1,969,005	1,970,949	1,944	9	216
326-335[48]	09/14/15 - 11/22/15	1,970,949	1,970,949	0	0	0
336[49]	11/23/15 - 11/29/15	1,970,949	1,970,960	11	1	11
337-339[48]	11/30/15 - 12/20/15	1,970,960	1,970,960	0	0	0
340	12/21/15 - 12/27/15	1,970,960	1,972,390	1,430	7	204
341	12/28/15 - 01/03/16	1,972,390	1,972,781	391	3	130
342	01/04/16 - 01/10/16	1,972,781	1,972,792	11	1	11
343-345[50]	01/11/16 - 01/31/16	1,972,792	1,972,897	105	1	105
346	02/01/16 - 02/07/16	1,972,897	1,973,037	140	1	140

TABLE 2
HISTORICAL DATA
City of Tucson Police/Fire Station Headquarters
265 South Church Avenue, Tucson, Arizona
UST Facility ID 0-005176; LUST File No. 3208.01
PCWW Permit No. 12916

Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
347	02/08/16 - 02/14/16	1,973,037	1,977,577	4,540	7	649
348	02/15/16 - 02/21/16	1,977,577	1,979,215	1,638	4	410
349-350[51]	02/22/16 - 03/06/16	1,979,215	1,982,649	3,434	6	572
351	03/07/16 - 03/13/16	1,982,649	1,986,533	3,884	7	555
352	03/14/16 - 03/20/16	1,986,533	1,986,717	184	10	18
353-363[52]	03/21/16 - 06/05/16	1,986,717	1,986,717	0	0	0
					Total Average Flowrate (GPD)	1,214

Notes:

GPD = gallons per day

[1] Well water extraction was not turned on until 6/30/09 due to air leaks needing repairs. Actual Well Pump Run-time from 6/11 to 7/5 is 6 days.

[2] Well water extraction was turned off for 5 days for maintenance of system and pumps. Well Pump Run-time from 7/6 to 7/12 is 2 days.

[3] Well water extraction was turned off for 2 days to for maintenance inspection. Well Pump Run-time from 7/13 to 7/19 is 5 days.

[4] Well water extraction was turned off for 2 days to replace cam locks and maintenance. Well Pump Run-time from 7/20 to 7/26 is 5 days.

[5] Well water extraction was on for only 2 days to open up wells DIW & DIE and to conduct light non-aqueous phase liquids (LNAPL) readings. Well Pump Run-time from 7/27 to 8/2 is 2 days.

[6] Well water extraction was off to open up wells DIW & DIE and to conduct LNAPL readings. Well Pump Run-time from 8/3 to 8/9 is 0 days.

[7] Well water extraction was off to open up wells DIW & DIE and to conduct LNAPL readings. Well Pump Run-time from 8/10 to 8/23 is 0 days.

[8] Well water extraction was on for 3 days due to needed repairs for pumps and maintenance inspection. Well Pump Run-time from 7/27 to 8/2 is 3 days.

[9] Well water extraction was off due to extraction pump malfunctioning.

[10] Extraction from water wells was terminated to measure LNAPL rebound. Well Pump Run-time from 10/13 to 10/19 is 1 day.

[11] Extraction from water wells was terminated to measure LNAPL rebound. Well Pump Run-time from 10/20 to 10/26 is 3 days.

[12] Well water extraction was turned off for maintenance of system. Well Pump Run-time from 11/3 to 11/9 is 3 days.

[13] Well water extraction was turned off for maintenance of system and to relocate RSI ICE Unit to Area of Concern 2 (AOC2) at well CEP-519A. Well Pump Run-time from 11/10 to 11/16 is 1 day.

[14] RSI unit was relocated to AOC2 for vapor extraction at well CEP-519A.

[15] No groundwater extraction was conducted during this period (soil vapor extraction was conducted at AOC2).

[16] The vapor extraction/groundwater extraction (VEGE) system was shutdown on 12/29/09 and not operated thereafter. The unit was returned to the equipment vendor on 1/6/10.

[17] System construction of the oil/water seperator (OWS) remediation system was conducted in March 2010. The system began operation on 3/24/10.

[18] Periodic operation during system start-up and commissioning.

[19] Periodic operation during system start-up and commissioning. System was shut down for several days beginning on 4/20/10 to review and implement modifications.

Notes:

[20] System was shut down for most of the time during this period due to needed maintenance and repairs to the OWS, remediation system, and pump air lines. The system was operational on 8/26 and 8/27.

[21] Pump in well HQUST 524A was turned off by City of Tucson (COT) maintenance for a 5-day period.

[22] System was shut down for repairs (pipes burst due to the extremely long freezing temperatures).

[23] System was shut down on 2/21/11 so LNAPL rebound monitoring could be conducted.

[24] System was shut down on 2/21/11 to 3/25/11 so LNAPL rebound monitoring could be conducted.

[25] The pumps had plugged and were not pumping groundwater during a 3-week period. The final totalizer reading was collected on 5/26/11 when system maintenance was conducted. The number of days of Run-time is estimated.

[26] The pump in well HQUST-523A was plugged and was pulled for maintenance on 8/24/11.

[27] Extraction well HQUST-524A was taken off line due to a faulty air regulator.

[28] Extraction well HQUST-523A was taken off line, pump had become non-functional due to mechanical failure, new pump on order.

[29] System shut down for ISCO pilot test and COT quarterly sampling event.

[30] Extraction well HQUST-523A was taken off line, pump had become non-functional due to mechanical failure.

[31] Extraction well HQUST-524A was taken off line, pump had become non-functional due to mechanical failure.

[32] System was initially shut down for May 2012 ISCO pilot test, COT second quarterly sampling event, and for remedial technology evaluation.

[33] System was shut down on January 11, 2013 due to freezing tempratures.

[34] System was shut down on March 1, 2013 for soil vapor extraction remedial equipment install. The system was restarted the week of April 1, 2013.

[35] System was shut down on April 30, 2013 for pump manifold replacement. System was cycled manualy during the repair phase and re-started on May 7, 2013.

[36] System was shut down on June 4, 2013 due to an observed leak in the carbon vessel hose. The hose was replaced and the system was restarted on June 11, 2013.

[37] System was shut down for maintenance of well pumps.

[38] System was shut down on October 21, 2013 for replacement of well pumps.

[39] System was shut down on February 4, 2014 due to an observed leak in carbon vessel CV2. The vessel was repaired and the system was restarted on March 31, 2014.

[40] On February 18, 2014 the system was cycled on to collect discharge compliance samples.

[41] System was shut down on July 3, 2014 due to damaged transfer pump fittings. Transfer pump fittings were replaced and the system was restarted the week of July 14, 2014.

[42] System was shut down on August 11, 2014 to replace the transfer pump, and was restarted on August 21, 2014.

[43] System was shut down the week of October 13, 2014 to repair the air compressor. The air compressor was repaired and the system was restarted on November 12, 2014.

[44] The system was shut down on February 6, 2015 for routine maintenance, and was restarted on February 12, 2015.

[45] The system was shut down on April 27, 2015 for routine maintenance, and was restarted on May 4, 2015.

[46] The system was shut down on May 12, 2015 for transfer pump maintenance, and was cycled on to collect discharge compliance samples on May 26, 2015. The system was restared on June 8, 2015.

[47] The system was shut down on July 6, 2015 for well pump maintenance, and was restarted on July 14, 2015.

[48] On September 9, 2015, the system was shut down and groundwater pumps were removed from monitor wells HQUST-523A and HQUST-524A to asses free product recovery, groundwater conditions, and collect quarterly groundwater samples. The system was restarted on December 14, 2015.

[49] On November 24, 2015 the system was cycled on to collect discharge compliance samples.

[50] On January 5, 2016 the system was shut down due to prolonged freezing temperatures, and was restarted on January 26, 2016.

[51] On February 22, 2016 the system was shut down for routine maintenance, and was restarted on March 1, 2016.

[52] On March 18, 2016, the system was shut down due to the low volatile organic compounds observed during the quarterly groundwater sampling event conducted on February 24 and 26, 2016.

APPENDIX A

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT INDUSTRIAL WASTE WATER CONTROL SELF-MONITORING REPORTING FORM

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT
INDUSTRIAL WASTEWATER CONTROL
SELF-MONITORING REPORT FORM

PART I. BUSINESS INFORMATION (Make necessary corrections)

FACILITY NAME: City of Tucson Environmental Services

PERMIT NO.: 12916

MAILING ADDRESS PO Box 27210
Tucson, AZ 85701

SERVICE ADDRESS: 265 South Church Avenue
Tucson, AZ 85710

PART II. REPORT INFORMATION

SAMPLING PERIOD: 03/01/2016 to 05/31/2016 **REPORT DUE:** 06/28/2016

PERMIT EXPIRATION PERIOD: 06/07/2017

PERMIT RENEWAL DATE: 12/09/2016

PART III. MONITORING REQUIREMENTS (Fill in the blanks)

A. ANALYSIS LIMITS AND RESULTS

SAMPLE LOCATION: 100 Samples were not collected because system was shutdown for rebound recovery analysis.

PARAMETER	LIMITS	SAMPLE FREQ	PERMITTED SAMPLE TYPE	ACTUAL SAMPLE TYPE	NAME OF SAMPLER	SAMPLE DATE	RESULTS
Chemical Oxygen Demand	***	QUARTERLY	COMPOS	Not Taken	---	---	---
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Not Taken	---	---	---
pH	5.0-11 S.U.	QUARTERLY	GRAB	Not Taken	---	---	---
Purgeable Aromatics	***	QUARTERLY	GRAB	Not Taken	---	---	---
Purgeable Halocarbons	***	QUARTERLY	GRAB	Not Taken	---	---	---
Total Suspended Solids	***	QUARTERLY	COMPOS	Not Taken	---	---	---

***** = Monitoring and reporting required. No limits set at this time.**

Sample Location: 100 Samples were not collected because system was shutdown for rebound recovery analysis.

Were any additional compliance samples taken? **YES [ ]** **NO [X]**

FACILITY NAME:	City of Tucson Environmental Services		
PERMIT NO.:	12916	**SAMPLING PERIOD:**	03/01/2016 to 05/31/2016
MAILING ADDRESS	PO Box 27210 Tucson, AZ 85701	**SERVICE ADDRESS:**	265 South Church Avenue Tucson, AZ 85710

B. LABORATORY INFORMATION (check which one is applicable and fill in the blank)

Samples were taken by an independent lab [ ]

Samples <u>were NOT</u> taken by an independent lab [ ]

Name of Lab Performing Analysis:

C. WASTEWATER FLOW INFORMATION (Fill in the blanks)

NOTE: 1 CCF = 100 Cubic Feet = 748 Gallons

SAMPLE LOCATION: 100 Samples were not collected because system was shutdown for rebound recovery analysis.

MEASRD Flow (total)

Date: _____

Flow (Gallons): 0

PART IV. REPORT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative: Richard Byrd

Date: 06 / 27 / 2016

Mail completed Report to: Pima County Regional Wastewater Reclamation Department
Industrial Wastewater Control
2955 West Calle Agua Nueva
Tucson, AZ 85745

Pima County Regional Wastewater Reclamation Department
Industrial Wastewater Control Section

INSTRUCTIONS FOR COMPLETING THE SELF-MONITORING REPORT FORM (SMRF)

Part I. Business Information

Review information and make any changes or corrections on the Self-Monitoring Report Form (SMRF).

Part II. Report Information

This part lists the Sampling Period for the SMRF. All required industrial wastewater samples shall be taken during normal operations within the sampling period. Return the completed SMRF to Industrial Wastewater Control Section no later than the report due date.

Part III. Monitoring Requirements

This part of the report form provides blanks for submittal of sampling and flow data collected for the sampling period. A blank is provided for each analysis result required to be reported.

A. Transfer (type or print) the following information from the laboratory analysis report into the blanks provided:

   1. Actual Sample Type (grab or composite)

   2. Name of Sampler (name of the person who collected sample)

   3. Sample Date (dale the sample was collected, not analysis date)

   4. Analysis Results (from the report by an independent laboratory.) If the results are "ND" or "Not Detected", please indicate the detection limit in parenthesis; i.e., "ND (0.001)"

   5. Sample Location (that part of your system where the sample was collected, i.e., "Cleanout on the discharge side of the grease trap.")

   Refer to Part 1.A.3. of your permit if you are not sure of the sampling requirements. <u>Do not send laboratory analysis reports.</u> Keep all records for a minimum of three years.

B. Check the box next to the appropriate statement to indicate whether the person who collected the sample(s) is an employee of your business or an employee of the independent laboratory that performed the sample analysis. Write in the name of the independent laboratory that performed the sample analysis.

C. A blank is provided for each flow value requirement. Type or print the flow data into the blanks provided. Note: if flow monitoring is not required for your permit this part will not appear on the SMRF.

Part IV. Report Certification

Please read carefully. The only acceptable signature is that of the Authorized Representative whose name is printed under the signature line. If this person is no longer the Authorized Representative, indicate the new Authorized Representative.

Refer to your permit for clarification of the requirements. SMRFs are provided as a courtesy. Every effort has been made to verify that they accurately reflect your permit requirements. In the event it does not, you are required to submit the information required by your permit. For further information or help completing the SMRF, please call (520) 724-6200.

APPENDIX B

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level and separate-phase product level, if present, in each well that contained water and/or separate-phase product are measured with a ORS Interface Probe, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from top of casing elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® or polypropylene bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. If appropriate, free-phase hydrocarbons are removed from the well.

During a purge sampling event before water samples are collected from the groundwater monitoring wells, the wells are purged until a minimum of three well casing volumes is purged and stabilization of the temperature, pH, and conductivity is obtained. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples." The quantity of water purged from each well is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r	=	radius of the well casing in feet
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
π	=	ratio of the circumference of a circle to its diameter

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples." Water samples are collected with a new, disposable Teflon® or polypropylene bailer. The groundwater is carefully poured into selected sample containers (40-milliliter [ml] glass vials, 1,000-ml glass amber bottles, etc.), which are filled so as to produce a positive meniscus.

Depending on the required analysis, each sample container is preserved with hydrochloric acid, nitric acid, etc., or it is preservative free. The type of preservative used for each sample is specified on the Chain-of-Custody record.

Each vial and glass amber bottle is sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace, which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain-of-Custody record, to a Arizona state-certified laboratory.

APPENDIX C

GROUNDWATER SAMPLE LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

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

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

PO 1152

SGS Accutest Job Number: C44247

Sampling Date: 02/24/16

Report to:

City of Tucson - Env. Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@cardno.com; justin.patton@cardno.com;
ATTN: Richard Byrd

Total number of pages in report: **87**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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Test results relate only to samples analyzed.

SGS Accutest is the sole authority for authorizing edits or modifications to this document.
Unauthorized modification of this report is strictly prohibited.

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C44247

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: PO 1152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C44247-1	02/24/16	09:04	KV	02/25/16	AQ	Ground Water	HQUST-526A
C44247-2	02/24/16	09:08	KV	02/25/16	AQ	Ground Water	HQUST-526A
C44247-3	02/24/16	09:34	KV	02/25/16	AQ	Ground Water	HQUST-548
C44247-4	02/24/16	10:00	KV	02/25/16	AQ	Ground Water	HQUST-547
C44247-5	02/24/16	10:32	KV	02/25/16	AQ	Ground Water	HQUST-525A
C44247-6	02/24/16	11:04	KV	02/25/16	AQ	Ground Water	HQUST-533A
C44247-7	02/24/16	11:28	KV	02/25/16	AQ	Ground Water	CEP-520A
C44247-8	02/24/16	11:54	KV	02/25/16	AQ	Ground Water	HQUST-531A
C44247-9	02/24/16	00:00	KV	02/25/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C44247
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	3/3/2016 9:00:03 PM

8 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 02/24/2016 and were received at Accutest on 02/25/2016 properly preserved, at 5.1 Deg. C and intact. These Samples received an Accutest job number of C44247. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VU1358

- Sample(s) C44252-15MS, C44252-15MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VV1318

- Sample(s) C44207-3MS, C44207-3MSD were used as the QC samples indicated.
- C44247-1: Sample vial contained more than 0.5cm of sediment.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10890

- Sample(s) C44247-8MS, C44247-8MSD, C44247-8SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP10890-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9063

- Sample(s) C44247-3MS, C44247-3MSD, C44247-7MS, C44247-7MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN18528

- Sample(s) C44244-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP9081

- Sample(s) C44284-5MSD, C44284-5MS were used as the QC samples for Total Organic Carbon.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Total Organic Carbon are outside control limits. Probable cause due to matrix interference. Associated BS/BSD recoveries are within control limits.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C44247
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 02/24/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C44247-1	**HQUST-526A**					
Benzene [a]		1.8	1.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether [a]		47.0	1.0		ug/l	SW846 8260B
Iron		3570	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		416	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		1.1	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		789	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.1	1.0		mg/l	SM5310 C-00
C44247-2	**HQUST-526A**					
Benzene		1.7	1.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether		42.0	1.0		ug/l	SW846 8260B
Iron		4430	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		398	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		1.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		685	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.9	1.0		mg/l	SM5310 C-00
C44247-3	**HQUST-548**					
Iron		3060	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		316	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		1020	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C44247-4	**HQUST-547**					
Methyl Tert Butyl Ether		1.4	1.0		ug/l	SW846 8260B
Iron		1960	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		288	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.6	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		1380	50		mg/l	EPA 300/SW846 9056A
C44247-5	**HQUST-525A**					
Iron		1120	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		246	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		620	25		mg/l	EPA 300/SW846 9056A

Summary of Hits

Job Number: C44247
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 02/24/16

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C44247-6	**HQUST-533A**					
Methyl Tert Butyl Ether		2.0	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		452	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		8.0	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		504	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.2	1.0		mg/l	SM5310 C-00
C44247-7	**CEP-520A**					
Iron		13700	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		192	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		3.1	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		471	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C44247-8	**HQUST-531A**					
Iron		1250	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		223	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		7.8	0.20		mg/l	EPA 300/SW846 9056A
Sulfate		772	50		mg/l	EPA 300/SW846 9056A
C44247-9	**TRIP BLANK**					

No hits reported in this sample.

(a) Sample vial contained more than 0.5cm of sediment.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C44247-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	V32054.D	1	03/01/16	KZ	n/a	n/a	VV1318
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	1.8	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-526A		
Lab Sample ID:	C44247-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	47.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-123%
2037-26-5	Toluene-D8	108%		88-112%
460-00-4	4-Bromofluorobenzene	103%		79-114%

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:	HQUST-526A		
Lab Sample ID:	C44247-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) Sample vial contained more than 0.5cm of sediment.
(b) AZ:T2,T6

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:	HQUST-526A		
Lab Sample ID:	C44247-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3570	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C44247-1	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	416	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	1.1	0.10	mg/l	1	02/25/16 19:46	HD	EPA 300/SW846 9056A
Sulfate	789	25	mg/l	50	02/25/16 22:40	HD	EPA 300/SW846 9056A
Total Organic Carbon	2.1	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C44247-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33118.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	1.7	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-526A		
Lab Sample ID:	C44247-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	42.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	92%		79-114%

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:	HQUST-526A		
Lab Sample ID:	C44247-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-526A		
Lab Sample ID:	C44247-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	4430	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C44247-2	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	398	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	1.4	0.10	mg/l	1	02/25/16 20:04	HD	EPA 300/SW846 9056A
Sulfate	685	25	mg/l	50	02/25/16 22:57	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.9	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C44247-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33119.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-548		
Lab Sample ID:	C44247-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-123%
2037-26-5	Toluene-D8	104%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	HQUST-548		
Lab Sample ID:	C44247-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-548		
Lab Sample ID:	C44247-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	3060	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C44247-3	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	316	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	6.4	0.10	mg/l	1	02/25/16 20:21	HD	EPA 300/SW846 9056A
Sulfate	1020	50	mg/l	100	02/25/16 23:14	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C44247-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33120.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-547		
Lab Sample ID:	C44247-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.4	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	HQUST-547		
Lab Sample ID:	C44247-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-547		
Lab Sample ID:	C44247-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1960	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C44247-4	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	288	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	5.6	0.10	mg/l	1	02/25/16 20:38	HD	EPA 300/SW846 9056A
Sulfate	1380	50	mg/l	100	02/26/16 00:06	HD	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C44247-5	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33121.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-525A		
Lab Sample ID:	C44247-5	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-123%
2037-26-5	Toluene-D8	105%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	HQUST-525A		
Lab Sample ID:	C44247-5	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-525A		
Lab Sample ID:	C44247-5	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1120	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C44247-5	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	246	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	4.4	0.10	mg/l	1	02/25/16 20:56	HD	EPA 300/SW846 9056A
Sulfate	620	25	mg/l	50	02/26/16 00:24	HD	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C44247-6	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33122.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-533A		
Lab Sample ID:	C44247-6	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	90%		79-114%

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:	HQUST-533A		
Lab Sample ID:	C44247-6	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-533A		
Lab Sample ID:	C44247-6	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C44247-6	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	452	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	8.0	0.25	mg/l	2.5	02/25/16 21:48	HD	EPA 300/SW846 9056A
Sulfate	504	25	mg/l	50	02/26/16 01:16	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C44247-7	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33123.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-520A		
Lab Sample ID:	C44247-7	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	CEP-520A		
Lab Sample ID:	C44247-7	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	CEP-520A		
Lab Sample ID:	C44247-7	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	13700	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C44247-7	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	192	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	3.1	0.10	mg/l	1	02/25/16 22:05	HD	EPA 300/SW846 9056A
Sulfate	471	25	mg/l	50	02/26/16 10:33	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C44247-8	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33124.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-531A		
Lab Sample ID:	C44247-8	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-123%
2037-26-5	Toluene-D8	104%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	HQUST-531A		
Lab Sample ID:	C44247-8	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-531A		
Lab Sample ID:	C44247-8	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1250	200	ug/l	1	02/26/16	02/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5640
(2) Prep QC Batch: MP10890

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C44247-8	**Date Sampled:**	02/24/16
Matrix:	AQ - Ground Water	**Date Received:**	02/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	223	5.0	mg/l	1	02/26/16 10:00	DQ	SM2320 B-97
Nitrogen, Nitrate	7.8	0.20	mg/l	2	02/25/16 22:22	HD	EPA 300/SW846 9056A
Sulfate	772	50	mg/l	100	02/26/16 01:50	HD	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C44247-9	**Date Sampled:**	02/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33125.D	1	03/01/16	JC	n/a	n/a	VU1358
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C44247-9	**Date Sampled:**	02/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	C44247-9	**Date Sampled:**	02/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

Qual	Description
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

PHOENIX

ACCUTEST® LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 7824 5459 4604
Bottle Order Control #
Accutest Quote #
Accutest Job #: C44247

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box 27210
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520-791-3175
Samplers's Name: Kayla Virgone

Project Information

Project Name: TCC / HQUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis

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	DI NONE	Alk NO3 SO4	Fe (total)	TOC	8260 VOC	LAB USE ONLY
1	HQUST-526A	2/24/16	0904	KV	GW	7									X	X	X	X	
2	HQUST-526A	2/24/16	0908	KV	GW	7									X	X	X	X	
3	HQUST-548	2/24/16	0934	KV	GW	7									X	X	X	X	
4	HQUST-547	2/24/16	1000	KV	GW	7									X	X	X	X	
5	HQUST-525A	2/24/16	1032	KV	GW	7									X	X	X	X	
6	HQUST-533A	2/24/16	1104	KV	GW	7									X	X	X	X	
7	CEP-520A	2/24/16	1128	KV	GW	7									X	X	X	X	
8	HQUST-531A	2/24/16	1154	KV	GW	7									X	X	X	X	
9	TRIP BLANK					2												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:

- 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	Kayla Virgone	2/24/16 1302	[signature]	[signature]	2/24/16 1600	Fedex
2	Relinquished by: FedEx	Date Time: 2/25/16 0950	Received By: [signature]	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	On Ice Y / N
5						Cooler Temp. 4.9/5.1 °C

1474C

AZ

C44247: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C44247 **Client:** CITY OF TUCSON **Project:** TCC/HQUST

Date / Time Received: 2/25/2016 9:50:00 AM **Delivery Method:** FedEx **Airbill #'s:** 782454594604

Cooler Temps (Initial/Adjusted): #1: (4.9/5.1);

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. Therm ID:	IR1;	
3. Cooler media:	Ice (Bag)	
4. No. Coolers:	1	

Quality Control Preservation	Y	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	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

Accutest Laboratories
V:408.588.0200
2105 Lundy Avenue
F: 408.588.0201
San Jose, CA 95131
www/accutest.com

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: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-MB	V32043.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	0.29	1.0	ug/l	J
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-MB	V32043.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-123%
2037-26-5	Toluene-D8	108%	88-112%

Method Blank Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-MB	V32043.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	106%	79-114%

Method Blank Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-MB	U33109.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-MB	U33109.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-123%
2037-26-5	Toluene-D8	100%	88-112%

Method Blank Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-MB	U33109.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-BS	V32040.D	1	03/01/16	KZ	n/a	n/a	VV1318
VV1318-BSD	V32041.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	87.8	110	88.1	110	0	55-147/17
71-43-2	Benzene	20	19.1	96	19.4	97	2	76-120/10
108-86-1	Bromobenzene	20	21.1	106	21.3	107	1	80-123/10
74-97-5	Bromochloromethane	20	20.2	101	20.6	103	2	79-124/10
75-27-4	Bromodichloromethane	20	19.5	98	19.8	99	2	75-121/10
75-25-2	Bromoform	20	17.8	89	17.7	89	1	62-127/10
104-51-8	n-Butylbenzene	20	19.5	98	19.8	99	2	74-129/10
135-98-8	sec-Butylbenzene	20	19.6	98	19.9	100	2	75-128/11
98-06-6	tert-Butylbenzene	20	19.9	100	20.2	101	1	74-127/11
108-90-7	Chlorobenzene	20	19.5	98	20.0	100	3	79-119/10
75-00-3	Chloroethane	20	20.0	100	20.2	101	1	60-115/14
67-66-3	Chloroform	20	18.5	93	19.0	95	3	75-122/10
95-49-8	o-Chlorotoluene	20	19.6	98	19.4	97	1	76-125/12
106-43-4	p-Chlorotoluene	20	19.6	98	19.8	99	1	76-126/11
75-15-0	Carbon disulfide	20	15.5	78	15.8	79	2	51-130/13
56-23-5	Carbon tetrachloride	20	19.6	98	19.7	99	1	72-128/13
75-34-3	1,1-Dichloroethane	20	19.0	95	19.5	98	3	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.6	93	18.9	95	2	62-125/13
563-58-6	1,1-Dichloropropene	20	18.9	95	19.2	96	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	20.2	101	19.5	98	4	64-129/11
106-93-4	1,2-Dibromoethane	20	21.6	108	21.7	109	0	81-124/10
107-06-2	1,2-Dichloroethane	20	20.0	100	20.2	101	1	74-122/10
78-87-5	1,2-Dichloropropane	20	19.4	97	19.9	100	3	75-123/10
142-28-9	1,3-Dichloropropane	20	21.8	109	21.8	109	0	81-127/11
108-20-3	Di-Isopropyl ether	20	19.1	96	19.8	99	4	69-126/10
594-20-7	2,2-Dichloropropane	20	19.2	96	19.8	99	3	66-130/12
124-48-1	Dibromochloromethane	20	19.1	96	19.4	97	2	76-124/10
75-71-8	Dichlorodifluoromethane	20	21.9	110	20.4	102	7	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	19.2	96	19.7	99	3	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.7	104	21.0	105	1	76-131/10
541-73-1	m-Dichlorobenzene	20	20.3	102	20.7	104	2	79-121/10
95-50-1	o-Dichlorobenzene	20	20.1	101	20.4	102	1	79-120/10
106-46-7	p-Dichlorobenzene	20	20.2	101	20.7	104	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.4	87	17.6	88	1	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	20.4	102	20.6	103	1	73-125/10
100-41-4	Ethylbenzene	20	20.0	100	20.4	102	2	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-BS	V32040.D	1	03/01/16	KZ	n/a	n/a	VV1318
VV1318-BSD	V32041.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	93.8	117	89.9	112	4	71-145/12
87-68-3	Hexachlorobutadiene	20	19.2	96	19.5	98	2	70-130/12
98-82-8	Isopropylbenzene	20	19.4	97	19.8	99	2	77-125/10
99-87-6	p-Isopropyltoluene	20	19.9	100	19.8	99	1	76-126/10
108-10-1	4-Methyl-2-pentanone	80	86.3	108	85.4	107	1	70-142/11
74-83-9	Methyl bromide	20	18.8	94	19.2	96	2	65-124/13
74-87-3	Methyl chloride	20	22.5	113	22.7	114	1	47-143/20
74-95-3	Methylene bromide	20	20.9	105	20.8	104	0	80-125/10
75-09-2	Methylene chloride	20	19.1	96	19.5	98	2	65-124/15
78-93-3	Methyl ethyl ketone	80	79.9	100	80.5	101	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.8	94	18.9	95	1	73-120/10
91-20-3	Naphthalene	20	21.1	106	21.2	106	0	66-120/12
103-65-1	n-Propylbenzene	20	19.7	99	19.9	100	1	75-125/10
100-42-5	Styrene	20	20.7	104	21.0	105	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.9	100	20.2	101	1	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.5	98	20.0	100	3	79-126/10
71-55-6	1,1,1-Trichloroethane	20	19.4	97	19.9	100	3	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	21.5	108	21.4	107	0	78-127/10
79-00-5	1,1,2-Trichloroethane	20	20.7	104	21.0	105	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	20.8	104	21.2	106	2	70-128/12
96-18-4	1,2,3-Trichloropropane	20	17.8	89	17.5	88	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	20.5	103	20.8	104	1	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	19.9	100	20.3	102	2	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.2	101	20.3	102	0	79-130/10
127-18-4	Tetrachloroethylene	20	19.7	99	20.0	100	2	72-124/13
108-88-3	Toluene	20	19.7	99	20.2	101	3	78-121/10
79-01-6	Trichloroethylene	20	19.8	99	20.1	101	2	75-119/10
75-69-4	Trichlorofluoromethane	20	20.4	102	19.8	99	3	68-130/19
75-01-4	Vinyl chloride	20	21.6	108	21.9	110	1	57-137/18
1330-20-7	Xylene (total)	60	59.2	99	60.2	100	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	101%	80-123%
2037-26-5	Toluene-D8	102%	103%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-BS	V32040.D	1	03/01/16	KZ	n/a	n/a	VV1318
VV1318-BSD	V32041.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-BS	U33106.D	1	03/01/16	JC	n/a	n/a	VU1358
VU1358-BSD	U33107.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	74.0	93	74.7	93	1	55-147/17
71-43-2	Benzene	20	20.2	101	20.3	102	0	76-120/10
108-86-1	Bromobenzene	20	18.9	95	19.1	96	1	80-123/10
74-97-5	Bromochloromethane	20	20.9	105	20.6	103	1	79-124/10
75-27-4	Bromodichloromethane	20	19.8	99	19.8	99	0	75-121/10
75-25-2	Bromoform	20	19.7	99	20.2	101	3	62-127/10
104-51-8	n-Butylbenzene	20	19.4	97	19.7	99	2	74-129/10
135-98-8	sec-Butylbenzene	20	18.6	93	19.0	95	2	75-128/11
98-06-6	tert-Butylbenzene	20	18.1	91	18.7	94	3	74-127/11
108-90-7	Chlorobenzene	20	19.6	98	19.7	99	1	79-119/10
75-00-3	Chloroethane	20	18.0	90	18.0	90	0	60-115/14
67-66-3	Chloroform	20	20.3	102	20.3	102	0	75-122/10
95-49-8	o-Chlorotoluene	20	18.2	91	18.4	92	1	76-125/12
106-43-4	p-Chlorotoluene	20	18.4	92	18.7	94	2	76-126/11
75-15-0	Carbon disulfide	20	16.1	81	16.0	80	1	51-130/13
56-23-5	Carbon tetrachloride	20	20.6	103	20.7	104	0	72-128/13
75-34-3	1,1-Dichloroethane	20	20.3	102	20.4	102	0	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.7	94	18.8	94	1	62-125/13
563-58-6	1,1-Dichloropropene	20	19.3	97	19.3	97	0	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	17.3	87	17.7	89	2	64-129/11
106-93-4	1,2-Dibromoethane	20	19.8	99	20.0	100	1	81-124/10
107-06-2	1,2-Dichloroethane	20	20.6	103	20.7	104	0	74-122/10
78-87-5	1,2-Dichloropropane	20	20.6	103	20.6	103	0	75-123/10
142-28-9	1,3-Dichloropropane	20	20.7	104	20.8	104	0	81-127/11
108-20-3	Di-Isopropyl ether	20	19.5	98	19.7	99	1	69-126/10
594-20-7	2,2-Dichloropropane	20	18.8	94	19.0	95	1	66-130/12
124-48-1	Dibromochloromethane	20	19.5	98	19.9	100	2	76-124/10
75-71-8	Dichlorodifluoromethane	20	14.7	74	14.6	73	1	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.8	104	21.0	105	1	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.6	103	20.7	104	0	76-131/10
541-73-1	m-Dichlorobenzene	20	18.9	95	19.1	96	1	79-121/10
95-50-1	o-Dichlorobenzene	20	18.9	95	19.3	97	2	79-120/10
106-46-7	p-Dichlorobenzene	20	19.1	96	19.4	97	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	18.2	91	18.0	90	1	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	19.7	99	19.9	100	1	73-125/10
100-41-4	Ethylbenzene	20	19.7	99	19.9	100	1	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-BS	U33106.D	1	03/01/16	JC	n/a	n/a	VU1358
VU1358-BSD	U33107.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	81.5	102	80.6	101	1	71-145/12
87-68-3	Hexachlorobutadiene	20	18.4	92	19.0	95	3	70-130/12
98-82-8	Isopropylbenzene	20	19.5	98	19.8	99	2	77-125/10
99-87-6	p-Isopropyltoluene	20	18.5	93	18.9	95	2	76-126/10
108-10-1	4-Methyl-2-pentanone	80	80.6	101	80.3	100	0	70-142/11
74-83-9	Methyl bromide	20	17.7	89	17.7	89	0	65-124/13
74-87-3	Methyl chloride	20	22.0	110	21.4	107	3	47-143/20
74-95-3	Methylene bromide	20	21.5	108	21.5	108	0	80-125/10
75-09-2	Methylene chloride	20	20.0	100	20.1	101	0	65-124/15
78-93-3	Methyl ethyl ketone	80	76.1	95	74.5	93	2	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.0	90	18.3	92	2	73-120/10
91-20-3	Naphthalene	20	18.6	93	20.1	101	8	66-120/12
103-65-1	n-Propylbenzene	20	18.5	93	18.8	94	2	75-125/10
100-42-5	Styrene	20	19.4	97	19.5	98	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.4	97	19.7	99	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	20.2	101	20.1	101	0	79-126/10
71-55-6	1,1,1-Trichloroethane	20	20.0	100	20.1	101	0	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	20.1	101	20.3	102	1	78-127/10
79-00-5	1,1,2-Trichloroethane	20	21.0	105	21.2	106	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	19.2	96	20.6	103	7	70-128/12
96-18-4	1,2,3-Trichloropropane	20	18.8	94	18.8	94	0	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	18.6	93	19.5	98	5	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	18.7	94	19.0	95	2	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	18.5	93	18.9	95	2	79-130/10
127-18-4	Tetrachloroethylene	20	19.3	97	19.4	97	1	72-124/13
108-88-3	Toluene	20	19.3	97	19.4	97	1	78-121/10
79-01-6	Trichloroethylene	20	20.0	100	19.9	100	1	75-119/10
75-69-4	Trichlorofluoromethane	20	18.4	92	19.0	95	3	68-130/19
75-01-4	Vinyl chloride	20	21.6	108	21.8	109	1	57-137/18
1330-20-7	Xylene (total)	60	58.6	98	58.7	98	0	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	106%	80-123%
2037-26-5	Toluene-D8	101%	102%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-BS	U33106.D	1	03/01/16	JC	n/a	n/a	VU1358
VU1358-BSD	U33107.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1318-LCS	V32042.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-123%
2037-26-5	Toluene-D8	106%	88-112%
460-00-4	4-Bromofluorobenzene	102%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1358-LCS	U33108.D	1	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-123%
2037-26-5	Toluene-D8	103%	88-112%
460-00-4	4-Bromofluorobenzene	96%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44207-3MS	V32061.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3MSD	V32062.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3	V32048.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	C44207-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		80	86.2	108	80	84.5	106	2	55-147/17
71-43-2	Benzene	ND		20	21.3	107	20	20.7	104	3	76-120/10
108-86-1	Bromobenzene	ND		20	22.6	113	20	22.0	110	3	80-123/10
74-97-5	Bromochloromethane	ND		20	22.1	111	20	21.5	108	3	79-124/10
75-27-4	Bromodichloromethane	ND		20	21.3	107	20	20.7	104	3	75-121/10
75-25-2	Bromoform	ND		20	18.8	94	20	19.0	95	1	62-127/10
104-51-8	n-Butylbenzene	ND		20	21.4	107	20	20.7	104	3	74-129/10
135-98-8	sec-Butylbenzene	ND		20	21.7	109	20	21.2	106	2	75-128/11
98-06-6	tert-Butylbenzene	ND		20	22.1	111	20	21.3	107	4	74-127/11
108-90-7	Chlorobenzene	ND		20	21.1	106	20	21.1	106	0	79-119/10
75-00-3	Chloroethane	ND		20	22.8	114	20	22.4	112	2	60-115/14
67-66-3	Chloroform	ND		20	20.8	104	20	20.0	100	4	75-122/10
95-49-8	o-Chlorotoluene	ND		20	21.5	108	20	20.6	103	4	76-125/12
106-43-4	p-Chlorotoluene	ND		20	21.3	107	20	20.8	104	2	76-126/11
75-15-0	Carbon disulfide	ND		20	18.1	91	20	17.3	87	5	51-130/13
56-23-5	Carbon tetrachloride	ND		20	22.4	112	20	21.8	109	3	72-128/13
75-34-3	1,1-Dichloroethane	ND		20	21.4	107	20	20.5	103	4	70-121/10
75-35-4	1,1-Dichloroethylene	ND		20	21.3	107	20	20.8	104	2	62-125/13
563-58-6	1,1-Dichloropropene	ND		20	21.8	109	20	21.3	107	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	19.8	99	20	19.7	99	1	64-129/11
106-93-4	1,2-Dibromoethane	ND		20	22.1	111	20	22.4	112	1	81-124/10
107-06-2	1,2-Dichloroethane	ND		20	21.7	109	20	21.0	105	3	74-122/10
78-87-5	1,2-Dichloropropane	ND		20	21.6	108	20	20.9	105	3	75-123/10
142-28-9	1,3-Dichloropropane	ND		20	22.8	114	20	22.5	113	1	81-127/11
108-20-3	Di-Isopropyl ether	ND		20	20.9	105	20	20.4	102	2	69-126/10
594-20-7	2,2-Dichloropropane	ND		20	19.5	98	20	18.8	94	4	66-130/12
124-48-1	Dibromochloromethane	ND		20	20.1	101	20	20.2	101	0	76-124/10
75-71-8	Dichlorodifluoromethane	ND		20	27.1	136	20	25.4	127	6	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		20	21.7	109	20	20.8	104	4	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		20	22.0	110	20	21.4	107	3	76-131/10
541-73-1	m-Dichlorobenzene	ND		20	22.0	110	20	21.4	107	3	79-121/10
95-50-1	o-Dichlorobenzene	ND		20	21.6	108	20	21.1	106	2	79-120/10
106-46-7	p-Dichlorobenzene	ND		20	21.9	110	20	21.5	108	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		20	19.6	98	20	19.1	96	3	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.9	105	20	20.8	104	0	73-125/10
100-41-4	Ethylbenzene	ND		20	21.9	110	20	21.7	109	1	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44207-3MS	V32061.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3MSD	V32062.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3	V32048.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Compound	C44207-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		80	91.8	115	80	90.8	114	1	71-145/12
87-68-3	Hexachlorobutadiene	ND		20	21.3	107	20	21.0	105	1	70-130/12
98-82-8	Isopropylbenzene	ND		20	21.3	107	20	21.2	106	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		20	22.1	111	20	21.2	106	4	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		80	89.1	111	80	86.5	108	3	70-142/11
74-83-9	Methyl bromide	ND		20	21.3	107	20	20.8	104	2	65-124/13
74-87-3	Methyl chloride	ND		20	26.1	131	20	25.0	125	4	47-143/20
74-95-3	Methylene bromide	ND		20	22.1	111	20	21.5	108	3	80-125/10
75-09-2	Methylene chloride	ND		20	21.0	105	20	20.3	102	3	65-124/15
78-93-3	Methyl ethyl ketone	ND		80	80.6	101	80	77.3	97	4	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	20.0	100	20	19.4	97	3	73-120/10
91-20-3	Naphthalene	ND		20	21.9	110	20	21.6	108	1	66-120/12
103-65-1	n-Propylbenzene	ND		20	21.6	108	20	20.9	105	3	75-125/10
100-42-5	Styrene	ND		20	21.7	109	20	21.5	108	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		20	21.3	107	20	20.6	103	3	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		20	21.0	105	20	21.0	105	0	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		20	22.3	112	20	21.6	108	3	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.2	111	20	21.5	108	3	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		20	21.7	109	20	21.7	109	0	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		20	22.6	113	20	21.9	110	3	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		20	18.5	93	20	18.6	93	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		20	21.8	109	20	21.2	106	3	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		20	21.6	108	20	21.0	105	3	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		20	22.1	111	20	21.5	108	3	79-130/10
127-18-4	Tetrachloroethylene	ND		20	21.6	108	20	21.4	107	1	72-124/13
108-88-3	Toluene	ND		20	21.6	108	20	21.4	107	1	78-121/10
79-01-6	Trichloroethylene	ND		20	22.3	112	20	21.7	109	3	75-119/10
75-69-4	Trichlorofluoromethane	ND		20	23.6	118	20	23.2	116	2	68-130/19
75-01-4	Vinyl chloride	ND		20	25.7	129	20	25.0	125	3	57-137/18
1330-20-7	Xylene (total)	ND		60	64.8	108	60	64.5	108	0	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C44207-3	Limits
1868-53-7	Dibromofluoromethane	103%	101%	100%	80-123%
2037-26-5	Toluene-D8	102%	104%	110%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44207-3MS	V32061.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3MSD	V32062.D	1	03/01/16	KZ	n/a	n/a	VV1318
C44207-3	V32048.D	1	03/01/16	KZ	n/a	n/a	VV1318

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

C44247-1

CAS No.	Surrogate Recoveries	MS	MSD	C44207-3	Limits
460-00-4	4-Bromofluorobenzene	100%	102%	107%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44252-15MS	U33129.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15MSD	U33130.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15	U33127.D	5	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	C44252-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	31.4	J	400	451	105	400	458	107	2	55-147/17
71-43-2	Benzene	4.1	J	100	109	105	100	109	105	0	76-120/10
108-86-1	Bromobenzene	ND		100	95.7	96	100	97.6	98	2	80-123/10
74-97-5	Bromochloromethane	ND		100	108	108	100	110	110	2	79-124/10
75-27-4	Bromodichloromethane	ND		100	102	102	100	102	102	0	75-121/10
75-25-2	Bromoform	ND		100	102	102	100	102	102	0	62-127/10
104-51-8	n-Butylbenzene	ND		100	98.7	99	100	97.8	98	1	74-129/10
135-98-8	sec-Butylbenzene	ND		100	96.2	96	100	96.1	96	0	75-128/11
98-06-6	tert-Butylbenzene	ND		100	92.8	93	100	94.8	95	2	74-127/11
108-90-7	Chlorobenzene	ND		100	101	101	100	102	102	1	79-119/10
75-00-3	Chloroethane	ND		100	91.7	92	100	94.9	95	3	60-115/14
67-66-3	Chloroform	ND		100	106	106	100	109	109	3	75-122/10
95-49-8	o-Chlorotoluene	ND		100	93.5	94	100	94.4	94	1	76-125/12
106-43-4	p-Chlorotoluene	ND		100	93.8	94	100	94.3	94	1	76-126/11
75-15-0	Carbon disulfide	ND		100	75.8	76	100	76.0	76	0	51-130/13
56-23-5	Carbon tetrachloride	ND		100	108	108	100	107	107	1	72-128/13
75-34-3	1,1-Dichloroethane	ND		100	105	105	100	108	108	3	70-121/10
75-35-4	1,1-Dichloroethylene	ND		100	97.1	97	100	97.3	97	0	62-125/13
563-58-6	1,1-Dichloropropene	ND		100	100	100	100	99.6	100	0	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	92.5	93	100	95.2	95	3	64-129/11
106-93-4	1,2-Dibromoethane	ND		100	103	103	100	104	104	1	81-124/10
107-06-2	1,2-Dichloroethane	ND		100	107	107	100	107	107	0	74-122/10
78-87-5	1,2-Dichloropropane	ND		100	106	106	100	106	106	0	75-123/10
142-28-9	1,3-Dichloropropane	ND		100	108	108	100	109	109	1	81-127/11
108-20-3	Di-Isopropyl ether	ND		100	100	100	100	104	104	4	69-126/10
594-20-7	2,2-Dichloropropane	ND		100	89.2	89	100	90.8	91	2	66-130/12
124-48-1	Dibromochloromethane	ND		100	101	101	100	101	101	0	76-124/10
75-71-8	Dichlorodifluoromethane	ND		100	84.8	85	100	79.1	79	7	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		100	107	107	100	109	109	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		100	103	103	100	104	104	1	76-131/10
541-73-1	m-Dichlorobenzene	ND		100	96.0	96	100	97.7	98	2	79-121/10
95-50-1	o-Dichlorobenzene	ND		100	97.7	98	100	98.7	99	1	79-120/10
106-46-7	p-Dichlorobenzene	ND		100	97.0	97	100	97.9	98	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		100	93.0	93	100	95.2	95	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		100	99.0	99	100	101	101	2	73-125/10
100-41-4	Ethylbenzene	ND		100	103	103	100	103	103	0	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44252-15MS	U33129.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15MSD	U33130.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15	U33127.D	5	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Compound	C44252-15 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		400	442	111	400	442	111	0	71-145/12
87-68-3	Hexachlorobutadiene	ND		100	91.0	91	100	92.3	92	1	70-130/12
98-82-8	Isopropylbenzene	ND		100	102	102	100	102	102	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		100	94.4	94	100	94.9	95	1	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		400	431	108	400	429	107	0	70-142/11
74-83-9	Methyl bromide	ND		100	90.1	90	100	93.5	94	4	65-124/13
74-87-3	Methyl chloride	ND		100	115	115	100	115	115	0	47-143/20
74-95-3	Methylene bromide	ND		100	112	112	100	113	113	1	80-125/10
75-09-2	Methylene chloride	ND		100	104	104	100	107	107	3	65-124/15
78-93-3	Methyl ethyl ketone	ND		400	413	103	400	415	104	0	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		100	91.8	92	100	95.7	96	4	73-120/10
91-20-3	Naphthalene	ND		100	97.5	98	100	104	104	6	66-120/12
103-65-1	n-Propylbenzene	ND		100	94.5	95	100	95.2	95	1	75-125/10
100-42-5	Styrene	ND		100	90.8	91	100	90.2	90	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		100	99.4	99	100	103	103	4	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	103	103	100	104	104	1	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		100	106	106	100	107	107	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	106	106	100	106	106	0	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		100	112	112	100	111	111	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		100	96.0	96	100	103	103	7	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		100	99.7	100	100	98.2	98	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		100	93.3	93	100	96.7	97	4	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		100	95.2	95	100	96.8	97	2	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		100	94.6	95	100	95.3	95	1	79-130/10
127-18-4	Tetrachloroethylene	282		100	386	104	100	370	88	4	72-124/13
108-88-3	Toluene	ND		100	99.0	99	100	101	101	2	78-121/10
79-01-6	Trichloroethylene	1.7	J	100	105	103	100	105	103	0	75-119/10
75-69-4	Trichlorofluoromethane	ND		100	102	102	100	99.6	100	2	68-130/19
75-01-4	Vinyl chloride	ND		100	121	121	100	120	120	1	57-137/18
1330-20-7	Xylene (total)	ND		300	302	101	300	303	101	0	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C44252-15	Limits
1868-53-7	Dibromofluoromethane	109%	110%	110%	80-123%
2037-26-5	Toluene-D8	101%	102%	102%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44247
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44252-15MS	U33129.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15MSD	U33130.D	5	03/01/16	JC	n/a	n/a	VU1358
C44252-15	U33127.D	5	03/01/16	JC	n/a	n/a	VU1358

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

C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8, C44247-9

CAS No.	Surrogate Recoveries	MS	MSD	C44252-15	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	92%	79-114%

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10890
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/26/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	0.60	<200
Lead	10	1	1.7		
Lithium	50	1.1	2.9		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP10890: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8

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: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10890 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/26/16

Metal	C44247-8 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	1250	13900	12500	101.2	75-125
Lead					
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP10890: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8

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: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10890 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/26/16

Metal	C44247-8 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium	anr					
Cobalt						
Copper						
Iron	1250	13500	12500	98.0	2.9	20
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP10890: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8

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: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10890 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/26/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	12900	12500	103.2	80-120
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10890: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10890 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 02/26/16

Metal	C44247-8 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	1250	1380	10.3*(a)	0-10
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP10890: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN18528	5.0	0.0	mg/l	250	248	99.2	75-125%
Fluoride	GP9063/GN18535	0.10	0.0	mg/l	5	4.80	96.0	90-110%
Nitrogen, Nitrate	GP9063/GN18535	0.10	0.0	mg/l	5	4.95	99.0	90-110%
Nitrogen, Nitrite	GP9063/GN18535	0.10	0.0	mg/l	5	4.77	95.4	90-110%
Sulfate	GP9063/GN18535	0.50	0.0	mg/l	5	5.03	100.6	90-110%
Total Organic Carbon	GP9081/GN18557	1.0	0.0	mg/l	5	4.6	92.3	75-125%

Associated Samples:
Batch GP9063: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GP9081: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GN18528: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN18528	mg/l	250	250	0.8	
Fluoride	GP9063/GN18535	mg/l	5	4.78	0.4	25%
Nitrogen, Nitrate	GP9063/GN18535	mg/l	5	4.95	0.0	25%
Nitrogen, Nitrite	GP9063/GN18535	mg/l	5	4.89	2.5	25%
Sulfate	GP9063/GN18535	mg/l	5	5.02	0.2	25%
Total Organic Carbon	GP9081/GN18557	mg/l	5	4.7	1.2	

Associated Samples:
Batch GP9063: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GP9081: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GN18528: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN18528	C44244-1	mg/l	274	237	14.5	0-25%

Associated Samples:
Batch GN18528: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Fluoride	GP9063/GN18535	C44247-3	mg/l	0.14	500	496	99.2	80-120%
Fluoride	GP9063/GN18535	C44247-7	mg/l	0.12	250	234	93.6	80-120%
Nitrogen, Nitrate	GP9063/GN18535	C44247-3	mg/l	6.4	500	493	97.3	80-120%
Nitrogen, Nitrate	GP9063/GN18535	C44247-7	mg/l	3.1	250	245	96.8	80-120%
Nitrogen, Nitrite	GP9063/GN18535	C44247-3	mg/l	0.0	500	486	97.2	80-120%
Nitrogen, Nitrite	GP9063/GN18535	C44247-7	mg/l	0.10	250	233	93.2	80-120%
Sulfate	GP9063/GN18535	C44247-3	mg/l	1020	500	1470	90.0	80-120%
Sulfate	GP9063/GN18535	C44247-7	mg/l	471	250	718	98.8	80-120%
Total Organic Carbon	GP9081/GN18557	C44284-5	mg/l	4.0	10	10.8	68.8*(a)	75-125%

Associated Samples:
Batch GP9063: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GP9081: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria due to possible matrix interference. However, BS/BSD recoveries are within control limits. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44247
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Fluoride	GP9063/GN18535	C44247-3	mg/l	0.14	500	497	0.2	
Fluoride	GP9063/GN18535	C44247-7	mg/l	0.12	250	233	0.4	
Nitrogen, Nitrate	GP9063/GN18535	C44247-3	mg/l	6.4	500	483	2.0	
Nitrogen, Nitrate	GP9063/GN18535	C44247-7	mg/l	3.1	250	245	0.0	
Nitrogen, Nitrite	GP9063/GN18535	C44247-3	mg/l	0.0	500	494	1.6	
Nitrogen, Nitrite	GP9063/GN18535	C44247-7	mg/l	0.10	250	235	0.9	
Sulfate	GP9063/GN18535	C44247-3	mg/l	1020	500	1480	0.7	
Sulfate	GP9063/GN18535	C44247-7	mg/l	471	250	718	0.0	
Total Organic Carbon	GP9081/GN18557	C44284-5	mg/l	4.0	10	10.7	1.3	

Associated Samples:
Batch GP9063: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
Batch GP9081: C44247-1, C44247-2, C44247-3, C44247-4, C44247-5, C44247-6, C44247-7, C44247-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

PO 1152

SGS Accutest Job Number: C44284

Sampling Date: 02/25/16

Report to:

City of Tucson - Env. Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@cardno.com; justin.patton@cardno.com;
ATTN: Richard Byrd

Total number of pages in report: **84**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C44284

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: PO 1152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C44284-1	02/25/16	07:12	KV	02/26/16	AQ	Ground Water	HQUST-532A
C44284-2	02/25/16	07:42	KV	02/26/16	AQ	Ground Water	HQUST-523A
C44284-3	02/25/16	08:04	KV	02/26/16	AQ	Ground Water	CEP-518A
C44284-4	02/25/16	08:30	KV	02/26/16	AQ	Ground Water	CEP-519A
C44284-5	02/25/16	09:00	KV	02/26/16	AQ	Ground Water	CEP-527A
C44284-6	02/25/16	09:22	KV	02/26/16	AQ	Ground Water	CEP-528A
C44284-7	02/25/16	10:25	KV	02/26/16	AQ	Ground Water	HQUST-524A
C44284-8	02/25/16	00:00	KV	02/26/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C44284
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	3/4/2016 7:40:51 PM

7 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 02/25/2016 and were received at Accutest on 02/26/2016 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of C44284. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VU1360

- Sample(s) C44284-2MS, C44284-2MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 1,2,4-Trimethylbenzene are outside laboratory control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable.
- C44284-6: Sample vial contained more than 0.5cm of sediment.
- C44284-5: Sample vial contained more than 0.5cm of sediment.
- RPD(s) for BSD for p-Chlorotoluene, 1,3,5-Trimethylbenzene exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria.

Matrix: AQ **Batch ID:** VV1320

- Sample(s) C44284-3MS, C44284-3MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for o-Chlorotoluene, 1,3,5-Trimethylbenzene, n-Butylbenzene, Naphthalene, n-Propylbenzene are outside control limits. Probable cause due to matrix interference and/or high level in sample relative to spike amount. The associated blank spike recoveries were acceptable.
- RPD(s) for MSD for 1,3,5-Trimethylbenzene, n-Butylbenzene, tert-Butylbenzene are outside laboratory control limits for sample C44284-3MSD.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10907

- Sample(s) C44312-2MS, C44312-2MSD, C44312-2SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9063

- Sample(s) C44247-3MS, C44247-3MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP9094

- Sample(s) C44284-3MS, C44284-3MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN18529

- Sample(s) C44266-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP9081

- Sample(s) C44284-5MSD, C44284-5MS were used as the QC samples for Total Organic Carbon.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Total Organic Carbon are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C44284
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 02/25/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C44284-1	**HQUST-532A**					
Iron		645	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		206	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		725	25		mg/l	EPA 300/SW846 9056A
C44284-2	**HQUST-523A**					
Naphthalene		257	200		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		750	80		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		217	80		ug/l	SW846 8260B
Xylene (total)		193	80		ug/l	SW846 8260B
Iron		408	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		326	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		842	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		9.4	4.0		mg/l	SM5310 C-00
C44284-3	**CEP-518A**					
n-Butylbenzene		35.5	20		ug/l	SW846 8260B
Ethylbenzene		334	10		ug/l	SW846 8260B
Isopropylbenzene		56.2	10		ug/l	SW846 8260B
Naphthalene		658	50		ug/l	SW846 8260B
n-Propylbenzene		157	20		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		1220	40		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		384	20		ug/l	SW846 8260B
Xylene (total)		531	20		ug/l	SW846 8260B
Iron		2060	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		462	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.11	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		1020	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		14.2	2.0		mg/l	SM5310 C-00
C44284-4	**CEP-519A**					
1,2,4-Trimethylbenzene		29.6	4.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		12.6	4.0		ug/l	SW846 8260B
Xylene (total)		4.5	4.0		ug/l	SW846 8260B
Iron		605	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		200	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		17.5	0.20		mg/l	EPA 300/SW846 9056A
Sulfate		332	13		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.7	1.0		mg/l	SM5310 C-00

Summary of Hits

Job Number: C44284
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 02/25/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C44284-5	**CEP-527A**					
Chloroform [a]		2.0	0.50		ug/l	SW846 8260B
Iron		14700	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		488	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		482	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		4.0	2.0		mg/l	SM5310 C-00
C44284-6	**CEP-528A**					
Iron		36800	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		324	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		24.8	0.50		mg/l	EPA 300/SW846 9056A
Sulfate		1010	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C44284-7	**HQUST-524A**					
Benzene		3.0	1.0		ug/l	SW846 8260B
Ethylbenzene		2.2	1.0		ug/l	SW846 8260B
Methyl ethyl ketone		11.5	10		ug/l	SW846 8260B
Naphthalene		48.7	5.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		6.7	2.0		ug/l	SW846 8260B
Xylene (total)		5.4	2.0		ug/l	SW846 8260B
Iron		1650	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		322	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.59	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		759	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		9.2	1.0		mg/l	SM5310 C-00

C44284-8 **TRIP BLANK**

No hits reported in this sample.

(a) Sample vial contained more than 0.5cm of sediment.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C44284-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33178.D	1	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-532A		
Lab Sample ID:	C44284-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	91%		79-114%

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:	HQUST-532A		
Lab Sample ID:	C44284-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-532A		
Lab Sample ID:	C44284-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	645	200	ug/l	1	03/01/16	03/02/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5650
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C44284-1	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	206	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	6.0	0.10	mg/l	1	02/26/16 12:25	HD	EPA 300/SW846 9056A
Sulfate	725	25	mg/l	50	03/01/16 13:20	HD	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C44284-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33179.D	40	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	800	ug/l	
71-43-2	Benzene	ND	40	ug/l	
108-86-1	Bromobenzene	ND	40	ug/l	
74-97-5	Bromochloromethane	ND	40	ug/l	
75-27-4	Bromodichloromethane	ND	20	ug/l	
75-25-2	Bromoform	ND	20	ug/l	
104-51-8	n-Butylbenzene	ND	80	ug/l	
135-98-8	sec-Butylbenzene	ND	80	ug/l	
98-06-6	tert-Butylbenzene	ND	80	ug/l	
108-90-7	Chlorobenzene	ND	20	ug/l	
75-00-3	Chloroethane	ND	20	ug/l	
67-66-3	Chloroform	ND	20	ug/l	
95-49-8	o-Chlorotoluene	ND	80	ug/l	
106-43-4	p-Chlorotoluene	ND	80	ug/l	
75-15-0	Carbon disulfide	ND	40	ug/l	
56-23-5	Carbon tetrachloride	ND	20	ug/l	
75-34-3	1,1-Dichloroethane	ND	20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	20	ug/l	
563-58-6	1,1-Dichloropropene	ND	40	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	80	ug/l	
106-93-4	1,2-Dibromoethane	ND	40	ug/l	
107-06-2	1,2-Dichloroethane	ND	20	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	ug/l	
142-28-9	1,3-Dichloropropane	ND	40	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	80	ug/l	
594-20-7	2,2-Dichloropropane	ND	40	ug/l	
124-48-1	Dibromochloromethane	ND	20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	20	ug/l	
541-73-1	m-Dichlorobenzene	ND	20	ug/l	
95-50-1	o-Dichlorobenzene	ND	20	ug/l	

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:	HQUST-523A		
Lab Sample ID:	C44284-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	20	ug/l	
100-41-4	Ethylbenzene	ND	40	ug/l	
591-78-6	2-Hexanone	ND	400	ug/l	
87-68-3	Hexachlorobutadiene	ND	80	ug/l	
98-82-8	Isopropylbenzene	ND	40	ug/l	
99-87-6	p-Isopropyltoluene	ND	80	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	400	ug/l	
74-83-9	Methyl bromide	ND	80	ug/l	
74-87-3	Methyl chloride	ND	40	ug/l	
74-95-3	Methylene bromide	ND	40	ug/l	
75-09-2	Methylene chloride	ND	200	ug/l	
78-93-3	Methyl ethyl ketone	ND	400	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	40	ug/l	
91-20-3	Naphthalene	257	200	ug/l	
103-65-1	n-Propylbenzene	ND	80	ug/l	
100-42-5	Styrene	ND	40	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	80	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	40	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	80	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	80	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	80	ug/l	
95-63-6	1,2,4-Trimethylbenzene	750	80	ug/l	
108-67-8	1,3,5-Trimethylbenzene	217	80	ug/l	
127-18-4	Tetrachloroethylene	ND	20	ug/l	
108-88-3	Toluene	ND	40	ug/l	
79-01-6	Trichloroethylene	ND	20	ug/l	
75-69-4	Trichlorofluoromethane	ND	20	ug/l	
75-01-4	Vinyl chloride	ND	20	ug/l	
1330-20-7	Xylene (total)	193	80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	94%		79-114%

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:	HQUST-523A		
Lab Sample ID:	C44284-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-523A		
Lab Sample ID:	C44284-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	408	200	ug/l	1	03/01/16	03/02/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5650
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C44284-2	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	326	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	5.0	0.10	mg/l	1	02/26/16 12:42	HD	EPA 300/SW846 9056A
Sulfate	842	50	mg/l	100	03/01/16 13:38	HD	EPA 300/SW846 9056A
Total Organic Carbon	9.4	4.0	mg/l	4	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C44284-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V32116.D	10	03/03/16	KZ	n/a	n/a	VV1320
Run #2	V32133.D	20	03/04/16	KZ	n/a	n/a	VV1321

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	200	ug/l	
71-43-2	Benzene	ND	10	ug/l	
108-86-1	Bromobenzene	ND	10	ug/l	
74-97-5	Bromochloromethane	ND	10	ug/l	
75-27-4	Bromodichloromethane	ND	5.0	ug/l	
75-25-2	Bromoform	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	35.5	20	ug/l	
135-98-8	sec-Butylbenzene	ND	20	ug/l	
98-06-6	tert-Butylbenzene	ND	20	ug/l	
108-90-7	Chlorobenzene	ND	5.0	ug/l	
75-00-3	Chloroethane	ND	5.0	ug/l	
67-66-3	Chloroform	ND	5.0	ug/l	
95-49-8	o-Chlorotoluene	ND	20	ug/l	
106-43-4	p-Chlorotoluene	ND	20	ug/l	
75-15-0	Carbon disulfide	ND	10	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	10	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	ug/l	
106-93-4	1,2-Dibromoethane	ND	10	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	5.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	10	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	20	ug/l	
594-20-7	2,2-Dichloropropane	ND	10	ug/l	
124-48-1	Dibromochloromethane	ND	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	5.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	5.0	ug/l	

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:	CEP-518A		
Lab Sample ID:	C44284-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	5.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	334	10	ug/l	
591-78-6	2-Hexanone	ND	100	ug/l	
87-68-3	Hexachlorobutadiene	ND	20	ug/l	
98-82-8	Isopropylbenzene	56.2	10	ug/l	
99-87-6	p-Isopropyltoluene	ND	20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	100	ug/l	
74-83-9	Methyl bromide	ND	20	ug/l	
74-87-3	Methyl chloride	ND	10	ug/l	
74-95-3	Methylene bromide	ND	10	ug/l	
75-09-2	Methylene chloride	ND	50	ug/l	
78-93-3	Methyl ethyl ketone	ND	100	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	ug/l	
91-20-3	Naphthalene	658	50	ug/l	
103-65-1	n-Propylbenzene	157	20	ug/l	
100-42-5	Styrene	ND	10	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	20	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	10	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1220 [b]	40	ug/l	
108-67-8	1,3,5-Trimethylbenzene	384	20	ug/l	
127-18-4	Tetrachloroethylene	ND	5.0	ug/l	
108-88-3	Toluene	ND	10	ug/l	
79-01-6	Trichloroethylene	ND	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	5.0	ug/l	
1330-20-7	Xylene (total)	531	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	102%	80-123%
2037-26-5	Toluene-D8	105%	106%	88-112%
460-00-4	4-Bromofluorobenzene	103%	104%	79-114%

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:	CEP-518A		
Lab Sample ID:	C44284-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) 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:	CEP-518A		
Lab Sample ID:	C44284-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	2060	200	ug/l	1	03/01/16	03/02/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5650
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C44284-3	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	462	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	0.11	0.10	mg/l	1	02/26/16 13:00	HD	EPA 300/SW846 9056A
Sulfate	1020	50	mg/l	100	03/01/16 13:55	HD	EPA 300/SW846 9056A
Total Organic Carbon	14.2	2.0	mg/l	2	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C44284-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33180.D	2	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	40	ug/l	
71-43-2	Benzene	ND	2.0	ug/l	
108-86-1	Bromobenzene	ND	2.0	ug/l	
74-97-5	Bromochloromethane	ND	2.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	4.0	ug/l	
135-98-8	sec-Butylbenzene	ND	4.0	ug/l	
98-06-6	tert-Butylbenzene	ND	4.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	4.0	ug/l	
106-43-4	p-Chlorotoluene	ND	4.0	ug/l	
75-15-0	Carbon disulfide	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	4.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	

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:	CEP-519A		
Lab Sample ID:	C44284-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
591-78-6	2-Hexanone	ND	20	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	4.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	ug/l	
74-83-9	Methyl bromide	ND	4.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	ug/l	
74-95-3	Methylene bromide	ND	2.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	10	ug/l	
103-65-1	n-Propylbenzene	ND	4.0	ug/l	
100-42-5	Styrene	ND	2.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	4.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	4.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	4.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	29.6	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	12.6	4.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	4.5	4.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-123%
2037-26-5	Toluene-D8	101%		88-112%
460-00-4	4-Bromofluorobenzene	93%		79-114%

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:	CEP-519A		
Lab Sample ID:	C44284-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	CEP-519A		
Lab Sample ID:	C44284-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	605	200	ug/l	1	03/01/16	03/03/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5654
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C44284-4	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	200	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	17.5	0.20	mg/l	2	02/26/16 15:29	HD	EPA 300/SW846 9056A
Sulfate	332	13	mg/l	25	03/01/16 14:47	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.7	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C44284-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	U33181.D	1	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	2.0	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-527A		
Lab Sample ID:	C44284-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-123%
2037-26-5	Toluene-D8	101%		88-112%
460-00-4	4-Bromofluorobenzene	93%		79-114%

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:	CEP-527A		
Lab Sample ID:	C44284-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) Sample vial contained more than 0.5cm of sediment.
(b) AZ:T2,T6

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:	CEP-527A		
Lab Sample ID:	C44284-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	14700	200	ug/l	1	03/01/16	03/03/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5654
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C44284-5	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	488	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	4.4	0.10	mg/l	1	02/26/16 13:34	HD	EPA 300/SW846 9056A
Sulfate	482	25	mg/l	50	03/01/16 15:04	HD	EPA 300/SW846 9056A
Total Organic Carbon	4.0	2.0	mg/l	2	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C44284-6	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	U33182.D	1	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-528A		
Lab Sample ID:	C44284-6	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	92%		79-114%

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:	CEP-528A		
Lab Sample ID:	C44284-6	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) Sample vial contained more than 0.5cm of sediment.
(b) AZ:T2,T6

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:	CEP-528A		
Lab Sample ID:	C44284-6	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	36800	200	ug/l	1	03/01/16	03/03/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5654
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C44284-6	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	324	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	24.8	0.50	mg/l	5	02/26/16 15:46	HD	EPA 300/SW846 9056A
Sulfate	1010	50	mg/l	100	03/01/16 15:22	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C44284-7	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33183.D	1	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	3.0	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-524A		
Lab Sample ID:	C44284-7	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	2.2	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	11.5	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	48.7	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	6.7	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	5.4	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

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:	HQUST-524A		
Lab Sample ID:	C44284-7	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-524A		
Lab Sample ID:	C44284-7	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1650	200	ug/l	1	03/01/16	03/03/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5654
(2) Prep QC Batch: MP10907

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C44284-7	**Date Sampled:**	02/25/16
Matrix:	AQ - Ground Water	**Date Received:**	02/26/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	322	5.0	mg/l	1	02/26/16 15:10	DQ	SM2320 B-97
Nitrogen, Nitrate	0.59	0.10	mg/l	1	02/26/16 14:09	HD	EPA 300/SW846 9056A
Sulfate	759	50	mg/l	100	03/01/16 15:39	HD	EPA 300/SW846 9056A
Total Organic Carbon	9.2	1.0	mg/l	1	02/29/16 12:09	HD	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C44284-8	**Date Sampled:**	02/25/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U33169.D	1	03/02/16	JC	n/a	n/a	VU1360
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C44284-8	**Date Sampled:**	02/25/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	92%		79-114%

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:	C44284-8	**Date Sampled:**	02/25/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	02/26/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

Qual	Description
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R7	LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
R9	Sample RPD exceeded the laboratory acceptance limit.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

PHOENIX

ACCUTEST® LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 7824 6322 3711
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C 44284

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box 27210
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520-791-3175
Samplers's Name: Kayla Virgone

Project Information

Project Name: HQUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis: ALK, NO3, SO4; Fe (total); TOC; 8260 VOC

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)

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	ALK, NO3, SO4	Fe (total)	TOC	8260 VOC	LAB USE ONLY
1	HQUST-532A	2/25/16	0712	KV	GW	7									X	X	X	X	
2	HQUST-523A	2/25/16	0742	KV	GW	7									X	X	X	X	
3	CEP-518A	2/25/16	0804	KV	GW	7									X	X	X	X	
4	CEP-519A	2/25/16	0830	KV	GW	7									X	X	X	X	
5	CEP-527A	2/25/16	0900	KV	GW	7									X	X	X	X	
6	CEP-528A	2/25/16	0922	KV	GW	7									X	X	X	X	
7	HQUST-524A	2/25/16	1025	KV	GW	7									X	X	X	X	
8	TRIP BLANK					2												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 Kayla Virgone	2/25/16 1300	1 [signature]	2 [signature]	2/25/16 1700	2 Fedex
Relinquished by: Fedex	Date Time: 2/26/16 09:30	Received By: 3 Ali Zeighami	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y	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. 1.7/1.9 °C

AZ

5.2 5

C44284: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C44284 **Client:** CITY OF TUSCON **Project:** HQUST

Date / Time Received: 2/26/2016 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 782463223711

Cooler Temps (Initial/Adjusted): #1: (1.7/1.9);

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. Therm ID:	IR1;		
3. Cooler media:	Ice (Bag)		
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

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www/accutest.com

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: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-MB	U33168.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-MB	U33168.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-123%
2037-26-5	Toluene-D8	103%	88-112%

Method Blank Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-MB	U33168.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	79-114%

Method Blank Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1320-MB	V32099.D	1	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1320-MB	V32099.D	1	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-123%
2037-26-5	Toluene-D8	107%	88-112%
460-00-4	4-Bromofluorobenzene	103%	79-114%

Method Blank Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1321-MB	V32130.D	1	03/04/16	KZ	n/a	n/a	VV1321

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

C44284-3

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-123%
2037-26-5	Toluene-D8	110%	88-112%
460-00-4	4-Bromofluorobenzene	107%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-BS	U33165.D	1	03/02/16	JC	n/a	n/a	VU1360
VU1360-BSD	U33166.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	77.3	97	78.6	98	2	55-147/17
71-43-2	Benzene	20	19.6	98	20.8	104	6	76-120/10
108-86-1	Bromobenzene	20	18.2	91	20.0	100	9	80-123/10
74-97-5	Bromochloromethane	20	21.1	106	21.8	109	3	79-124/10
75-27-4	Bromodichloromethane	20	19.4	97	20.5	103	6	75-121/10
75-25-2	Bromoform	20	19.2	96	19.8	99	3	62-127/10
104-51-8	n-Butylbenzene	20	18.0	90	19.9	100	10	74-129/10
135-98-8	sec-Butylbenzene	20	17.3	87	19.3	97	11	75-128/11
98-06-6	tert-Butylbenzene	20	17.1	86	19.0	95	11	74-127/11
108-90-7	Chlorobenzene	20	18.8	94	20.5	103	9	79-119/10
75-00-3	Chloroethane	20	17.3	87	19.1	96	10	60-115/14
67-66-3	Chloroform	20	20.2	101	21.3	107	5	75-122/10
95-49-8	o-Chlorotoluene	20	19.3	97	19.2	96	1	76-125/12
106-43-4	p-Chlorotoluene	20	17.5	88	20.5	103	16* [a]	76-126/11
75-15-0	Carbon disulfide	20	15.2	76	16.5	83	8	51-130/13
56-23-5	Carbon tetrachloride	20	19.3	97	21.1	106	9	72-128/13
75-34-3	1,1-Dichloroethane	20	20.0	100	21.3	107	6	70-121/10
75-35-4	1,1-Dichloroethylene	20	17.9	90	19.4	97	8	62-125/13
563-58-6	1,1-Dichloropropene	20	18.2	91	19.8	99	8	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	17.0	85	18.2	91	7	64-129/11
106-93-4	1,2-Dibromoethane	20	19.3	97	20.7	104	7	81-124/10
107-06-2	1,2-Dichloroethane	20	20.4	102	21.4	107	5	74-122/10
78-87-5	1,2-Dichloropropane	20	20.1	101	21.2	106	5	75-123/10
142-28-9	1,3-Dichloropropane	20	20.2	101	21.7	109	7	81-127/11
108-20-3	Di-Isopropyl ether	20	19.6	98	20.6	103	5	69-126/10
594-20-7	2,2-Dichloropropane	20	18.2	91	19.2	96	5	66-130/12
124-48-1	Dibromochloromethane	20	19.0	95	20.2	101	6	76-124/10
75-71-8	Dichlorodifluoromethane	20	14.2	71	15.3	77	7	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.6	103	21.9	110	6	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.1	101	21.3	107	6	76-131/10
541-73-1	m-Dichlorobenzene	20	18.1	91	19.7	99	8	79-121/10
95-50-1	o-Dichlorobenzene	20	18.4	92	20.0	100	8	79-120/10
106-46-7	p-Dichlorobenzene	20	18.3	92	20.1	101	9	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.6	88	18.9	95	7	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	19.2	96	20.6	103	7	73-125/10
100-41-4	Ethylbenzene	20	18.7	94	20.5	103	9	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-BS	U33165.D	1	03/02/16	JC	n/a	n/a	VU1360
VU1360-BSD	U33166.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	80.9	101	83.2	104	3	71-145/12
87-68-3	Hexachlorobutadiene	20	17.5	88	19.1	96	9	70-130/12
98-82-8	Isopropylbenzene	20	18.4	92	20.2	101	9	77-125/10
99-87-6	p-Isopropyltoluene	20	17.4	87	19.2	96	10	76-126/10
108-10-1	4-Methyl-2-pentanone	80	81.4	102	82.7	103	2	70-142/11
74-83-9	Methyl bromide	20	16.8	84	18.6	93	10	65-124/13
74-87-3	Methyl chloride	20	20.1	101	22.2	111	10	47-143/20
74-95-3	Methylene bromide	20	21.2	106	22.2	111	5	80-125/10
75-09-2	Methylene chloride	20	20.0	100	21.1	106	5	65-124/15
78-93-3	Methyl ethyl ketone	80	78.2	98	78.8	99	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.4	92	19.2	96	4	73-120/10
91-20-3	Naphthalene	20	18.8	94	20.7	104	10	66-120/12
103-65-1	n-Propylbenzene	20	17.4	87	19.3	97	10	75-125/10
100-42-5	Styrene	20	18.8	94	20.2	101	7	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.8	99	20.6	103	4	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.1	96	20.9	105	9	79-126/10
71-55-6	1,1,1-Trichloroethane	20	19.4	97	20.9	105	7	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	19.8	99	21.2	106	7	78-127/10
79-00-5	1,1,2-Trichloroethane	20	20.7	104	21.9	110	6	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	18.9	95	21.2	106	11	70-128/12
96-18-4	1,2,3-Trichloropropane	20	18.2	91	19.1	96	5	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	18.4	92	19.8	99	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	17.8	89	19.6	98	10	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	17.5	88	19.5	98	11* [a]	79-130/10
127-18-4	Tetrachloroethylene	20	18.0	90	19.9	100	10	72-124/13
108-88-3	Toluene	20	18.4	92	20.1	101	9	78-121/10
79-01-6	Trichloroethylene	20	19.1	96	20.6	103	8	75-119/10
75-69-4	Trichlorofluoromethane	20	17.9	90	19.5	98	9	68-130/19
75-01-4	Vinyl chloride	20	20.7	104	22.5	113	8	57-137/18
1330-20-7	Xylene (total)	60	55.7	93	60.5	101	8	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	108%	107%	80-123%
2037-26-5	Toluene-D8	99%	102%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-BS	U33165.D	1	03/02/16	JC	n/a	n/a	VU1360
VU1360-BSD	U33166.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	101%	79-114%

(a) RPD exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria. AZ:R7

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1320-BS	V32096.D	1	03/03/16	KZ	n/a	n/a	VV1320
VV1320-BSD	V32097.D	1	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	83.8	105	80.9	101	4	55-147/17
71-43-2	Benzene	20	19.1	96	19.3	97	1	76-120/10
108-86-1	Bromobenzene	20	21.1	106	21.0	105	0	80-123/10
74-97-5	Bromochloromethane	20	20.4	102	20.3	102	0	79-124/10
75-27-4	Bromodichloromethane	20	19.7	99	19.7	99	0	75-121/10
75-25-2	Bromoform	20	17.4	87	17.9	90	3	62-127/10
104-51-8	n-Butylbenzene	20	19.9	100	19.6	98	2	74-129/10
135-98-8	sec-Butylbenzene	20	19.7	99	19.7	99	0	75-128/11
98-06-6	tert-Butylbenzene	20	19.8	99	19.9	100	1	74-127/11
108-90-7	Chlorobenzene	20	19.6	98	19.7	99	1	79-119/10
75-00-3	Chloroethane	20	19.7	99	19.7	99	0	60-115/14
67-66-3	Chloroform	20	18.8	94	18.9	95	1	75-122/10
95-49-8	o-Chlorotoluene	20	20.8	104	20.3	102	2	76-125/12
106-43-4	p-Chlorotoluene	20	19.9	100	19.7	99	1	76-126/11
75-15-0	Carbon disulfide	20	15.6	78	15.6	78	0	51-130/13
56-23-5	Carbon tetrachloride	20	19.6	98	20.1	101	3	72-128/13
75-34-3	1,1-Dichloroethane	20	19.4	97	19.1	96	2	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.9	95	18.6	93	2	62-125/13
563-58-6	1,1-Dichloropropene	20	19.3	97	19.7	99	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	19.0	95	19.1	96	1	64-129/11
106-93-4	1,2-Dibromoethane	20	21.7	109	21.8	109	0	81-124/10
107-06-2	1,2-Dichloroethane	20	20.1	101	20.2	101	0	74-122/10
78-87-5	1,2-Dichloropropane	20	19.5	98	19.8	99	2	75-123/10
142-28-9	1,3-Dichloropropane	20	21.6	108	21.5	108	0	81-127/11
108-20-3	Di-Isopropyl ether	20	19.5	98	19.3	97	1	69-126/10
594-20-7	2,2-Dichloropropane	20	20.0	100	19.6	98	2	66-130/12
124-48-1	Dibromochloromethane	20	19.0	95	19.3	97	2	76-124/10
75-71-8	Dichlorodifluoromethane	20	21.0	105	21.0	105	0	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	19.6	98	19.3	97	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.7	104	21.1	106	2	76-131/10
541-73-1	m-Dichlorobenzene	20	20.6	103	20.2	101	2	79-121/10
95-50-1	o-Dichlorobenzene	20	20.3	102	20.2	101	0	79-120/10
106-46-7	p-Dichlorobenzene	20	20.8	104	20.2	101	3	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.8	89	17.5	88	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	20.3	102	20.2	101	0	73-125/10
100-41-4	Ethylbenzene	20	20.0	100	20.2	101	1	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1320-BS	V32096.D	1	03/03/16	KZ	n/a	n/a	VV1320
VV1320-BSD	V32097.D	1	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	90.9	114	91.3	114	0	71-145/12
87-68-3	Hexachlorobutadiene	20	19.4	97	19.3	97	1	70-130/12
98-82-8	Isopropylbenzene	20	19.4	97	19.6	98	1	77-125/10
99-87-6	p-Isopropyltoluene	20	20.2	101	20.0	100	1	76-126/10
108-10-1	4-Methyl-2-pentanone	80	85.1	106	88.0	110	3	70-142/11
74-83-9	Methyl bromide	20	20.3	102	19.5	98	4	65-124/13
74-87-3	Methyl chloride	20	22.3	112	22.3	112	0	47-143/20
74-95-3	Methylene bromide	20	21.1	106	21.1	106	0	80-125/10
75-09-2	Methylene chloride	20	19.3	97	18.9	95	2	65-124/15
78-93-3	Methyl ethyl ketone	80	78.2	98	79.2	99	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.9	95	18.8	94	1	73-120/10
91-20-3	Naphthalene	20	20.8	104	21.1	106	1	66-120/12
103-65-1	n-Propylbenzene	20	19.8	99	19.9	100	1	75-125/10
100-42-5	Styrene	20	20.5	103	20.5	103	0	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.7	99	20.0	100	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.5	98	19.7	99	1	79-126/10
71-55-6	1,1,1-Trichloroethane	20	19.8	99	19.8	99	0	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	21.5	108	21.3	107	1	78-127/10
79-00-5	1,1,2-Trichloroethane	20	21.0	105	20.9	105	0	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	21.0	105	21.2	106	1	70-128/12
96-18-4	1,2,3-Trichloropropane	20	18.2	91	19.2	96	5	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	20.5	103	20.5	103	0	72-125/11
108-67-8	1,3,5-Trimethylbenzene	20	20.2	101	19.9	100	1	79-130/10
127-18-4	Tetrachloroethylene	20	19.7	99	20.0	100	2	72-124/13
108-88-3	Toluene	20	19.8	99	19.6	98	1	78-121/10
79-01-6	Trichloroethylene	20	20.0	100	20.3	102	1	75-119/10
75-69-4	Trichlorofluoromethane	20	20.3	102	20.3	102	0	68-130/19
75-01-4	Vinyl chloride	20	21.5	108	21.6	108	0	57-137/18
1330-20-7	Xylene (total)	60	59.6	99	59.9	100	1	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	101%	80-123%
2037-26-5	Toluene-D8	103%	102%	88-112%
460-00-4	4-Bromofluorobenzene	101%	102%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1321-BS	V32127.D	1	03/04/16	KZ	n/a	n/a	VV1321
VV1321-BSD	V32128.D	1	03/04/16	KZ	n/a	n/a	VV1321

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

C44284-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	20	19.6	98	20.1	101	3	76-124/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	103%	102%	80-123%
2037-26-5	Toluene-D8	102%	102%	88-112%
460-00-4	4-Bromofluorobenzene	99%	100%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1360-LCS	U33167.D	1	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	80-123%
2037-26-5	Toluene-D8	104%	88-112%
460-00-4	4-Bromofluorobenzene	95%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1320-LCS	V32098.D	1	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-123%
2037-26-5	Toluene-D8	105%	88-112%
460-00-4	4-Bromofluorobenzene	104%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1321-LCS	V32129.D	1	03/04/16	KZ	n/a	n/a	VV1321

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

C44284-3

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-123%
2037-26-5	Toluene-D8	108%	88-112%
460-00-4	4-Bromofluorobenzene	105%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-2MS	U33188.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2MSD	U33189.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2	U33179.D	40	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	C44284-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		3200	3150	98	3200	3240	101	3	55-147/17
71-43-2	Benzene	ND		800	791	99	800	786	98	1	76-120/10
108-86-1	Bromobenzene	ND		800	722	90	800	732	92	1	80-123/10
74-97-5	Bromochloromethane	ND		800	827	103	800	825	103	0	79-124/10
75-27-4	Bromodichloromethane	ND		800	758	95	800	752	94	1	75-121/10
75-25-2	Bromoform	ND		800	649	81	800	678	85	4	62-127/10
104-51-8	n-Butylbenzene	36.8		800	909	109	800	876	105	4	74-129/10
135-98-8	sec-Butylbenzene	11.3		800	732	90	800	735	90	0	75-128/11
98-06-6	tert-Butylbenzene	ND		800	842	105	800	844	106	0	74-127/11
108-90-7	Chlorobenzene	ND		800	757	95	800	769	96	2	79-119/10
75-00-3	Chloroethane	ND		800	680	85	800	699	87	3	60-115/14
67-66-3	Chloroform	ND		800	809	101	800	806	101	0	75-122/10
95-49-8	o-Chlorotoluene	ND		800	688	86	800	694	87	1	76-125/12
106-43-4	p-Chlorotoluene	ND		800	738	92	800	746	93	1	76-126/11
75-15-0	Carbon disulfide	ND		800	519	65	800	538	67	4	51-130/13
56-23-5	Carbon tetrachloride	ND		800	798	100	800	789	99	1	72-128/13
75-34-3	1,1-Dichloroethane	ND		800	798	100	800	810	101	1	70-121/10
75-35-4	1,1-Dichloroethylene	ND		800	739	92	800	736	92	0	62-125/13
563-58-6	1,1-Dichloropropene	ND		800	749	94	800	745	93	1	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		800	749	94	800	756	95	1	64-129/11
106-93-4	1,2-Dibromoethane	ND		800	774	97	800	788	99	2	81-124/10
107-06-2	1,2-Dichloroethane	ND		800	819	102	800	805	101	2	74-122/10
78-87-5	1,2-Dichloropropane	ND		800	808	101	800	805	101	0	75-123/10
142-28-9	1,3-Dichloropropane	ND		800	809	101	800	811	101	0	81-127/11
108-20-3	Di-Isopropyl ether	ND		800	771	96	800	781	98	1	69-126/10
594-20-7	2,2-Dichloropropane	ND		800	651	81	800	656	82	1	66-130/12
124-48-1	Dibromochloromethane	ND		800	692	87	800	713	89	3	76-124/10
75-71-8	Dichlorodifluoromethane	ND		800	601	75	800	556	70	8	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		800	818	102	800	828	104	1	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		800	758	95	800	759	95	0	76-131/10
541-73-1	m-Dichlorobenzene	ND		800	722	90	800	724	91	0	79-121/10
95-50-1	o-Dichlorobenzene	ND		800	746	93	800	735	92	1	79-120/10
106-46-7	p-Dichlorobenzene	ND		800	734	92	800	739	92	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		800	700	88	800	717	90	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		800	709	89	800	728	91	3	73-125/10
100-41-4	Ethylbenzene	29.3		800	800	96	800	807	97	1	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-2MS	U33188.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2MSD	U33189.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2	U33179.D	40	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Compound	C44284-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		3200	3200	100	3200	3280	103	2	71-145/12
87-68-3	Hexachlorobutadiene	ND		800	695	87	800	701	88	1	70-130/12
98-82-8	Isopropylbenzene	14.2		800	774	95	800	780	96	1	77-125/10
99-87-6	p-Isopropyltoluene	ND		800	716	90	800	717	90	0	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		3200	3280	103	3200	3280	103	0	70-142/11
74-83-9	Methyl bromide	ND		800	661	83	800	676	85	2	65-124/13
74-87-3	Methyl chloride	ND		800	827	103	800	794	99	4	47-143/20
74-95-3	Methylene bromide	ND		800	860	108	800	837	105	3	80-125/10
75-09-2	Methylene chloride	ND		800	794	99	800	792	99	0	65-124/15
78-93-3	Methyl ethyl ketone	ND		3200	3030	95	3200	3170	99	5	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		800	710	89	800	732	92	3	73-120/10
91-20-3	Naphthalene	257		800	1090	104	800	1130	109	4	66-120/12
103-65-1	n-Propylbenzene	45.7		800	766	90	800	769	90	0	75-125/10
100-42-5	Styrene	ND		800	750	94	800	760	95	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		800	772	97	800	782	98	1	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		800	772	97	800	786	98	2	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		800	793	99	800	802	100	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		800	777	97	800	787	98	1	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		800	824	103	800	833	104	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		800	781	98	800	804	101	3	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		800	658	82	800	668	84	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		800	754	94	800	761	95	1	72-125/11
95-63-6	1,2,4-Trimethylbenzene	750		800	1750	125* [a]	800	1670	115	5	76-124/10
108-67-8	1,3,5-Trimethylbenzene	217		800	1030	102	800	1020	100	1	79-130/10
127-18-4	Tetrachloroethylene	ND		800	723	90	800	739	92	2	72-124/13
108-88-3	Toluene	ND		800	738	92	800	753	94	2	78-121/10
79-01-6	Trichloroethylene	ND		800	793	99	800	791	99	0	75-119/10
75-69-4	Trichlorofluoromethane	ND		800	728	91	800	724	91	1	68-130/19
75-01-4	Vinyl chloride	ND		800	873	109	800	832	104	5	57-137/18
1330-20-7	Xylene (total)	193		2400	2510	97	2400	2520	97	0	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C44284-2	Limits
1868-53-7	Dibromofluoromethane	105%	107%	113%	80-123%
2037-26-5	Toluene-D8	99%	101%	102%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-2MS	U33188.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2MSD	U33189.D	40	03/03/16	JC	n/a	n/a	VU1360
C44284-2	U33179.D	40	03/02/16	JC	n/a	n/a	VU1360

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

C44284-1, C44284-2, C44284-4, C44284-5, C44284-6, C44284-7, C44284-8

CAS No.	Surrogate Recoveries	MS	MSD	C44284-2	Limits
460-00-4	4-Bromofluorobenzene	100%	102%	94%	79-114%

(a) Outside laboratory control limits. AZ:M1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-3MS	V32117.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3MSD	V32118.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3	V32116.D	10	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	C44284-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		800	797	100	800	836	105	5	55-147/17
71-43-2	Benzene	ND		200	197	99	200	201	101	2	76-120/10
108-86-1	Bromobenzene	ND		200	214	107	200	217	109	1	80-123/10
74-97-5	Bromochloromethane	ND		200	207	104	200	214	107	3	79-124/10
75-27-4	Bromodichloromethane	ND		200	203	102	200	203	102	0	75-121/10
75-25-2	Bromoform	ND		200	194	97	200	203	102	5	62-127/10
104-51-8	n-Butylbenzene	35.5		200	362	163* [a]	200	319	142* [a]	13* [b]	74-129/10
135-98-8	sec-Butylbenzene	19.6		200	218	99	200	216	98	1	75-128/11
98-06-6	tert-Butylbenzene	ND		200	158	79	200	181	91	14* [b]	74-127/11
108-90-7	Chlorobenzene	ND		200	197	99	200	202	101	3	79-119/10
75-00-3	Chloroethane	ND		200	200	100	200	207	104	3	60-115/14
67-66-3	Chloroform	ND		200	190	95	200	198	99	4	75-122/10
95-49-8	o-Chlorotoluene	ND		200	105	53* [c]	200	116	58* [c]	10	76-125/12
106-43-4	p-Chlorotoluene	ND		200	196	98	200	196	98	0	76-126/11
75-15-0	Carbon disulfide	2.3		200	163	80	200	168	83	3	51-130/13
56-23-5	Carbon tetrachloride	ND		200	199	100	200	198	99	1	72-128/13
75-34-3	1,1-Dichloroethane	ND		200	194	97	200	202	101	4	70-121/10
75-35-4	1,1-Dichloroethylene	ND		200	190	95	200	193	97	2	62-125/13
563-58-6	1,1-Dichloropropene	ND		200	194	97	200	197	99	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	200	100	200	207	104	3	64-129/11
106-93-4	1,2-Dibromoethane	ND		200	211	106	200	216	108	2	81-124/10
107-06-2	1,2-Dichloroethane	ND		200	202	101	200	208	104	3	74-122/10
78-87-5	1,2-Dichloropropane	ND		200	199	100	200	205	103	3	75-123/10
142-28-9	1,3-Dichloropropane	ND		200	214	107	200	220	110	3	81-127/11
108-20-3	Di-Isopropyl ether	ND		200	199	100	200	204	102	2	69-126/10
594-20-7	2,2-Dichloropropane	ND		200	186	93	200	187	94	1	66-130/12
124-48-1	Dibromochloromethane	ND		200	198	99	200	203	102	2	76-124/10
75-71-8	Dichlorodifluoromethane	ND		200	214	107	200	207	104	3	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		200	195	98	200	205	103	5	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		200	197	99	200	206	103	4	76-131/10
541-73-1	m-Dichlorobenzene	ND		200	202	101	200	203	102	0	79-121/10
95-50-1	o-Dichlorobenzene	ND		200	197	99	200	202	101	3	79-120/10
106-46-7	p-Dichlorobenzene	ND		200	199	100	200	203	102	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		200	178	89	200	183	92	3	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		200	189	95	200	196	98	4	73-125/10
100-41-4	Ethylbenzene	334		200	558	112	200	546	106	2	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-3MS	V32117.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3MSD	V32118.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3	V32116.D	10	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

CAS No.	Compound	C44284-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		800	851	106	800	917	115	7	71-145/12
87-68-3	Hexachlorobutadiene	ND		200	162	81	200	172	86	6	70-130/12
98-82-8	Isopropylbenzene	56.2		200	260	102	200	258	101	1	77-125/10
99-87-6	p-Isopropyltoluene	11.0		200	204	97	200	206	98	1	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		800	895	112	800	896	112	0	70-142/11
74-83-9	Methyl bromide	ND		200	184	92	200	198	99	7	65-124/13
74-87-3	Methyl chloride	ND		200	225	113	200	230	115	2	47-143/20
74-95-3	Methylene bromide	ND		200	211	106	200	215	108	2	80-125/10
75-09-2	Methylene chloride	ND		200	195	98	200	204	102	5	65-124/15
78-93-3	Methyl ethyl ketone	ND		800	772	97	800	783	98	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		200	189	95	200	196	98	4	73-120/10
91-20-3	Naphthalene	658		200	1020	181* [d]	200	931	137* [d]	9	66-120/12
103-65-1	n-Propylbenzene	157		200	414	129* [a]	200	380	112	9	75-125/10
100-42-5	Styrene	ND		200	217	109	200	223	112	3	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		200	202	101	200	207	104	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	199	100	200	203	102	2	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		200	199	100	200	203	102	2	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	215	108	200	216	108	0	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		200	212	106	200	215	108	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		200	189	95	200	202	101	7	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		200	175	88	200	181	91	3	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		200	186	93	200	196	98	5	72-125/11
108-67-8	1,3,5-Trimethylbenzene	384		200	751	184* [a]	200	665	141* [a]	12* [b]	79-130/10
127-18-4	Tetrachloroethylene	ND		200	194	97	200	195	98	1	72-124/13
108-88-3	Toluene	ND		200	198	99	200	202	101	2	78-121/10
79-01-6	Trichloroethylene	4.1		200	204	100	200	208	102	2	75-119/10
75-69-4	Trichlorofluoromethane	ND		200	207	104	200	208	104	0	68-130/19
75-01-4	Vinyl chloride	ND		200	221	111	200	223	112	1	57-137/18
1330-20-7	Xylene (total)	531		600	1160	105	600	1150	103	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C44284-3	Limits
1868-53-7	Dibromofluoromethane	103%	103%	101%	80-123%
2037-26-5	Toluene-D8	101%	103%	105%	88-112%
460-00-4	4-Bromofluorobenzene	104%	103%	103%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C44284
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C44284-3MS	V32117.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3MSD	V32118.D	10	03/03/16	KZ	n/a	n/a	VV1320
C44284-3	V32116.D	10	03/03/16	KZ	n/a	n/a	VV1320

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

C44284-3

(a) Outside laboratory control limits. AZ:M1
(b) Outside laboratory control limits. AZ:R9
(c) Outside laboratory control limits. AZ:M2
(d) Outside control limits due to high level in sample relative to spike amount. AZ:M3

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10907
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/01/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	1.7	<200
Lead	10	1	1.7		
Lithium	50	1.1	2.9		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP10907: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7

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: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10907 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/01/16

Metal	C44312-2 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	191	13500	12500	106.5	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin	anr				
Titanium	anr				
Vanadium	anr				
Zinc	anr				

Associated samples MP10907: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7

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: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10907 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/01/16

Metal	C44312-2 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	191	13700	12500	108.1	1.5	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin	anr					
Titanium	anr					
Vanadium	anr					
Zinc	anr					

Associated samples MP10907: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7

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: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10907
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 03/01/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	13700	12500	109.6	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin	anr			
Titanium	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP10907: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10907 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/01/16

Metal	C44312-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	191	187	1.9	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin	anr			
Titanium	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP10907: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN18529	5.0	2.0	mg/l	250	242	96.8	75-125%
Fluoride	GP9063/GN18535	0.10	0.0	mg/l	5	4.80	96.0	90-110%
Fluoride	GP9094/GN18574	0.10	0.0	mg/l	5	4.77	95.4	90-110%
Nitrogen, Nitrate	GP9063/GN18535	0.10	0.0	mg/l	5	4.95	99.0	90-110%
Nitrogen, Nitrate	GP9094/GN18574	0.10	0.0	mg/l	5	4.92	98.4	90-110%
Nitrogen, Nitrite	GP9063/GN18535	0.10	0.0	mg/l	5	4.77	95.4	90-110%
Nitrogen, Nitrite	GP9094/GN18574	0.10	0.0	mg/l	5	4.84	96.8	90-110%
Sulfate	GP9063/GN18535	0.50	0.0	mg/l	5	5.03	100.6	90-110%
Sulfate	GP9094/GN18574	0.50	0.0	mg/l	5	4.99	99.8	90-110%
Total Organic Carbon	GP9081/GN18557	1.0	0.0	mg/l	5	4.6	92.3	75-125%

Associated Samples:
Batch GP9063: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9081: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9094: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GN18529: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN18529	mg/l	250	246	1.6	
Fluoride	GP9063/GN18535	mg/l	5	4.78	0.4	25%
Fluoride	GP9094/GN18574	mg/l	5	4.73	0.8	25%
Nitrogen, Nitrate	GP9063/GN18535	mg/l	5	4.95	0.0	25%
Nitrogen, Nitrate	GP9094/GN18574	mg/l	5	4.87	1.0	25%
Nitrogen, Nitrite	GP9063/GN18535	mg/l	5	4.89	2.5	25%
Nitrogen, Nitrite	GP9094/GN18574	mg/l	5	4.85	0.2	25%
Sulfate	GP9063/GN18535	mg/l	5	5.02	0.2	25%
Sulfate	GP9094/GN18574	mg/l	5	5.02	0.6	25%
Total Organic Carbon	GP9081/GN18557	mg/l	5	4.7	1.2	

Associated Samples:
Batch GP9063: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9081: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9094: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GN18529: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN18529	C44266-1	mg/l	102	106	3.8	0-25%

Associated Samples:
Batch GN18529: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
(*) Outside of QC limits

8.3
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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Fluoride	GP9063/GN18535	C44247-3	mg/l	0.14	500	496	99.2	80-120%
Fluoride	GP9094/GN18574	C44284-3	mg/l	0.0	500	457	91.4	80-120%
Nitrogen, Nitrate	GP9063/GN18535	C44247-3	mg/l	6.4	500	493	97.3	80-120%
Nitrogen, Nitrate	GP9094/GN18574	C44284-3	mg/l	0.0	500	471	94.2	80-120%
Nitrogen, Nitrite	GP9063/GN18535	C44247-3	mg/l	0.0	500	486	97.2	80-120%
Nitrogen, Nitrite	GP9094/GN18574	C44284-3	mg/l	0.0	500	463	92.6	80-120%
Sulfate	GP9063/GN18535	C44247-3	mg/l	1020	500	1470	90.0	80-120%
Sulfate	GP9094/GN18574	C44284-3	mg/l	1020	500	1510	98.0	80-120%
Total Organic Carbon	GP9081/GN18557	C44284-5	mg/l	4.0	10	10.8	68.8*(a)	75-125%

Associated Samples:
Batch GP9063: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9081: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9094: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria due to possible matrix interference. However, BS/BSD recoveries are within control limits. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C44284
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Fluoride	GP9063/GN18535	C44247-3	mg/l	0.14	500	497	0.2	
Fluoride	GP9094/GN18574	C44284-3	mg/l	0.0	500	456	0.2	
Nitrogen, Nitrate	GP9063/GN18535	C44247-3	mg/l	6.4	500	483	2.0	
Nitrogen, Nitrate	GP9094/GN18574	C44284-3	mg/l	0.0	500	472	0.2	
Nitrogen, Nitrite	GP9063/GN18535	C44247-3	mg/l	0.0	500	494	1.6	
Nitrogen, Nitrite	GP9094/GN18574	C44284-3	mg/l	0.0	500	469	1.3	
Sulfate	GP9063/GN18535	C44247-3	mg/l	1020	500	1480	0.7	
Sulfate	GP9094/GN18574	C44284-3	mg/l	1020	500	1500	0.7	
Total Organic Carbon	GP9081/GN18557	C44284-5	mg/l	4.0	10	10.7	1.3	

Associated Samples:
Batch GP9063: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9081: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
Batch GP9094: C44284-1, C44284-2, C44284-3, C44284-4, C44284-5, C44284-6, C44284-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

PO 1152

SGS Accutest Job Number: C45950

Sampling Date: 05/24/16

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@atcassociates.com; justin.patton@atcassociates.com;
ATTN: Richard Byrd

Total number of pages in report: **108**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C45950

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: PO 1152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C45950-1	05/24/16	07:50	KV	05/25/16	AQ	Ground Water	HQUST-532A
C45950-2	05/24/16	08:35	KV	05/25/16	AQ	Ground Water	HQUST-526A
C45950-3	05/24/16	09:10	KV	05/25/16	AQ	Ground Water	HQUST-525A
C45950-4	05/24/16	09:35	KV	05/25/16	AQ	Ground Water	CEP-519A
C45950-5	05/24/16	10:10	KV	05/25/16	AQ	Ground Water	CEP-520A
C45950-6	05/24/16	10:42	KV	05/25/16	AQ	Ground Water	HQUST-531A
C45950-7	05/24/16	11:18	KV	05/25/16	AQ	Ground Water	CEP-528A
C45950-8	05/24/16	00:00	KV	05/25/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C45950
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	6/9/2016 3:10:36 AM

7 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 05/24/2016 and were received at Accutest on 05/25/2016 properly preserved, at 5.9 Deg. C and intact. These Samples received an Accutest job number of C45950. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VR1561

- Sample(s) C45886-21MS, C45886-21MSD were used as the QC samples indicated.
- Sample(s) C45950-2, C45950-5 have for 4-Methyl-2-pentanone, Acetone, Di-Isopropyl ether, Dichlorodifluoromethane a CCV outside of control limits (biased high); not detected in samples.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Carbon disulfide, Carbon tetrachloride, Dibromochloromethane, n-Butylbenzene, p-Isopropyltoluene, Tetrachloroethylene, Methyl chloride are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.
- RPD(s) for MSD for 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,1-Dichloropropene, 2,2-Dichloropropane, Carbon disulfide, Carbon tetrachloride, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, Methyl chloride, n-Butylbenzene, n-Propylbenzene, p-Isopropyltoluene, sec-Butylbenzene, tert-Butylbenzene, Tetrachloroethylene, trans-1,2-Dichloroethylene, Vinyl chloride are outside control limits for sample C45886-21MSD.

Matrix: AQ **Batch ID:** VR1562

- Sample(s) C45969-1MS, C45969-1MSD were used as the QC samples indicated.
- Sample(s) C45950-1, C45950-3, C45950-4 have for Di-Isopropyl ether a CCV outside of control limits (biased high); not detected in samples.
- Blank Spike Recovery for Chloroethane is outside laboratory control limits (high bias); not detected in associated samples.
- Blank Spike Duplicate Recovery for Methyl chloride is outside laboratory control limits; but within marginal exceedance criteria.
- RPD(s) for BSD for Chloroethane, Carbon disulfide, 1,1-Dichloroethylene, Dichlorodifluoromethane, trans-1,2-Dichloroethylene, Methyl bromide, Methyl chloride, Methylene chloride, Methyl Tert Butyl Ether, Vinyl chloride are outside laboratory control limits.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Acetone, Bromoform, Chloroethane, Di-Isopropyl ether, Dibromochloromethane, Styrene, Tert-Amyl Methyl Ether are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.
- RPD for MSD for Methyl chloride exceeded laboratory acceptance limit; MS/MSD recoveries met acceptance criteria.

Matrix: AQ **Batch ID:** VU1438

- VU1438-MB for 1,2,3-Trichlorobenzene: Target analyte detected in method blank at or above the method detection limit. Concentration present in blank is less than 1/2 RL; meeting method criteria.

Matrix: AQ **Batch ID:** VU1439

- Sample(s) C45916-6MS, C45916-6MSD were used as the QC samples indicated.
- C45950-8 for Xylene (total): Associated internal standard recovery did not meet method acceptance criteria; result may be biased high. No target analytes were detected in the sample; insufficient sample volume remained for reanalysis.

Matrix: AQ **Batch ID:** VV1377

- Sample(s) C45948-1MS, C45948-1MSD were used as the QC samples indicated.
- Sample(s) C45950-7 have for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Hexachlorobutadiene, Naphthalene a CCV outside of control limits (biased high); not detected in sample.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ	**Batch ID:** VV1377

- Matrix Spike Recovery(s) for Methyl bromide, Trichlorofluoromethane are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.
- RPD(s) for MSD for Methyl bromide, Trichlorofluoromethane, 1,2-Dichloropropane, Bromodichloromethane, Chloroethane, cis-1,3-Dichloropropene, Dichlorodifluoromethane, Methyl chloride, Vinyl chloride are outside laboratory control limits for sample C45948-1MSD.
- C45950-7: Sample vial contained more than 0.5cm of sediment.

Matrix: AQ	**Batch ID:** VV1378

- Sample(s) C45967-7MS, C45967-7MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Trichloroethylene, Trichlorofluoromethane are outside control limits. Probable cause due to matrix interference and/or high level in sample relative to spike amount. The associated blank spike recoveries were acceptable.

Metals By Method SW846 6010B

Matrix: AQ	**Batch ID:** MP11386

- Sample(s) C45950-2MS, C45950-2MSD, C45950-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP11386-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ	**Batch ID:** GP9424

- Sample(s) C45950-2MS, C45950-2MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.
- Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ	**Batch ID:** GN19081

- Sample(s) C45950-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ	**Batch ID:** GP9408

- Sample(s) C45950-6MS were used as the QC samples for Total Organic Carbon.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C45950
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 05/24/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C45950-1	**HQUST-532A**					
Iron		746	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		212	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		731	50		mg/l	EPA 300/SW846 9056A
C45950-2	**HQUST-526A**					
Methyl Tert Butyl Ether		6.2	1.0		ug/l	SW846 8260B
Iron		296	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		311	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		3.8	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		1010	50		mg/l	EPA 300/SW846 9056A
C45950-3	**HQUST-525A**					
Alkalinity, Total as CaCO3		238	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.5	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		630	25		mg/l	EPA 300/SW846 9056A
C45950-4	**CEP-519A**					
Chloroform		0.52	0.50		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		15.2	2.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		7.5	2.0		ug/l	SW846 8260B
Xylene (total)		2.3	2.0		ug/l	SW846 8260B
Iron		265	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		167	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		14.0	0.20		mg/l	EPA 300/SW846 9056A
Sulfate [a]		292	13		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		4.3	1.0		mg/l	SM5310 C-00
C45950-5	**CEP-520A**					
Iron		4580	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		216	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.11	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		404	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C45950-6	**HQUST-531A**					
Alkalinity, Total as CaCO3		234	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		9.6	0.10		mg/l	EPA 300/SW846 9056A

Summary of Hits

Job Number: C45950
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 05/24/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Sulfate [a]		796	50		mg/l	EPA 300/SW846 9056A
C45950-7	**CEP-528A**					
Iron		25500	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		327	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		28.7	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]		1120	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.0	1.0		mg/l	SM5310 C-00
C45950-8	**TRIP BLANK**					

No hits reported in this sample.

(a) AZ:D2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C45950-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40606.D	1	06/02/16	CV	n/a	n/a	VR1562
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane [a]	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide [b]	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene [b]	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [c]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-532A		
Lab Sample ID:	C45950-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene [b]	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide [b]	ND	2.0	ug/l	
74-87-3	Methyl chloride [d]	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride [b]	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [e]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride [b]	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	92%		79-114%

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:	HQUST-532A		
Lab Sample ID:	C45950-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:L1
(b) AZ:R7
(c) CCV outside of control limits (biased high); not detected in sample. AZ:V1,T2,T6
(d) AZ:L2,R9
(e) AZ:T2,T6

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:	HQUST-532A		
Lab Sample ID:	C45950-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	746	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C45950-1	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	212	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate	6.4	0.10	mg/l	1	05/25/16 14:00	PH	EPA 300/SW846 9056A
Sulfate [a]	731	50	mg/l	100	05/25/16 17:46	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C45950-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40587.D	1	06/01/16	CV	n/a	n/a	VR1561
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-526A		
Lab Sample ID:	C45950-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.2	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [c]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-123%
2037-26-5	Toluene-D8	98%		88-112%
460-00-4	4-Bromofluorobenzene	89%		79-114%

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:	HQUST-526A		
Lab Sample ID:	C45950-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(b) CCV outside of control limits (biased high); not detected in sample. AZ:V1,T2,T6
(c) AZ:T2,T6

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:	HQUST-526A		
Lab Sample ID:	C45950-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	296	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C45950-2	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	311	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate	3.8	0.10	mg/l	1	05/25/16 14:18	PH	EPA 300/SW846 9056A
Sulfate [a]	1010	50	mg/l	100	05/25/16 18:03	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C45950-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40607.D	1	06/02/16	CV	n/a	n/a	VR1562
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane [a]	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide [b]	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene [b]	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [c]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-525A		
Lab Sample ID:	C45950-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene [b]	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide [b]	ND	2.0	ug/l	
74-87-3	Methyl chloride [d]	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride [b]	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [e]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride [b]	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	95%		79-114%

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:	HQUST-525A		
Lab Sample ID:	C45950-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:L1
(b) AZ:R7
(c) CCV outside of control limits (biased high); not detected in sample. AZ:V1,T2,T6
(d) AZ:L2,R9
(e) AZ:T2,T6

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:	HQUST-525A		
Lab Sample ID:	C45950-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C45950-3	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	238	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate	4.5	0.10	mg/l	1	05/25/16 14:35	PH	EPA 300/SW846 9056A
Sulfate [a]	630	25	mg/l	50	05/25/16 18:21	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C45950-4	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40608.D	1	06/02/16	CV	n/a	n/a	VR1562
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane [a]	ND	0.50	ug/l	
67-66-3	Chloroform	0.52	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide [b]	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene [b]	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [c]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-519A		
Lab Sample ID:	C45950-4	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene [b]	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide [b]	ND	2.0	ug/l	
74-87-3	Methyl chloride [d]	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride [b]	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [e]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	15.2	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	7.5	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride [b]	ND	0.50	ug/l	
1330-20-7	Xylene (total)	2.3	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

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:	CEP-519A		
Lab Sample ID:	C45950-4	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:L1
(b) AZ:R7
(c) CCV outside of control limits (biased high); not detected in sample. AZ:V1,T2,T6
(d) AZ:L2,R9
(e) AZ:T2,T6

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:	CEP-519A		
Lab Sample ID:	C45950-4	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	265	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C45950-4	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	167	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	14.0	0.20	mg/l	2	05/25/16 17:11	PH	EPA 300/SW846 9056A
Sulfate [a]	292	13	mg/l	25	05/25/16 18:38	PH	EPA 300/SW846 9056A
Total Organic Carbon	4.3	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C45950-5	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R40590.D	1	06/01/16	CV	n/a	n/a	VR1561
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone [a]	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-520A		
Lab Sample ID:	C45950-5	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [c]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	96%		88-112%
460-00-4	4-Bromofluorobenzene	90%		79-114%

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:	CEP-520A		
Lab Sample ID:	C45950-5	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(b) CCV outside of control limits (biased high); not detected in sample. AZ:V1,T2,T6
(c) AZ:T2,T6

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:	CEP-520A		
Lab Sample ID:	C45950-5	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	4580	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C45950-5	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	216	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate	0.11	0.10	mg/l	1	05/25/16 15:10	PH	EPA 300/SW846 9056A
Sulfate [a]	404	25	mg/l	50	05/25/16 18:55	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C45950-6	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33484.D	1	06/06/16	KZ	n/a	n/a	VV1378
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-531A		
Lab Sample ID:	C45950-6	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

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:	HQUST-531A		
Lab Sample ID:	C45950-6	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-531A		
Lab Sample ID:	C45950-6	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C45950-6	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	234	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate	9.6	0.10	mg/l	1	05/25/16 15:27	PH	EPA 300/SW846 9056A
Sulfate [a]	796	50	mg/l	100	05/25/16 19:13	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C45950-7	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	V33462.D	1	06/03/16	KZ	n/a	n/a	VV1377
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-528A		
Lab Sample ID:	C45950-7	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene [c]	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene [c]	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene [c]	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene [c]	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

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:	CEP-528A		
Lab Sample ID:	C45950-7	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) Sample vial contained more than 0.5cm of sediment.
(b) AZ:T2,T6
(c) CCV outside of control limits (biased high); not detected in sample. 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:	CEP-528A		
Lab Sample ID:	C45950-7	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	25500	200	ug/l	1	05/26/16	05/26/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5900
(2) Prep QC Batch: MP11386

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C45950-7	**Date Sampled:**	05/24/16
Matrix:	AQ - Ground Water	**Date Received:**	05/25/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	327	5.0	mg/l	1	05/27/16 08:40	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	28.7	0.50	mg/l	5	05/25/16 17:29	PH	EPA 300/SW846 9056A
Sulfate [a]	1120	50	mg/l	100	05/25/16 20:05	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.0	1.0	mg/l	1	05/26/16 14:24	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C45950-8	**Date Sampled:**	05/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35008.D	1	06/04/16	MV	n/a	n/a	VU1438
Run #2	U35045.D	1	06/06/16	MV	n/a	n/a	VU1439

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C45950-8	**Date Sampled:**	05/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total) [b]	ND [c]	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	105%	80-123%
2037-26-5	Toluene-D8	102%	96%	88-112%
460-00-4	4-Bromofluorobenzene	90%	87%	79-114%

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:	C45950-8	**Date Sampled:**	05/24/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/25/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) Associated internal standard recovery did not meet method acceptance criteria; result may be biased high. No target analytes were detected in the sample; insufficient sample volume remained for reanalysis. AZ:E6
(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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, 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.
E6	Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
L1	The associated blank spike recovery was above laboratory acceptance limits.
L2	The associated blank spike recovery was below laboratory acceptance limits.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R5	MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
R7	LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
R9	Sample RPD exceeded the laboratory acceptance limit.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking #: 783 9930 3663
Bottle Order Control #:
Accutest Quote #:
Accutest NC Job #: C C45950

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520-791-3175
Samplers's Name: Kayla Virgone

Project Information

Project Name: TCC/HQUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis

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	Alk, NO3, SO4	Fe (total)	TDC	8260 VOC
1	HQUST-532A	5/24/16	0750	KV	GW	7									X	X	X	X
2	HQUST-526A	5/24/16	0835	KV	GW	7									X	X	X	X
3	HQUST-525A	5/24/16	0910	KV	GW	7									X	X	X	X
4	CEP-519A	5/24/16	0935	KV	GW	7									X	X	X	X
5	CEP-520A	5/24/16	1010	KV	GW	7									X	X	X	X
6	HQUST-531A	5/24/16	1042	KV	GW	7									X	X	X	X
7	CEP-528A	5/24/16	1118	KV	GW	7									X	X	X	X
8	TRIP BLANK					2												X

Number of preserved Bottles

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)

LAB USE ONLY

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 Kayla Virgone	5/24/16 1155	1 [signature]	2 [signature]	5/24/16 1600	2 Fedex
3 Fedex	5/25/16 09:15	3 Ali Zeighami	4		4
5		5			

Custody Seal #: Y
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. 4.9/5.9 °C

C45950: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C45950 **Client:** CITY OF TUCSON **Project:** TCC / HQUST

Date / Time Received: 5/25/2016 9:15:00 AM **Delivery Method:** FedEx **Airbill #'s:** 783199303663

Cooler Temps (Initial/Adjusted): #1: (4.9/5.9);

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. Therm ID:	IR3;		
3. Cooler media:	Ice (Bag)		
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

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: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-MB	R40571.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-MB	R40571.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	80-123%
2037-26-5	Toluene-D8	99%	88-112%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-MB	R40571.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	79-114%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-MB	R40603.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-MB	R40603.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	80-123%
2037-26-5	Toluene-D8	98%	88-112%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-MB	R40603.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	79-114%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-MB	V33447.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-MB	V33447.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-123%
2037-26-5	Toluene-D8	100%	88-112%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-MB	V33447.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	79-114%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1438-MB	U35007.D	1	06/04/16	MV	n/a	n/a	VU1438

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

C45950-8

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1438-MB	U35007.D	1	06/04/16	MV	n/a	n/a	VU1438

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

C45950-8

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	0.20	2.0	ug/l	J
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	110%	80-123%
2037-26-5	Toluene-D8	103%	88-112%
460-00-4	4-Bromofluorobenzene	90%	79-114%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1438-MB	U35007.D	1	06/04/16	MV	n/a	n/a	VU1438

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

C45950-8

(a) Target analyte detected in method blank at or above the method detection limit. Concentration present in blank is less than 1/2 RL; meeting method criteria.

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-MB	V33475.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-MB	V33475.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-123%
2037-26-5	Toluene-D8	98%	88-112%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-MB	V33475.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	79-114%

Method Blank Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1439-MB	U35033.D	1	06/06/16	MV	n/a	n/a	VU1439

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

C45950-8

CAS No.	Compound	Result	RL	Units	Q
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-123%
2037-26-5	Toluene-D8	100%	88-112%
460-00-4	4-Bromofluorobenzene	92%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-BS	R40568.D	1	06/01/16	CV	n/a	n/a	VR1561
VR1561-BSD	R40569.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	96.2	120	104	130	8	55-147/17
71-43-2	Benzene	20	19.5	98	18.2	91	7	76-120/10
108-86-1	Bromobenzene	20	19.2	96	18.7	94	3	80-123/10
74-97-5	Bromochloromethane	20	19.4	97	18.6	93	4	79-124/10
75-27-4	Bromodichloromethane	20	19.0	95	19.3	97	2	75-121/10
75-25-2	Bromoform	20	14.7	74	14.9	75	1	62-127/10
104-51-8	n-Butylbenzene	20	18.4	92	17.7	89	4	74-129/10
135-98-8	sec-Butylbenzene	20	19.9	100	19.2	96	4	75-128/11
98-06-6	tert-Butylbenzene	20	18.8	94	18.3	92	3	74-127/11
108-90-7	Chlorobenzene	20	18.5	93	18.1	91	2	79-119/10
75-00-3	Chloroethane	20	19.9	100	21.8	109	9	60-115/14
67-66-3	Chloroform	20	19.8	99	18.9	95	5	75-122/10
95-49-8	o-Chlorotoluene	20	19.4	97	18.9	95	3	76-125/12
106-43-4	p-Chlorotoluene	20	20.2	101	19.8	99	2	76-126/11
75-15-0	Carbon disulfide	20	15.9	80	16.7	84	5	51-130/13
56-23-5	Carbon tetrachloride	20	18.5	93	18.0	90	3	72-128/13
75-34-3	1,1-Dichloroethane	20	20.6	103	21.2	106	3	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.1	91	19.0	95	5	62-125/13
563-58-6	1,1-Dichloropropene	20	18.6	93	17.5	88	6	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	18.1	91	17.5	88	3	64-129/11
106-93-4	1,2-Dibromoethane	20	19.6	98	19.3	97	2	81-124/10
107-06-2	1,2-Dichloroethane	20	20.0	100	19.0	95	5	74-122/10
78-87-5	1,2-Dichloropropane	20	20.6	103	20.2	101	2	75-123/10
142-28-9	1,3-Dichloropropane	20	20.6	103	20.1	101	2	81-127/11
108-20-3	Di-Isopropyl ether	20	22.4	112	23.2	116	4	69-126/10
594-20-7	2,2-Dichloropropane	20	20.3	102	20.7	104	2	66-130/12
124-48-1	Dibromochloromethane	20	15.6	78	15.5	78	1	76-124/10
75-71-8	Dichlorodifluoromethane	20	17.0	85	17.9	90	5	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.4	102	20.5	103	0	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	18.7	94	18.8	94	1	76-131/10
541-73-1	m-Dichlorobenzene	20	19.1	96	18.6	93	3	79-121/10
95-50-1	o-Dichlorobenzene	20	19.1	96	18.6	93	3	79-120/10
106-46-7	p-Dichlorobenzene	20	18.8	94	18.4	92	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.7	89	19.1	96	8	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	17.1	86	16.9	85	1	73-125/10
100-41-4	Ethylbenzene	20	19.6	98	19.2	96	2	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-BS	R40568.D	1	06/01/16	CV	n/a	n/a	VR1561
VR1561-BSD	R40569.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	89.2	112	86.6	108	3	71-145/12
87-68-3	Hexachlorobutadiene	20	20.6	103	19.7	99	4	70-130/12
98-82-8	Isopropylbenzene	20	19.6	98	19.1	96	3	77-125/10
99-87-6	p-Isopropyltoluene	20	17.3	87	16.8	84	3	76-126/10
108-10-1	4-Methyl-2-pentanone	80	97.0	121	95.9	120	1	70-142/11
74-83-9	Methyl bromide	20	18.2	91	19.5	98	7	65-124/13
74-87-3	Methyl chloride	20	17.5	88	15.6	78	11	47-143/20
74-95-3	Methylene bromide	20	20.2	101	19.9	100	1	80-125/10
75-09-2	Methylene chloride	20	18.7	94	19.7	99	5	65-124/15
78-93-3	Methyl ethyl ketone	80	86.8	109	90.0	113	4	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	20.2	101	21.6	108	7	73-120/10
91-20-3	Naphthalene	20	19.1	96	18.1	91	5	66-120/12
103-65-1	n-Propylbenzene	20	19.6	98	19.0	95	3	75-125/10
100-42-5	Styrene	20	17.1	86	16.6	83	3	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	22.0	110	22.1	111	0	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.1	96	18.7	94	2	79-126/10
71-55-6	1,1,1-Trichloroethane	20	19.4	97	19.9	100	3	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	21.5	108	20.8	104	3	78-127/10
79-00-5	1,1,2-Trichloroethane	20	20.0	100	19.4	97	3	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	20.4	102	19.4	97	5	70-128/12
96-18-4	1,2,3-Trichloropropane	20	20.2	101	19.6	98	3	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	17.7	89	16.9	85	5	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	20.0	100	19.4	97	3	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.1	101	19.6	98	3	79-130/10
127-18-4	Tetrachloroethylene	20	17.1	86	17.0	85	1	72-124/13
108-88-3	Toluene	20	18.9	95	18.5	93	2	78-121/10
79-01-6	Trichloroethylene	20	18.7	94	18.5	93	1	75-119/10
75-69-4	Trichlorofluoromethane	20	17.3	87	19.8	99	13	68-130/19
75-01-4	Vinyl chloride	20	20.2	101	22.6	113	11	57-137/18
1330-20-7	Xylene (total)	60	57.5	96	56.3	94	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	101%	80-123%
2037-26-5	Toluene-D8	97%	97%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1561-BS	R40568.D	1	06/01/16	CV	n/a	n/a	VR1561
VR1561-BSD	R40569.D	1	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	101%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-BS	R40598.D	1	06/02/16	CV	n/a	n/a	VR1562
VR1562-BSD	R40599.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	111	139	93.4	117	17	55-147/17
71-43-2	Benzene	20	18.9	95	18.6	93	2	76-120/10
108-86-1	Bromobenzene	20	19.5	98	19.3	97	1	80-123/10
74-97-5	Bromochloromethane	20	20.0	100	19.3	97	4	79-124/10
75-27-4	Bromodichloromethane	20	20.1	101	19.4	97	4	75-121/10
75-25-2	Bromoform	20	16.7	84	16.5	83	1	62-127/10
104-51-8	n-Butylbenzene	20	17.7	89	17.3	87	2	74-129/10
135-98-8	sec-Butylbenzene	20	19.2	96	18.8	94	2	75-128/11
98-06-6	tert-Butylbenzene	20	18.7	94	18.4	92	2	74-127/11
108-90-7	Chlorobenzene	20	18.3	92	18.2	91	1	79-119/10
75-00-3	Chloroethane	20	23.4	117* [a]	18.8	94	22* [a]	60-115/14
67-66-3	Chloroform	20	20.0	100	18.8	94	6	75-122/10
95-49-8	o-Chlorotoluene	20	18.9	95	19.0	95	1	76-125/12
106-43-4	p-Chlorotoluene	20	20.1	101	19.7	99	2	76-126/11
75-15-0	Carbon disulfide	20	17.5	88	14.3	72	20* [b]	51-130/13
56-23-5	Carbon tetrachloride	20	19.2	96	18.3	92	5	72-128/13
75-34-3	1,1-Dichloroethane	20	20.2	101	18.8	94	7	70-121/10
75-35-4	1,1-Dichloroethylene	20	19.8	99	16.5	83	18* [b]	62-125/13
563-58-6	1,1-Dichloropropene	20	18.4	92	17.5	88	5	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	19.6	98	19.2	96	2	64-129/11
106-93-4	1,2-Dibromoethane	20	20.2	101	19.9	100	1	81-124/10
107-06-2	1,2-Dichloroethane	20	20.4	102	19.5	98	5	74-122/10
78-87-5	1,2-Dichloropropane	20	20.2	101	20.0	100	1	75-123/10
142-28-9	1,3-Dichloropropane	20	20.2	101	20.0	100	1	81-127/11
108-20-3	Di-Isopropyl ether	20	22.1	111	20.6	103	7	69-126/10
594-20-7	2,2-Dichloropropane	20	21.2	106	19.7	99	7	66-130/12
124-48-1	Dibromochloromethane	20	17.0	85	16.4	82	4	76-124/10
75-71-8	Dichlorodifluoromethane	20	18.9	95	10	50	62* [b]	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.2	101	19.4	97	4	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	19.4	97	19.0	95	2	76-131/10
541-73-1	m-Dichlorobenzene	20	19.2	96	19.1	96	1	79-121/10
95-50-1	o-Dichlorobenzene	20	19.6	98	19.6	98	0	79-120/10
106-46-7	p-Dichlorobenzene	20	18.9	95	18.9	95	0	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	19.8	99	16.7	84	17* [b]	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	17.2	86	16.9	85	2	73-125/10
100-41-4	Ethylbenzene	20	19.1	96	18.9	95	1	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-BS	R40598.D	1	06/02/16	CV	n/a	n/a	VR1562
VR1562-BSD	R40599.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	79.9	100	82.0	103	3	71-145/12
87-68-3	Hexachlorobutadiene	20	22.2	111	19.9	100	11	70-130/12
98-82-8	Isopropylbenzene	20	19.0	95	18.9	95	1	77-125/10
99-87-6	p-Isopropyltoluene	20	17.2	86	16.7	84	3	76-126/10
108-10-1	4-Methyl-2-pentanone	80	90.1	113	92.5	116	3	70-142/11
74-83-9	Methyl bromide	20	21.2	106	17.2	86	21* [b]	65-124/13
74-87-3	Methyl chloride	20	11.0	55	7.9	40* [c]	33* [d]	47-143/20
74-95-3	Methylene bromide	20	20.2	101	19.7	99	3	80-125/10
75-09-2	Methylene chloride	20	21.3	107	17.6	88	19* [b]	65-124/15
78-93-3	Methyl ethyl ketone	80	87.6	110	85.5	107	2	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	23.8	119	20.4	102	15* [b]	73-120/10
91-20-3	Naphthalene	20	20.5	103	19.3	97	6	66-120/12
103-65-1	n-Propylbenzene	20	19.2	96	18.7	94	3	75-125/10
100-42-5	Styrene	20	16.4	82	16.6	83	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	23.0	115	22.2	111	4	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.6	98	19.3	97	2	79-126/10
71-55-6	1,1,1-Trichloroethane	20	20.6	103	19.3	97	7	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	21.1	106	21.4	107	1	78-127/10
79-00-5	1,1,2-Trichloroethane	20	18.3	92	18.4	92	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	22.2	111	21.0	105	6	70-128/12
96-18-4	1,2,3-Trichloropropane	20	20.4	102	20.7	104	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	19.5	98	18.1	91	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	19.5	98	19.5	98	0	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.1	101	19.6	98	3	79-130/10
127-18-4	Tetrachloroethylene	20	16.9	85	16.6	83	2	72-124/13
108-88-3	Toluene	20	18.3	92	18.1	91	1	78-121/10
79-01-6	Trichloroethylene	20	19.2	96	18.5	93	4	75-119/10
75-69-4	Trichlorofluoromethane	20	21.5	108	18.0	90	18	68-130/19
75-01-4	Vinyl chloride	20	23.4	117	15.3	77	42* [b]	57-137/18
1330-20-7	Xylene (total)	60	54.8	91	55.1	92	1	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	105%	100%	80-123%
2037-26-5	Toluene-D8	95%	95%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VR1562-BS	R40598.D	1	06/02/16	CV	n/a	n/a	VR1562
VR1562-BSD	R40599.D	1	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	79-114%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L1
(b) RPD exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria. AZ:R7
(c) Outside laboratory control limits; but within marginal exceedance criteria. AZ:L2
(d) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-BS	V33444.D	1	06/03/16	KZ	n/a	n/a	VV1377
VV1377-BSD	V33445.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	74.7	93	74.2	93	1	55-147/17
71-43-2	Benzene	20	17.4	87	17.8	89	2	76-120/10
108-86-1	Bromobenzene	20	17.5	88	18.1	91	3	80-123/10
74-97-5	Bromochloromethane	20	18.0	90	18.5	93	3	79-124/10
75-27-4	Bromodichloromethane	20	17.3	87	17.9	90	3	75-121/10
75-25-2	Bromoform	20	14.6	73	15.1	76	3	62-127/10
104-51-8	n-Butylbenzene	20	16.7	84	17.0	85	2	74-129/10
135-98-8	sec-Butylbenzene	20	16.9	85	17.3	87	2	75-128/11
98-06-6	tert-Butylbenzene	20	16.7	84	17.3	87	4	74-127/11
108-90-7	Chlorobenzene	20	17.2	86	17.7	89	3	79-119/10
75-00-3	Chloroethane	20	16.5	83	17.5	88	6	60-115/14
67-66-3	Chloroform	20	17.2	86	17.8	89	3	75-122/10
95-49-8	o-Chlorotoluene	20	17.1	86	17.7	89	3	76-125/12
106-43-4	p-Chlorotoluene	20	17.7	89	18.5	93	4	76-126/11
75-15-0	Carbon disulfide	20	15.4	77	16.3	82	6	51-130/13
56-23-5	Carbon tetrachloride	20	17.6	88	18.0	90	2	72-128/13
75-34-3	1,1-Dichloroethane	20	17.2	86	17.9	90	4	70-121/10
75-35-4	1,1-Dichloroethylene	20	16.8	84	17.5	88	4	62-125/13
563-58-6	1,1-Dichloropropene	20	16.8	84	17.1	86	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	15.9	80	16.2	81	2	64-129/11
106-93-4	1,2-Dibromoethane	20	17.6	88	18.0	90	2	81-124/10
107-06-2	1,2-Dichloroethane	20	17.6	88	17.9	90	2	74-122/10
78-87-5	1,2-Dichloropropane	20	17.8	89	18.1	91	2	75-123/10
142-28-9	1,3-Dichloropropane	20	17.9	90	18.4	92	3	81-127/11
108-20-3	Di-Isopropyl ether	20	16.4	82	16.9	85	3	69-126/10
594-20-7	2,2-Dichloropropane	20	17.1	86	17.3	87	1	66-130/12
124-48-1	Dibromochloromethane	20	17.4	87	18.0	90	3	76-124/10
75-71-8	Dichlorodifluoromethane	20	13.7	69	14.6	73	6	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	18.2	91	18.9	95	4	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	18.9	95	19.0	95	1	76-131/10
541-73-1	m-Dichlorobenzene	20	17.1	86	17.7	89	3	79-121/10
95-50-1	o-Dichlorobenzene	20	17.1	86	17.6	88	3	79-120/10
106-46-7	p-Dichlorobenzene	20	17.2	86	17.8	89	3	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	16.1	81	16.7	84	4	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	17.4	87	17.9	90	3	73-125/10
100-41-4	Ethylbenzene	20	17.4	87	17.9	90	3	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-BS	V33444.D	1	06/03/16	KZ	n/a	n/a	VV1377
VV1377-BSD	V33445.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	72.0	90	73.5	92	2	71-145/12
87-68-3	Hexachlorobutadiene	20	16.5	83	17.2	86	4	70-130/12
98-82-8	Isopropylbenzene	20	17.2	86	17.7	89	3	77-125/10
99-87-6	p-Isopropyltoluene	20	17.1	86	17.6	88	3	76-126/10
108-10-1	4-Methyl-2-pentanone	80	72.7	91	73.1	91	1	70-142/11
74-83-9	Methyl bromide	20	15.5	78	16.4	82	6	65-124/13
74-87-3	Methyl chloride	20	15.2	76	16.6	83	9	47-143/20
74-95-3	Methylene bromide	20	18.3	92	18.6	93	2	80-125/10
75-09-2	Methylene chloride	20	16.7	84	17.6	88	5	65-124/15
78-93-3	Methyl ethyl ketone	80	72.9	91	73.3	92	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	16.0	80	16.7	84	4	73-120/10
91-20-3	Naphthalene	20	17.0	85	18.0	90	6	66-120/12
103-65-1	n-Propylbenzene	20	16.8	84	17.2	86	2	75-125/10
100-42-5	Styrene	20	17.9	90	18.5	93	3	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	17.1	86	17.7	89	3	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	17.5	88	18.2	91	4	79-126/10
71-55-6	1,1,1-Trichloroethane	20	17.4	87	18.0	90	3	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	17.7	89	18.1	91	2	78-127/10
79-00-5	1,1,2-Trichloroethane	20	17.5	88	17.9	90	2	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	16.3	82	17.3	87	6	70-128/12
96-18-4	1,2,3-Trichloropropane	20	17.9	90	18.7	94	4	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	16.4	82	17.4	87	6	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	16.9	85	17.4	87	3	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	17.1	86	17.7	89	3	79-130/10
127-18-4	Tetrachloroethylene	20	17.1	86	17.8	89	4	72-124/13
108-88-3	Toluene	20	17.1	86	17.9	90	5	78-121/10
79-01-6	Trichloroethylene	20	17.4	87	17.8	89	2	75-119/10
75-69-4	Trichlorofluoromethane	20	16.6	83	17.3	87	4	68-130/19
75-01-4	Vinyl chloride	20	15.9	80	16.8	84	6	57-137/18
1330-20-7	Xylene (total)	60	51.9	87	53.3	89	3	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	100%	80-123%
2037-26-5	Toluene-D8	98%	99%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1377-BS	V33444.D	1	06/03/16	KZ	n/a	n/a	VV1377
VV1377-BSD	V33445.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	99%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1438-BS	U35004.D	1	06/03/16	MV	n/a	n/a	VU1438
VU1438-BSD	U35005.D	1	06/03/16	MV	n/a	n/a	VU1438

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

C45950-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	69.3	87	69.4	87	0	55-147/17
71-43-2	Benzene	20	19.3	97	19.2	96	1	76-120/10
108-86-1	Bromobenzene	20	19.8	99	20.0	100	1	80-123/10
74-97-5	Bromochloromethane	20	20.4	102	20.0	100	2	79-124/10
75-27-4	Bromodichloromethane	20	19.2	96	18.9	95	2	75-121/10
75-25-2	Bromoform	20	17.9	90	17.8	89	1	62-127/10
104-51-8	n-Butylbenzene	20	19.9	100	20.3	102	2	74-129/10
135-98-8	sec-Butylbenzene	20	20.0	100	20.3	102	1	75-128/11
98-06-6	tert-Butylbenzene	20	20.0	100	20.2	101	1	74-127/11
108-90-7	Chlorobenzene	20	19.0	95	19.1	96	1	79-119/10
75-00-3	Chloroethane	20	18.5	93	18.7	94	1	60-115/14
67-66-3	Chloroform	20	19.3	97	18.9	95	2	75-122/10
95-49-8	o-Chlorotoluene	20	19.0	95	19.3	97	2	76-125/12
106-43-4	p-Chlorotoluene	20	20.1	101	20.3	102	1	76-126/11
75-15-0	Carbon disulfide	20	14.2	71	14.1	71	1	51-130/13
56-23-5	Carbon tetrachloride	20	20.0	100	20.0	100	0	72-128/13
75-34-3	1,1-Dichloroethane	20	19.4	97	19.1	96	2	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.7	94	18.8	94	1	62-125/13
563-58-6	1,1-Dichloropropene	20	19.4	97	19.4	97	0	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	16.2	81	16.4	82	1	64-129/11
106-93-4	1,2-Dibromoethane	20	20.2	101	20.1	101	0	81-124/10
107-06-2	1,2-Dichloroethane	20	19.7	99	19.4	97	2	74-122/10
78-87-5	1,2-Dichloropropane	20	19.6	98	19.4	97	1	75-123/10
142-28-9	1,3-Dichloropropane	20	20.3	102	20.4	102	0	81-127/11
108-20-3	Di-Isopropyl ether	20	18.1	91	18.0	90	1	69-126/10
594-20-7	2,2-Dichloropropane	20	17.7	89	17.3	87	2	66-130/12
124-48-1	Dibromochloromethane	20	16.6	83	16.7	84	1	76-124/10
75-71-8	Dichlorodifluoromethane	20	15.5	78	16.0	80	3	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.1	101	19.8	99	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.4	102	20.3	102	0	76-131/10
541-73-1	m-Dichlorobenzene	20	19.1	96	19.3	97	1	79-121/10
95-50-1	o-Dichlorobenzene	20	19.4	97	19.5	98	1	79-120/10
106-46-7	p-Dichlorobenzene	20	19.2	96	19.3	97	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.8	89	17.8	89	0	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	16.3	82	16.3	82	0	73-125/10
100-41-4	Ethylbenzene	20	19.8	99	19.9	100	1	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1438-BS	U35004.D	1	06/03/16	MV	n/a	n/a	VU1438
VU1438-BSD	U35005.D	1	06/03/16	MV	n/a	n/a	VU1438

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

C45950-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	74.3	93	74.7	93	1	71-145/12
87-68-3	Hexachlorobutadiene	20	18.0	90	18.7	94	4	70-130/12
98-82-8	Isopropylbenzene	20	19.9	100	20.1	101	1	77-125/10
99-87-6	p-Isopropyltoluene	20	20.2	101	20.5	103	1	76-126/10
108-10-1	4-Methyl-2-pentanone	80	62.4	78	61.2	77	2	70-142/11
74-83-9	Methyl bromide	20	16.6	83	16.5	83	1	65-124/13
74-87-3	Methyl chloride	20	18.2	91	17.9	90	2	47-143/20
74-95-3	Methylene bromide	20	20.2	101	19.9	100	1	80-125/10
75-09-2	Methylene chloride	20	17.8	89	17.4	87	2	65-124/15
78-93-3	Methyl ethyl ketone	80	71.9	90	71.3	89	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	17.8	89	17.7	89	1	73-120/10
91-20-3	Naphthalene	20	17.9	90	19.0	95	6	66-120/12
103-65-1	n-Propylbenzene	20	19.4	97	19.7	99	2	75-125/10
100-42-5	Styrene	20	18.7	94	18.7	94	0	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.1	96	18.9	95	1	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	16.5	83	16.4	82	1	79-126/10
71-55-6	1,1,1-Trichloroethane	20	20.3	102	20.1	101	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	20.6	103	20.6	103	0	78-127/10
79-00-5	1,1,2-Trichloroethane	20	19.4	97	19.5	98	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	17.9	90	18.9	95	5	70-128/12
96-18-4	1,2,3-Trichloropropane	20	20.5	103	20.4	102	0	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	18.2	91	18.5	93	2	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	19.8	99	20.0	100	1	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.2	101	20.4	102	1	79-130/10
127-18-4	Tetrachloroethylene	20	19.8	99	21.3	107	7	72-124/13
108-88-3	Toluene	20	19.3	97	19.5	98	1	78-121/10
79-01-6	Trichloroethylene	20	19.5	98	19.4	97	1	75-119/10
75-69-4	Trichlorofluoromethane	20	19.1	96	19.8	99	4	68-130/19
75-01-4	Vinyl chloride	20	19.5	98	19.8	99	2	57-137/18

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	99%	80-123%
2037-26-5	Toluene-D8	99%	100%	88-112%
460-00-4	4-Bromofluorobenzene	99%	101%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-BS	V33472.D	1	06/06/16	KZ	n/a	n/a	VV1378
VV1378-BSD	V33473.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	75.5	94	81.6	102	8	55-147/17
71-43-2	Benzene	20	18.5	93	20.0	100	8	76-120/10
108-86-1	Bromobenzene	20	18.3	92	20.1	101	9	80-123/10
74-97-5	Bromochloromethane	20	19.5	98	21.0	105	7	79-124/10
75-27-4	Bromodichloromethane	20	18.7	94	20.1	101	7	75-121/10
75-25-2	Bromoform	20	16.9	85	18.3	92	8	62-127/10
104-51-8	n-Butylbenzene	20	17.6	88	19.0	95	8	74-129/10
135-98-8	sec-Butylbenzene	20	17.8	89	19.3	97	8	75-128/11
98-06-6	tert-Butylbenzene	20	17.7	89	19.3	97	9	74-127/11
108-90-7	Chlorobenzene	20	18.2	91	19.8	99	8	79-119/10
75-00-3	Chloroethane	20	17.7	89	19.2	96	8	60-115/14
67-66-3	Chloroform	20	18.5	93	20.1	101	8	75-122/10
95-49-8	o-Chlorotoluene	20	17.9	90	19.6	98	9	76-125/12
106-43-4	p-Chlorotoluene	20	18.7	94	20.5	103	9	76-126/11
75-15-0	Carbon disulfide	20	17.2	86	18.4	92	7	51-130/13
56-23-5	Carbon tetrachloride	20	18.9	95	20.2	101	7	72-128/13
75-34-3	1,1-Dichloroethane	20	18.6	93	20.2	101	8	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.5	93	19.8	99	7	62-125/13
563-58-6	1,1-Dichloropropene	20	18.1	91	19.3	97	6	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	17.3	87	19.0	95	9	64-129/11
106-93-4	1,2-Dibromoethane	20	18.5	93	20.0	100	8	81-124/10
107-06-2	1,2-Dichloroethane	20	18.7	94	20.1	101	7	74-122/10
78-87-5	1,2-Dichloropropane	20	18.9	95	20.6	103	9	75-123/10
142-28-9	1,3-Dichloropropane	20	18.8	94	20.4	102	8	81-127/11
108-20-3	Di-Isopropyl ether	20	17.8	89	19.2	96	8	69-126/10
594-20-7	2,2-Dichloropropane	20	18.6	93	19.7	99	6	66-130/12
124-48-1	Dibromochloromethane	20	18.8	94	20.7	104	10	76-124/10
75-71-8	Dichlorodifluoromethane	20	15.0	75	15.5	78	3	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	21.5	108	9	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.0	100	21.7	109	8	76-131/10
541-73-1	m-Dichlorobenzene	20	17.9	90	19.6	98	9	79-121/10
95-50-1	o-Dichlorobenzene	20	18.1	91	19.9	100	9	79-120/10
106-46-7	p-Dichlorobenzene	20	18.1	91	19.7	99	8	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.5	88	18.9	95	8	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	18.5	93	20.0	100	8	73-125/10
100-41-4	Ethylbenzene	20	18.3	92	19.8	99	8	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-BS	V33472.D	1	06/06/16	KZ	n/a	n/a	VV1378
VV1378-BSD	V33473.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	76.0	95	81.1	101	6	71-145/12
87-68-3	Hexachlorobutadiene	20	17.7	89	19.5	98	10	70-130/12
98-82-8	Isopropylbenzene	20	18.0	90	19.6	98	9	77-125/10
99-87-6	p-Isopropyltoluene	20	18.0	90	19.5	98	8	76-126/10
108-10-1	4-Methyl-2-pentanone	80	77.4	97	81.9	102	6	70-142/11
74-83-9	Methyl bromide	20	16.4	82	18.2	91	10	65-124/13
74-87-3	Methyl chloride	20	17.1	86	18.3	92	7	47-143/20
74-95-3	Methylene bromide	20	19.5	98	20.9	105	7	80-125/10
75-09-2	Methylene chloride	20	18.2	91	19.7	99	8	65-124/15
78-93-3	Methyl ethyl ketone	80	77.8	97	82.3	103	6	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	17.4	87	18.8	94	8	73-120/10
91-20-3	Naphthalene	20	18.3	92	20.2	101	10	66-120/12
103-65-1	n-Propylbenzene	20	17.5	88	19.0	95	8	75-125/10
100-42-5	Styrene	20	18.9	95	20.6	103	9	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	18.5	93	19.9	100	7	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	18.6	93	20.5	103	10	79-126/10
71-55-6	1,1,1-Trichloroethane	20	18.9	95	20.4	102	8	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	18.8	94	20.1	101	7	78-127/10
79-00-5	1,1,2-Trichloroethane	20	18.4	92	20.0	100	8	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	17.6	88	19.5	98	10	70-128/12
96-18-4	1,2,3-Trichloropropane	20	18.9	95	20.6	103	9	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	17.7	89	19.6	98	10	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	17.9	90	19.4	97	8	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	18.1	91	19.7	99	8	79-130/10
127-18-4	Tetrachloroethylene	20	18.2	91	19.7	99	8	72-124/13
108-88-3	Toluene	20	18.1	91	19.8	99	9	78-121/10
79-01-6	Trichloroethylene	20	18.8	94	19.9	100	6	75-119/10
75-69-4	Trichlorofluoromethane	20	17.9	90	19.2	96	7	68-130/19
75-01-4	Vinyl chloride	20	17.4	87	18.4	92	6	57-137/18
1330-20-7	Xylene (total)	60	54.7	91	59.4	99	8	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	100%	80-123%
2037-26-5	Toluene-D8	97%	98%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1378-BS	V33472.D	1	06/06/16	KZ	n/a	n/a	VV1378
VV1378-BSD	V33473.D	1	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	100%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1439-BS	U35030.D	1	06/06/16	MV	n/a	n/a	VU1439
VU1439-BSD	U35031.D	1	06/06/16	MV	n/a	n/a	VU1439

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

C45950-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	60	48.4	81	48.9	82	1	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	98%	80-123%
2037-26-5	Toluene-D8	97%	98%	88-112%
460-00-4	4-Bromofluorobenzene	96%	97%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1439-LCS	U35032.D	1	06/06/16	MV	n/a	n/a	VU1439

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

C45950-8

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	80-123%
2037-26-5	Toluene-D8	99%	88-112%
460-00-4	4-Bromofluorobenzene	94%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45886-21MS	R40591.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21MSD	R40592.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21	R40583.D	50	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	C45886-21 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		4000	5110	128	4000	5250	131	3	55-147/17
71-43-2	Benzene	ND		1000	917	92	1000	980	98	7	76-120/10
108-86-1	Bromobenzene	ND		1000	1070	107	1000	990	99	8	80-123/10
74-97-5	Bromochloromethane	ND		1000	1040	104	1000	1020	102	2	79-124/10
75-27-4	Bromodichloromethane	ND		1000	932	93	1000	1010	101	8	75-121/10
75-25-2	Bromoform	ND		1000	661	66	1000	656	66	1	62-127/10
104-51-8	n-Butylbenzene	ND		1000	711	71* [a]	1000	909	91	24* [b]	74-129/10
135-98-8	sec-Butylbenzene	ND		1000	768	77	1000	1000	100	26* [b]	75-128/11
98-06-6	tert-Butylbenzene	ND		1000	791	79	1000	969	97	20* [b]	74-127/11
108-90-7	Chlorobenzene	ND		1000	892	89	1000	921	92	3	79-119/10
75-00-3	Chloroethane	ND		1000	1070	107	1000	1090	109	2	60-115/14
67-66-3	Chloroform	ND		1000	990	99	1000	1080	108	9	75-122/10
95-49-8	o-Chlorotoluene	ND		1000	995	100	1000	1000	100	1	76-125/12
106-43-4	p-Chlorotoluene	ND		1000	983	98	1000	1050	105	7	76-126/11
75-15-0	Carbon disulfide	ND		1000	502	50* [a]	1000	738	74	38* [b]	51-130/13
56-23-5	Carbon tetrachloride	ND		1000	667	67* [a]	1000	1040	104	44* [b]	72-128/13
75-34-3	1,1-Dichloroethane	ND		1000	930	93	1000	1080	108	15* [b]	70-121/10
75-35-4	1,1-Dichloroethylene	ND		1000	630	63	1000	948	95	40* [b]	62-125/13
563-58-6	1,1-Dichloropropene	ND		1000	712	71	1000	976	98	31* [b]	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	994	99	1000	1030	103	4	64-129/11
106-93-4	1,2-Dibromoethane	ND		1000	990	99	1000	1020	102	3	81-124/10
107-06-2	1,2-Dichloroethane	ND		1000	1020	102	1000	1080	108	6	74-122/10
78-87-5	1,2-Dichloropropane	ND		1000	1030	103	1000	1060	106	3	75-123/10
142-28-9	1,3-Dichloropropane	ND		1000	1040	104	1000	1020	102	2	81-127/11
108-20-3	Di-Isopropyl ether	ND		1000	1110	111	1000	1170	117	5	69-126/10
594-20-7	2,2-Dichloropropane	ND		1000	801	80	1000	1070	107	29* [b]	66-130/12
124-48-1	Dibromochloromethane	ND		1000	725	73* [a]	1000	756	76	4	76-124/10
75-71-8	Dichlorodifluoromethane	ND		1000	912	91	1000	621	62	38* [b]	26-163/26
156-59-2	cis-1,2-Dichloroethylene	21.6		1000	1030	101	1000	1080	106	5	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		1000	907	91	1000	948	95	4	76-131/10
541-73-1	m-Dichlorobenzene	ND		1000	916	92	1000	968	97	6	79-121/10
95-50-1	o-Dichlorobenzene	ND		1000	958	96	1000	995	100	4	79-120/10
106-46-7	p-Dichlorobenzene	ND		1000	917	92	1000	959	96	4	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		1000	773	77	1000	940	94	19* [b]	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		1000	826	83	1000	839	84	2	73-125/10
100-41-4	Ethylbenzene	ND		1000	878	88	1000	998	100	13* [b]	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45886-21MS	R40591.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21MSD	R40592.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21	R40583.D	50	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Compound	C45886-21 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		4000	4520	113	4000	4240	106	6	71-145/12
87-68-3	Hexachlorobutadiene	ND		1000	756	76	1000	1090	109	36* [b]	70-130/12
98-82-8	Isopropylbenzene	ND		1000	816	82	1000	984	98	19* [b]	77-125/10
99-87-6	p-Isopropyltoluene	ND		1000	707	71* [a]	1000	877	88	21* [b]	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		4000	4970	124	4000	4760	119	4	70-142/11
74-83-9	Methyl bromide	ND		1000	986	99	1000	979	98	1	65-124/13
74-87-3	Methyl chloride	ND		1000	879	88	1000	448	45* [a]	65* [b]	47-143/20
74-95-3	Methylene bromide	ND		1000	1040	104	1000	1050	105	1	80-125/10
75-09-2	Methylene chloride	ND		1000	898	90	1000	980	98	9	65-124/15
78-93-3	Methyl ethyl ketone	ND		4000	4560	114	4000	4590	115	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1020	102	1000	1130	113	10	73-120/10
91-20-3	Naphthalene	ND		1000	996	100	1000	1030	103	3	66-120/12
103-65-1	n-Propylbenzene	ND		1000	913	91	1000	1020	102	11* [b]	75-125/10
100-42-5	Styrene	ND		1000	824	82	1000	819	82	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1160	116	1000	1190	119	3	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	932	93	1000	988	99	6	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		1000	810	81	1000	1140	114	34* [b]	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1220	122	1000	1120	112	9	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		1000	1010	101	1000	932	93	8	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1010	101	1000	1070	107	6	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		1000	1000	100	1000	1050	105	5	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		1000	866	87	1000	918	92	6	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		1000	924	92	1000	1020	102	10	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		1000	995	100	1000	1040	104	4	79-130/10
127-18-4	Tetrachloroethylene	36.6		1000	716	68* [a]	1000	895	86	22* [b]	72-124/13
108-88-3	Toluene	ND		1000	861	86	1000	928	93	7	78-121/10
79-01-6	Trichloroethylene	2050		1000	3060	101	1000	3030	98	1	75-119/10
75-69-4	Trichlorofluoromethane	ND		1000	916	92	1000	1060	106	15	68-130/19
75-01-4	Vinyl chloride	ND		1000	1090	109	1000	904	90	19* [b]	57-137/18
1330-20-7	Xylene (total)	ND		3000	2650	88	3000	2790	93	5	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45886-21	Limits
1868-53-7	Dibromofluoromethane	111%	109%	109%	80-123%
2037-26-5	Toluene-D8	95%	95%	97%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45886-21MS	R40591.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21MSD	R40592.D	50	06/01/16	CV	n/a	n/a	VR1561
C45886-21	R40583.D	50	06/01/16	CV	n/a	n/a	VR1561

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

C45950-2, C45950-5

CAS No.	Surrogate Recoveries	MS	MSD	C45886-21	Limits
460-00-4	4-Bromofluorobenzene	98%	103%	94%	79-114%

(a) Outside laboratory control limits. AZ:M2
(b) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45969-1MS	R40620.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1MSD	R40621.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1 [a]	R40618.D	50	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	C45969-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		4000	5940	149* [b]	4000	5640	141	5	55-147/17
71-43-2	Benzene	ND		1000	1090	109	1000	1060	106	3	76-120/10
108-86-1	Bromobenzene	ND		1000	1030	103	1000	1010	101	2	80-123/10
74-97-5	Bromochloromethane	ND		1000	1210	121	1000	1120	112	8	79-124/10
75-27-4	Bromodichloromethane	ND		1000	901	90	1000	886	89	2	75-121/10
75-25-2	Bromoform	ND		1000	398	40* [c]	1000	404	40* [c]	1	62-127/10
104-51-8	n-Butylbenzene	ND		1000	873	87	1000	892	89	2	74-129/10
135-98-8	sec-Butylbenzene	ND		1000	960	96	1000	978	98	2	75-128/11
98-06-6	tert-Butylbenzene	ND		1000	937	94	1000	951	95	1	74-127/11
108-90-7	Chlorobenzene	ND		1000	1000	100	1000	976	98	2	79-119/10
75-00-3	Chloroethane	ND		1000	1230	123* [d]	1000	1160	116* [d]	6	60-115/14
67-66-3	Chloroform	ND		1000	1180	118	1000	1110	111	6	75-122/10
95-49-8	o-Chlorotoluene	ND		1000	1030	103	1000	1020	102	1	76-125/12
106-43-4	p-Chlorotoluene	ND		1000	1030	103	1000	1040	104	1	76-126/11
75-15-0	Carbon disulfide	35.9	J	1000	857	82	1000	833	80	3	51-130/13
56-23-5	Carbon tetrachloride	ND		1000	928	93	1000	940	94	1	72-128/13
75-34-3	1,1-Dichloroethane	ND		1000	1200	120	1000	1140	114	5	70-121/10
75-35-4	1,1-Dichloroethylene	ND		1000	947	95	1000	914	91	4	62-125/13
563-58-6	1,1-Dichloropropene	ND		1000	962	96	1000	975	98	1	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	925	93	1000	953	95	3	64-129/11
106-93-4	1,2-Dibromoethane	ND		1000	1080	108	1000	1060	106	2	81-124/10
107-06-2	1,2-Dichloroethane	ND		1000	1120	112	1000	1110	111	1	74-122/10
78-87-5	1,2-Dichloropropane	ND		1000	1160	116	1000	1130	113	3	75-123/10
142-28-9	1,3-Dichloropropane	ND		1000	1130	113	1000	1110	111	2	81-127/11
108-20-3	Di-Isopropyl ether	ND		1000	1320	132* [b]	1000	1240	124	6	69-126/10
594-20-7	2,2-Dichloropropane	ND		1000	1090	109	1000	1050	105	4	66-130/12
124-48-1	Dibromochloromethane	ND		1000	562	56* [c]	1000	565	57* [c]	1	76-124/10
75-71-8	Dichlorodifluoromethane	ND		1000	1060	106	1000	856	86	21	26-163/26
156-59-2	cis-1,2-Dichloroethylene	14.0	J	1000	1180	117	1000	1100	109	7	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		1000	941	94	1000	959	96	2	76-131/10
541-73-1	m-Dichlorobenzene	ND		1000	1010	101	1000	996	100	1	79-121/10
95-50-1	o-Dichlorobenzene	ND		1000	1030	103	1000	1010	101	2	79-120/10
106-46-7	p-Dichlorobenzene	ND		1000	1000	100	1000	989	99	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		1000	991	99	1000	947	95	5	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		1000	811	81	1000	831	83	2	73-125/10
100-41-4	Ethylbenzene	ND		1000	1030	103	1000	1020	102	1	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45969-1MS	R40620.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1MSD	R40621.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1 [a]	R40618.D	50	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Compound	C45969-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		4000	4830	121	4000	4880	122	1	71-145/12
87-68-3	Hexachlorobutadiene	ND		1000	878	88	1000	962	96	9	70-130/12
98-82-8	Isopropylbenzene	ND		1000	1000	100	1000	992	99	1	77-125/10
99-87-6	p-Isopropyltoluene	ND		1000	842	84	1000	854	85	1	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		4000	5380	135	4000	5370	134	0	70-142/11
74-83-9	Methyl bromide	ND		1000	1110	111	1000	1010	101	9	65-124/13
74-87-3	Methyl chloride	ND		1000	871	87	1000	674	67	26* [e]	47-143/20
74-95-3	Methylene bromide	ND		1000	1160	116	1000	1130	113	3	80-125/10
75-09-2	Methylene chloride	ND		1000	1120	112	1000	996	100	12	65-124/15
78-93-3	Methyl ethyl ketone	ND		4000	5080	127	4000	4950	124	3	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1180	118	1000	1120	112	5	73-120/10
91-20-3	Naphthalene	ND		1000	913	91	1000	948	95	4	66-120/12
103-65-1	n-Propylbenzene	ND		1000	978	98	1000	987	99	1	75-125/10
100-42-5	Styrene	ND		1000	503	50* [c]	1000	500	50* [c]	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1280	128* [b]	1000	1230	123	4	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1040	104	1000	1020	102	2	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		1000	1110	111	1000	1070	107	4	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1160	116	1000	1150	115	1	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		1000	1100	110	1000	1070	107	3	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		1000	935	94	1000	1010	101	8	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		1000	1100	110	1000	1080	108	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		1000	805	81	1000	861	86	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		1000	1030	103	1000	1030	103	0	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		1000	1010	101	1000	1020	102	1	79-130/10
127-18-4	Tetrachloroethylene	ND		1000	884	88	1000	877	88	1	72-124/13
108-88-3	Toluene	ND		1000	1010	101	1000	990	99	2	78-121/10
79-01-6	Trichloroethylene	ND		1000	1000	100	1000	988	99	1	75-119/10
75-69-4	Trichlorofluoromethane	ND		1000	1090	109	1000	1060	106	3	68-130/19
75-01-4	Vinyl chloride	13.7	J	1000	1250	124	1000	1210	120	3	57-137/18
1330-20-7	Xylene (total)	ND		3000	3050	102	3000	2990	100	2	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45969-1	Limits
1868-53-7	Dibromofluoromethane	115%	109%	117%	80-123%
2037-26-5	Toluene-D8	95%	96%	95%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45969-1MS	R40620.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1MSD	R40621.D	50	06/02/16	CV	n/a	n/a	VR1562
C45969-1 [a]	R40618.D	50	06/02/16	CV	n/a	n/a	VR1562

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

C45950-1, C45950-3, C45950-4

CAS No.	Surrogate Recoveries	MS	MSD	C45969-1	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	89%	79-114%

(a) Dilution required due to nature of sample matrix. Sample vial contained floating product and more than 0.5cm of sediment.
(b) Outside laboratory control limits. AZ:M1
(c) Outside laboratory control limits. AZ:M2
(d) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L1
(e) RPD exceeded laboratory acceptance limit; MS/MSD recoveries met acceptance criteria. AZ:R5

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45948-1MS	V33465.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1MSD	V33466.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1	V33449.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	C45948-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	4.2	J	80	85.0	101	80	80.7	96	5	55-147/17
71-43-2	Benzene	ND		20	20.9	105	20	18.9	95	10	76-120/10
108-86-1	Bromobenzene	ND		20	20.9	105	20	19.4	97	7	80-123/10
74-97-5	Bromochloromethane	ND		20	21.1	106	20	19.6	98	7	79-124/10
75-27-4	Bromodichloromethane	ND		20	21.0	105	20	18.9	95	11* [a]	75-121/10
75-25-2	Bromoform	ND		20	18.1	91	20	16.6	83	9	62-127/10
104-51-8	n-Butylbenzene	ND		20	19.8	99	20	18.7	94	6	74-129/10
135-98-8	sec-Butylbenzene	ND		20	20.5	103	20	19.2	96	7	75-128/11
98-06-6	tert-Butylbenzene	ND		20	20.2	101	20	19.0	95	6	74-127/11
108-90-7	Chlorobenzene	ND		20	20.4	102	20	19.0	95	7	79-119/10
75-00-3	Chloroethane	ND		20	12.3	62	20	19.1	96	43* [a]	60-115/14
67-66-3	Chloroform	ND		20	20.8	104	20	19.1	96	9	75-122/10
95-49-8	o-Chlorotoluene	ND		20	20.5	103	20	19.3	97	6	76-125/12
106-43-4	p-Chlorotoluene	ND		20	21.2	106	20	19.6	98	8	76-126/11
75-15-0	Carbon disulfide	ND		20	19.3	97	20	18.0	90	7	51-130/13
56-23-5	Carbon tetrachloride	ND		20	21.6	108	20	19.9	100	8	72-128/13
75-34-3	1,1-Dichloroethane	ND		20	20.8	104	20	19.2	96	8	70-121/10
75-35-4	1,1-Dichloroethylene	ND		20	21.1	106	20	19.5	98	8	62-125/13
563-58-6	1,1-Dichloropropene	ND		20	20.6	103	20	18.8	94	9	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	18.4	92	20	17.7	89	4	64-129/11
106-93-4	1,2-Dibromoethane	ND		20	20.4	102	20	18.7	94	9	81-124/10
107-06-2	1,2-Dichloroethane	ND		20	20.9	105	20	18.9	95	10	74-122/10
78-87-5	1,2-Dichloropropane	ND		20	21.3	107	20	19.1	96	11* [a]	75-123/10
142-28-9	1,3-Dichloropropane	ND		20	21.0	105	20	19.1	96	9	81-127/11
108-20-3	Di-Isopropyl ether	ND		20	19.3	97	20	17.7	89	9	69-126/10
594-20-7	2,2-Dichloropropane	ND		20	18.6	93	20	17.0	85	9	66-130/12
124-48-1	Dibromochloromethane	ND		20	20.9	105	20	19.3	97	8	76-124/10
75-71-8	Dichlorodifluoromethane	ND		20	10.9	55	20	17.2	86	45* [a]	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		20	21.9	110	20	20.0	100	9	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.9	110	20	19.7	99	11* [a]	76-131/10
541-73-1	m-Dichlorobenzene	ND		20	20.3	102	20	19.0	95	7	79-121/10
95-50-1	o-Dichlorobenzene	ND		20	20.2	101	20	19.1	96	6	79-120/10
106-46-7	p-Dichlorobenzene	ND		20	20.2	101	20	19.2	96	5	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		20	19.7	99	20	18.2	91	8	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.2	101	20	18.4	92	9	73-125/10
100-41-4	Ethylbenzene	ND		20	20.7	104	20	19.3	97	7	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45948-1MS	V33465.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1MSD	V33466.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1	V33449.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Compound	C45948-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		80	83.0	104	80	75.9	95	9	71-145/12
87-68-3	Hexachlorobutadiene	ND		20	19.6	98	20	18.8	94	4	70-130/12
98-82-8	Isopropylbenzene	ND		20	20.6	103	20	19.1	96	8	77-125/10
99-87-6	p-Isopropyltoluene	ND		20	20.5	103	20	19.3	97	6	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		80	84.0	105	80	76.1	95	10	70-142/11
74-83-9	Methyl bromide	ND		20	11.3	57* [b]	20	17.8	89	45* [a]	65-124/13
74-87-3	Methyl chloride	ND		20	12.5	63	20	19.1	96	42* [a]	47-143/20
74-95-3	Methylene bromide	ND		20	21.4	107	20	19.6	98	9	80-125/10
75-09-2	Methylene chloride	ND		20	19.8	99	20	18.4	92	7	65-124/15
78-93-3	Methyl ethyl ketone	ND		80	84.2	105	80	76.1	95	10	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.7	94	20	17.4	87	7	73-120/10
91-20-3	Naphthalene	ND		20	19.9	100	20	19.1	96	4	66-120/12
103-65-1	n-Propylbenzene	ND		20	20.2	101	20	18.8	94	7	75-125/10
100-42-5	Styrene	ND		20	20.2	101	20	18.4	92	9	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		20	19.8	99	20	18.3	92	8	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		20	20.8	104	20	19.3	97	7	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		20	21.3	107	20	19.6	98	8	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	20.6	103	20	19.2	96	7	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		20	20.5	103	20	18.8	94	9	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		20	19.0	95	20	18.4	92	3	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		20	20.9	105	20	19.5	98	7	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		20	19.1	96	20	18.4	92	4	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		20	20.2	101	20	18.9	95	7	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		20	20.5	103	20	19.3	97	6	79-130/10
127-18-4	Tetrachloroethylene	ND		20	20.4	102	20	19.0	95	7	72-124/13
108-88-3	Toluene	ND		20	20.8	104	20	19.0	95	9	78-121/10
79-01-6	Trichloroethylene	ND		20	21.4	107	20	19.4	97	10	75-119/10
75-69-4	Trichlorofluoromethane	ND		20	12.7	64* [b]	20	19.9	100	44* [a]	68-130/19
75-01-4	Vinyl chloride	ND		20	12.6	63	20	19.2	96	42* [a]	57-137/18
1330-20-7	Xylene (total)	ND		60	61.7	103	60	57.5	96	7	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45948-1	Limits
1868-53-7	Dibromofluoromethane	100%	100%	99%	80-123%
2037-26-5	Toluene-D8	98%	98%	101%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45948-1MS	V33465.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1MSD	V33466.D	1	06/03/16	KZ	n/a	n/a	VV1377
C45948-1	V33449.D	1	06/03/16	KZ	n/a	n/a	VV1377

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

C45950-7

CAS No.	Surrogate Recoveries	MS	MSD	C45948-1	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	100%	79-114%

(a) Outside control limits due to matrix interference. AZ:R9
(b) Outside control limits due to matrix interference. AZ:M2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45967-7MS	V33493.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7MSD	V33494.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7 [a]	V33483.D	50	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	C45967-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		4000	3760	94	4000	3650	91	3	55-147/17
71-43-2	Benzene	ND		1000	881	88	1000	880	88	0	76-120/10
108-86-1	Bromobenzene	ND		1000	861	86	1000	876	88	2	80-123/10
74-97-5	Bromochloromethane	ND		1000	931	93	1000	915	92	2	79-124/10
75-27-4	Bromodichloromethane	ND		1000	889	89	1000	885	89	0	75-121/10
75-25-2	Bromoform	ND		1000	722	72	1000	711	71	2	62-127/10
104-51-8	n-Butylbenzene	ND		1000	812	81	1000	825	83	2	74-129/10
135-98-8	sec-Butylbenzene	ND		1000	827	83	1000	845	85	2	75-128/11
98-06-6	tert-Butylbenzene	ND		1000	823	82	1000	842	84	2	74-127/11
108-90-7	Chlorobenzene	ND		1000	867	87	1000	866	87	0	79-119/10
75-00-3	Chloroethane	ND		1000	854	85	1000	856	86	0	60-115/14
67-66-3	Chloroform	ND		1000	904	90	1000	888	89	2	75-122/10
95-49-8	o-Chlorotoluene	ND		1000	847	85	1000	871	87	3	76-125/12
106-43-4	p-Chlorotoluene	ND		1000	887	89	1000	899	90	1	76-126/11
75-15-0	Carbon disulfide	ND		1000	808	81	1000	791	79	2	51-130/13
56-23-5	Carbon tetrachloride	ND		1000	866	87	1000	888	89	3	72-128/13
75-34-3	1,1-Dichloroethane	ND		1000	914	91	1000	888	89	3	70-121/10
75-35-4	1,1-Dichloroethylene	212		1000	1040	83	1000	1050	84	1	62-125/13
563-58-6	1,1-Dichloropropene	ND		1000	832	83	1000	845	85	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	812	81	1000	808	81	0	64-129/11
106-93-4	1,2-Dibromoethane	ND		1000	875	88	1000	872	87	0	81-124/10
107-06-2	1,2-Dichloroethane	ND		1000	921	92	1000	902	90	2	74-122/10
78-87-5	1,2-Dichloropropane	ND		1000	913	91	1000	902	90	1	75-123/10
142-28-9	1,3-Dichloropropane	ND		1000	917	92	1000	898	90	2	81-127/11
108-20-3	Di-Isopropyl ether	ND		1000	872	87	1000	846	85	3	69-126/10
594-20-7	2,2-Dichloropropane	ND		1000	787	79	1000	763	76	3	66-130/12
124-48-1	Dibromochloromethane	ND		1000	873	87	1000	865	87	1	76-124/10
75-71-8	Dichlorodifluoromethane	ND		1000	494	49	1000	579	58	16	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		1000	945	95	1000	927	93	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		1000	924	92	1000	915	92	1	76-131/10
541-73-1	m-Dichlorobenzene	ND		1000	842	84	1000	858	86	2	79-121/10
95-50-1	o-Dichlorobenzene	ND		1000	848	85	1000	870	87	3	79-120/10
106-46-7	p-Dichlorobenzene	ND		1000	849	85	1000	862	86	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		1000	834	83	1000	820	82	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		1000	860	86	1000	851	85	1	73-125/10
100-41-4	Ethylbenzene	ND		1000	876	88	1000	869	87	1	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45967-7MS	V33493.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7MSD	V33494.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7 [a]	V33483.D	50	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Compound	C45967-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		4000	3710	93	4000	3620	91	2	71-145/12
87-68-3	Hexachlorobutadiene	ND		1000	794	79	1000	813	81	2	70-130/12
98-82-8	Isopropylbenzene	ND		1000	861	86	1000	860	86	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		1000	831	83	1000	849	85	2	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		4000	3730	93	4000	3680	92	1	70-142/11
74-83-9	Methyl bromide	ND		1000	810	81	1000	807	81	0	65-124/13
74-87-3	Methyl chloride	ND		1000	836	84	1000	843	84	1	47-143/20
74-95-3	Methylene bromide	ND		1000	930	93	1000	918	92	1	80-125/10
75-09-2	Methylene chloride	ND		1000	881	88	1000	863	86	2	65-124/15
78-93-3	Methyl ethyl ketone	ND		4000	3730	93	4000	3600	90	4	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		1000	847	85	1000	824	82	3	73-120/10
91-20-3	Naphthalene	ND		1000	859	86	1000	885	89	3	66-120/12
103-65-1	n-Propylbenzene	ND		1000	817	82	1000	836	84	2	75-125/10
100-42-5	Styrene	ND		1000	898	90	1000	892	89	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		1000	895	90	1000	878	88	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	893	89	1000	882	88	1	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		1000	901	90	1000	895	90	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	885	89	1000	891	89	1	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		1000	893	89	1000	877	88	2	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		1000	810	81	1000	844	84	4	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		1000	916	92	1000	902	90	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		1000	822	82	1000	842	84	2	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		1000	837	84	1000	852	85	2	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		1000	846	85	1000	863	86	2	79-130/10
127-18-4	Tetrachloroethylene	ND		1000	835	84	1000	831	83	0	72-124/13
108-88-3	Toluene	ND		1000	859	86	1000	862	86	0	78-121/10
79-01-6	Trichloroethylene	2800		1000	3480	68* [b]	1000	3590	79	3	75-119/10
75-69-4	Trichlorofluoromethane	ND		1000	642	64* [c]	1000	750	75	16	68-130/19
75-01-4	Vinyl chloride	ND		1000	758	76	1000	809	81	7	57-137/18
1330-20-7	Xylene (total)	ND		3000	2600	87	3000	2580	86	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45967-7	Limits
1868-53-7	Dibromofluoromethane	104%	101%	101%	80-123%
2037-26-5	Toluene-D8	98%	97%	99%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45967-7MS	V33493.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7MSD	V33494.D	50	06/06/16	KZ	n/a	n/a	VV1378
C45967-7 [a]	V33483.D	50	06/06/16	KZ	n/a	n/a	VV1378

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

C45950-6

CAS No.	Surrogate Recoveries	MS	MSD	C45967-7	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	100%	79-114%

(a) AZ:D2
(b) Outside control limits due to high level in sample relative to spike amount. AZ:M3
(c) Outside control limits due to matrix interference. AZ:M2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45950
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45916-6MS	U35074.D	10	06/07/16	MV	n/a	n/a	VU1439
C45916-6MSD	U35075.D	10	06/07/16	MV	n/a	n/a	VU1439
C45916-6	U35040.D	10	06/06/16	MV	n/a	n/a	VU1439

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

C45950-8

CAS No.	Compound	C45916-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	ND		600	513	86	600	508	85	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45916-6	Limits
1868-53-7	Dibromofluoromethane	108%	105%	98%	80-123%
2037-26-5	Toluene-D8	97%	97%	98%	88-112%
460-00-4	4-Bromofluorobenzene	97%	97%	91%	79-114%

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11386
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 05/26/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	6.5	<200
Lead	10	1	1.7		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP11386: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7

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: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11386 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/26/16

Metal	C45950-2 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper	anr				
Iron	296	11900	12500	92.8	75-125
Lead					
Magnesium					
Manganese	anr				
Molybdenum					
Nickel					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP11386: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7

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: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11386 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/26/16

Metal	C45950-2 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper	anr					
Iron	296	11900	12500	92.8	0.0	20
Lead						
Magnesium						
Manganese	anr					
Molybdenum						
Nickel						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP11386: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7

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: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11386 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/26/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron	12100	12500	96.8	80-120
Lead				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11386: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11386 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/26/16

Metal	C45950-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper	anr			
Iron	296	415	40.3*(a)	0-10
Lead				
Magnesium				
Manganese	anr			
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11386: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN19081	5.0	0.0	mg/l	250	253	101.0	75-125%
Nitrogen, Nitrate	GP9424/GN19103	0.10	0.0	mg/l	5	5.17	103.4	90-110%
Sulfate	GP9424/GN19103	0.50	0.0	mg/l	5	5.15	103.0	90-110%
Total Organic Carbon	GP9408/GN19089	1.0	0.0	mg/l	5	4.9	98.4	75-125%

Associated Samples:
Batch GP9408: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
Batch GP9424: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
Batch GN19081: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN19081	mg/l	250	255	0.8	
Nitrogen, Nitrate	GP9424/GN19103	mg/l	5	5.19	0.4	25%
Sulfate	GP9424/GN19103	mg/l	5	5.18	0.6	25%
Total Organic Carbon	GP9408/GN19089	mg/l	5	4.9	1.2	

Associated Samples:
Batch GP9408: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
Batch GP9424: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
Batch GN19081: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN19081	C45950-1	mg/l	212	210	0.9	0-25%

Associated Samples:
Batch GN19081: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP9424/GN19103	C45950-2	mg/l	3.8	5	9.3	110.0	80-120%
Sulfate	GP9424/GN19103	C45950-2	mg/l	1010	5	1510	10000.0(a)	80-120%
Total Organic Carbon	GP9408/GN19089	C45950-6	mg/l	0.75	5	5.4	94.0	75-125%

Associated Samples:
Batch GP9408: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
Batch GP9424: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information. AZ:M3

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45950
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrate	GP9424/GN19103	C45950-2	mg/l	3.8	5	9.3	0.0	
Sulfate	GP9424/GN19103	C45950-2	mg/l	1010	5	1510	0.0	

Associated Samples:
Batch GP9424: C45950-1, C45950-2, C45950-3, C45950-4, C45950-5, C45950-6, C45950-7
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

8.5
8

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

SGS Accutest Job Number: C45978

Sampling Date: 05/26/16

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@atcassociates.com; justin.patton@atcassociates.com;
ATTN: Richard Byrd

Total number of pages in report: **69**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C45978

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: P01152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C45978-1	05/26/16	07:30	LC	05/27/16	AQ	Ground Water	HQUST-533A
C45978-2	05/26/16	07:35	LC	05/27/16	AQ	Ground Water	HQUST-533A
C45978-3	05/26/16	08:50	LC	05/27/16	AQ	Ground Water	HQUST-548
C45978-4	05/26/16	09:25	LC	05/27/16	AQ	Ground Water	CEP-518A
C45978-5	05/26/16	10:00	LC	05/27/16	AQ	Ground Water	HQUST-547
C45978-6	05/26/16	11:20	LC	05/27/16	AQ	Ground Water	HQUST-523A
C45978-7	05/26/16	00:00	LC	05/27/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C45978
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	6/11/2016 1:20:08 AM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 05/26/2016 and were received at Accutest on 05/27/2016 properly preserved, at 2.7 Deg. C and intact. These Samples received an Accutest job number of C45978. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VN1505

- Sample(s) C45995-14MS, C45995-14MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Tetrachloroethylene are outside control limits due to high level in sample relative to spike amount.
- RPD(s) for MSD for p-Chlorotoluene exceeded laboratory acceptance limit; MS/MSD recoveries met acceptance criteria.

Matrix: AQ **Batch ID:** VN1506

- Sample(s) C45972-2MS, C45972-2MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP11400

- Sample(s) C45978-1MS, C45978-1MSD, C45978-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP11400-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9446

- Sample(s) C45978-4MS, C45978-4MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.
- Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN19084

- Sample(s) C45978-5DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP9431

- Sample(s) C45978-1MS were used as the QC samples for Total Organic Carbon.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C45978
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 05/26/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C45978-1	**HQUST-533A**					
Methyl Tert Butyl Ether		2.0	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		459	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		6.3	0.20		mg/l	EPA 300/SW846 9056A
Sulfate [b]		519	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C45978-2	**HQUST-533A**					
Iron		1260	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		305	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		4.9	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [b]		1110	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.3	1.0		mg/l	SM5310 C-00
C45978-3	**HQUST-548**					
Iron		1110	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		297	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		4.9	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [b]		1100	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C45978-4	**CEP-518A**					
n-Butylbenzene		72.6	40		ug/l	SW846 8260B
Ethylbenzene		419	20		ug/l	SW846 8260B
Isopropylbenzene		80.3	20		ug/l	SW846 8260B
Naphthalene		938	100		ug/l	SW846 8260B
n-Propylbenzene		230	40		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		1200	40		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		484	40		ug/l	SW846 8260B
Xylene (total)		580	40		ug/l	SW846 8260B
Iron		463	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		457	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.13	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]		1030	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon [b]		12.1	5.0		mg/l	SM5310 C-00
C45978-5	**HQUST-547**					
Methyl Tert Butyl Ether		2.4	1.0		ug/l	SW846 8260B
Iron		484	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		234	5.0		mg/l	SM2320 B-97

Summary of Hits

Job Number: C45978
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 05/26/16

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nitrogen, Nitrate [a]		6.1	0.20		mg/l	EPA 300/SW846 9056A
Sulfate [b]		914	50		mg/l	EPA 300/SW846 9056A
C45978-6	**HQUST-523A**					
n-Butylbenzene		181	10		ug/l	SW846 8260B
sec-Butylbenzene		58.2	10		ug/l	SW846 8260B
Ethylbenzene		119	5.0		ug/l	SW846 8260B
Isopropylbenzene		44.4	5.0		ug/l	SW846 8260B
p-Isopropyltoluene		30.9	10		ug/l	SW846 8260B
Naphthalene		324	25		ug/l	SW846 8260B
n-Propylbenzene		166	10		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		1000	100		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		333	100		ug/l	SW846 8260B
Toluene		7.7	5.0		ug/l	SW846 8260B
Xylene (total)		506	10		ug/l	SW846 8260B
Iron		11800	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		553	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.12	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]		505	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon [b]		38.1	5.0		mg/l	SM5310 C-00
C45978-7	**TRIP BLANK**					

No hits reported in this sample.

(a) AZ:D1
(b) AZ:D2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C45978-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56224.D	1	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-533A		
Lab Sample ID:	C45978-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	97%		79-114%

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:	HQUST-533A		
Lab Sample ID:	C45978-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-533A		
Lab Sample ID:	C45978-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	05/31/16	05/31/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5910
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C45978-1	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	459	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	6.3	0.20	mg/l	2	05/27/16 15:28	PH	EPA 300/SW846 9056A
Sulfate [b]	519	25	mg/l	50	05/27/16 17:47	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D1
(b) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C45978-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56225.D	1	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-533A		
Lab Sample ID:	C45978-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	97%		79-114%

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:	HQUST-533A		
Lab Sample ID:	C45978-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-533A		
Lab Sample ID:	C45978-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1260	200	ug/l	1	05/31/16	05/31/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5910
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C45978-2	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	305	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	4.9	0.50	mg/l	5	05/27/16 15:45	PH	EPA 300/SW846 9056A
Sulfate [b]	1110	50	mg/l	100	05/27/16 18:04	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D1
(b) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C45978-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56226.D	1	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-548		
Lab Sample ID:	C45978-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	96%		79-114%

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:	HQUST-548		
Lab Sample ID:	C45978-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-548		
Lab Sample ID:	C45978-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1110	200	ug/l	1	05/31/16	05/31/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5910
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C45978-3	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	297	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	4.9	0.50	mg/l	5	05/27/16 16:03	PH	EPA 300/SW846 9056A
Sulfate [b]	1100	50	mg/l	100	05/27/16 18:21	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D1
(b) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C45978-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56227.D	20	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	400	ug/l	
71-43-2	Benzene	ND	20	ug/l	
108-86-1	Bromobenzene	ND	20	ug/l	
74-97-5	Bromochloromethane	ND	20	ug/l	
75-27-4	Bromodichloromethane	ND	10	ug/l	
75-25-2	Bromoform	ND	10	ug/l	
104-51-8	n-Butylbenzene	72.6	40	ug/l	
135-98-8	sec-Butylbenzene	ND	40	ug/l	
98-06-6	tert-Butylbenzene	ND	40	ug/l	
108-90-7	Chlorobenzene	ND	10	ug/l	
75-00-3	Chloroethane	ND	10	ug/l	
67-66-3	Chloroform	ND	10	ug/l	
95-49-8	o-Chlorotoluene	ND	40	ug/l	
106-43-4	p-Chlorotoluene	ND	40	ug/l	
75-15-0	Carbon disulfide	ND	20	ug/l	
56-23-5	Carbon tetrachloride	ND	10	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	ug/l	
563-58-6	1,1-Dichloropropene	ND	20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	40	ug/l	
106-93-4	1,2-Dibromoethane	ND	20	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	ug/l	
142-28-9	1,3-Dichloropropane	ND	20	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	40	ug/l	
594-20-7	2,2-Dichloropropane	ND	20	ug/l	
124-48-1	Dibromochloromethane	ND	10	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	10	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	ug/l	
541-73-1	m-Dichlorobenzene	ND	10	ug/l	
95-50-1	o-Dichlorobenzene	ND	10	ug/l	

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:	CEP-518A		
Lab Sample ID:	C45978-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	10	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	ug/l	
100-41-4	Ethylbenzene	419	20	ug/l	
591-78-6	2-Hexanone	ND	200	ug/l	
87-68-3	Hexachlorobutadiene	ND	40	ug/l	
98-82-8	Isopropylbenzene	80.3	20	ug/l	
99-87-6	p-Isopropyltoluene	ND	40	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	200	ug/l	
74-83-9	Methyl bromide	ND	40	ug/l	
74-87-3	Methyl chloride	ND	20	ug/l	
74-95-3	Methylene bromide	ND	20	ug/l	
75-09-2	Methylene chloride	ND	100	ug/l	
78-93-3	Methyl ethyl ketone	ND	200	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	ug/l	
91-20-3	Naphthalene	938	100	ug/l	
103-65-1	n-Propylbenzene	230	40	ug/l	
100-42-5	Styrene	ND	20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	40	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	40	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	40	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1200	40	ug/l	
108-67-8	1,3,5-Trimethylbenzene	484	40	ug/l	
127-18-4	Tetrachloroethylene	ND	10	ug/l	
108-88-3	Toluene	ND	20	ug/l	
79-01-6	Trichloroethylene	ND	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	ug/l	
75-01-4	Vinyl chloride	ND	10	ug/l	
1330-20-7	Xylene (total)	580	40	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

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:	CEP-518A		
Lab Sample ID:	C45978-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	CEP-518A		
Lab Sample ID:	C45978-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	463	200	ug/l	1	05/31/16	05/31/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5910
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C45978-4	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	457	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate	0.13	0.10	mg/l	1	05/27/16 18:56	PH	EPA 300/SW846 9056A
Sulfate [a]	1030	50	mg/l	100	05/27/16 18:39	PH	EPA 300/SW846 9056A
Total Organic Carbon [a]	12.1	5.0	mg/l	5	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C45978-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56228.D	1	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-547		
Lab Sample ID:	C45978-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.4	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

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:	HQUST-547		
Lab Sample ID:	C45978-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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:	HQUST-547		
Lab Sample ID:	C45978-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	484	200	ug/l	1	05/31/16	05/31/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5910
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C45978-5	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	234	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	6.1	0.20	mg/l	2	05/27/16 16:37	PH	EPA 300/SW846 9056A
Sulfate [b]	914	50	mg/l	100	05/27/16 19:13	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D1
(b) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C45978-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56229.D	5	06/08/16	MV	n/a	n/a	VN1505
Run #2	N56249.D	50	06/09/16	MV	n/a	n/a	VN1506

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	100	ug/l	
71-43-2	Benzene	ND	5.0	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	2.5	ug/l	
75-25-2	Bromoform	ND	2.5	ug/l	
104-51-8	n-Butylbenzene	181	10	ug/l	
135-98-8	sec-Butylbenzene	58.2	10	ug/l	
98-06-6	tert-Butylbenzene	ND	10	ug/l	
108-90-7	Chlorobenzene	ND	2.5	ug/l	
75-00-3	Chloroethane	ND	2.5	ug/l	
67-66-3	Chloroform	ND	2.5	ug/l	
95-49-8	o-Chlorotoluene	ND	10	ug/l	
106-43-4	p-Chlorotoluene	ND	10	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.5	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.5	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.5	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	ug/l	
106-93-4	1,2-Dibromoethane	ND	5.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.5	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.5	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	10	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	2.5	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.5	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.5	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.5	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.5	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.5	ug/l	

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:	HQUST-523A		
Lab Sample ID:	C45978-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.5	ug/l	
100-41-4	Ethylbenzene	119	5.0	ug/l	
591-78-6	2-Hexanone	ND	50	ug/l	
87-68-3	Hexachlorobutadiene	ND	10	ug/l	
98-82-8	Isopropylbenzene	44.4	5.0	ug/l	
99-87-6	p-Isopropyltoluene	30.9	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	50	ug/l	
74-83-9	Methyl bromide	ND	10	ug/l	
74-87-3	Methyl chloride	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	25	ug/l	
78-93-3	Methyl ethyl ketone	ND	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	ug/l	
91-20-3	Naphthalene	324	25	ug/l	
103-65-1	n-Propylbenzene	166	10	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.5	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	10	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	10	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	10	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1000 [b]	100	ug/l	
108-67-8	1,3,5-Trimethylbenzene	333 [b]	100	ug/l	
127-18-4	Tetrachloroethylene	ND	2.5	ug/l	
108-88-3	Toluene	7.7	5.0	ug/l	
79-01-6	Trichloroethylene	ND	2.5	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.5	ug/l	
75-01-4	Vinyl chloride	ND	2.5	ug/l	
1330-20-7	Xylene (total)	506	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	103%	80-123%
2037-26-5	Toluene-D8	101%	104%	88-112%
460-00-4	4-Bromofluorobenzene	98%	104%	79-114%

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:	HQUST-523A		
Lab Sample ID:	C45978-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) 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:	HQUST-523A		
Lab Sample ID:	C45978-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	11800	200	ug/l	1	05/31/16	06/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5913
(2) Prep QC Batch: MP11400

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C45978-6	**Date Sampled:**	05/26/16
Matrix:	AQ - Ground Water	**Date Received:**	05/27/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	553	5.0	mg/l	1	05/27/16 15:15	DQ	SM2320 B-97
Nitrogen, Nitrate	0.12	0.10	mg/l	1	05/27/16 19:48	PH	EPA 300/SW846 9056A
Sulfate [a]	505	25	mg/l	50	05/27/16 19:31	PH	EPA 300/SW846 9056A
Total Organic Carbon [a]	38.1	5.0	mg/l	5	06/02/16 12:33	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C45978-7	**Date Sampled:**	05/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56221.D	1	06/08/16	MV	n/a	n/a	VN1505
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C45978-7	**Date Sampled:**	05/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		80-123%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	97%		79-114%

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:	C45978-7	**Date Sampled:**	05/26/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/27/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6

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: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

Qual	Description
D1	Sample required dilution due to matrix.
D2	Sample required dilution due to high concentration of target analyte.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R5	MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 783218920775
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C45978

Client / Reporting Information

Company Name: City of Tucson
Address: P.O Box
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: (520) 791-3175
Samplers's Name: Luis Clark

Project Information

Project Name: TCC / HQUST
Street:
City: State:
Project #: PO 1157
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)

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	Alk, NO3, SO4	Fe (total)	TOC	8260 VOC							LAB USE ONLY
1	HQUST-533A	5/26/16	0730	LC	GW	7									X	X	X	X							
2	HQUST-533A	5/26/16	0735	LC	GW	7									X	X	X	X							
3	HQUST-546	5/26/16	0850	LC	GW	7									X	X	X	X							
4	CEP-518A	5/26/16	0925	LC	GW	7									X	X	X	X							
5	HQUST-547	5/26/16	1000	LC	GW	7									X	X	X	X							
6	HQUST-503A	5/26/16	1120	LC	GW	7									X	X	X	X							
7	TRIP BLANK					2												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 Luis Clark	5/26/16 1800	1 [signature]	2 [signature]	5/26/16 1400	2 Fedex
Relinquished By: 3 Fedex	Date Time: 5/27/16 9:40	Received By: 3 Ali Zeighan	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y	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. 1.7/2.7

AZ

5.2 5

C45978: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C45978 **Client:** CITY OF TUCSON **Project:** TCC/HQUST

Date / Time Received: 5/27/2016 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:** 783218920775

Cooler Temps (Initial/Adjusted): #1: (1.7/2.7);

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. Therm ID:	IR3;
3. Cooler media:	Ice (Bag)
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

C45978: Chain of Custody
Page 2 of 2

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: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-MB	N56220.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-MB	N56220.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-123%
2037-26-5	Toluene-D8	101%	88-112%

Method Blank Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-MB	N56220.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	79-114%

Method Blank Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1506-MB	N56248.D	1	06/09/16	MV	n/a	n/a	VN1506

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

C45978-6

CAS No.	Compound	Result	RL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-123%
2037-26-5	Toluene-D8	100%	88-112%
460-00-4	4-Bromofluorobenzene	96%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-BS	N56217.D	1	06/08/16	MV	n/a	n/a	VN1505
VN1505-BSD	N56218.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	90.8	114	92.6	116	2	55-147/17
71-43-2	Benzene	20	19.6	98	19.8	99	1	76-120/10
108-86-1	Bromobenzene	20	19.7	99	19.8	99	1	80-123/10
74-97-5	Bromochloromethane	20	20.3	102	20.5	103	1	79-124/10
75-27-4	Bromodichloromethane	20	20.1	101	20.1	101	0	75-121/10
75-25-2	Bromoform	20	18.1	91	17.8	89	2	62-127/10
104-51-8	n-Butylbenzene	20	20.3	102	20.3	102	0	74-129/10
135-98-8	sec-Butylbenzene	20	20.4	102	20.5	103	0	75-128/11
98-06-6	tert-Butylbenzene	20	19.9	100	20.1	101	1	74-127/11
108-90-7	Chlorobenzene	20	19.5	98	19.4	97	1	79-119/10
75-00-3	Chloroethane	20	19.5	98	19.8	99	2	60-115/14
67-66-3	Chloroform	20	19.6	98	19.7	99	1	75-122/10
95-49-8	o-Chlorotoluene	20	19.3	97	19.9	100	3	76-125/12
106-43-4	p-Chlorotoluene	20	20.3	102	19.5	98	4	76-126/11
75-15-0	Carbon disulfide	20	19.3	97	19.7	99	2	51-130/13
56-23-5	Carbon tetrachloride	20	21.4	107	21.4	107	0	72-128/13
75-34-3	1,1-Dichloroethane	20	19.9	100	20.1	101	1	70-121/10
75-35-4	1,1-Dichloroethylene	20	20.1	101	20.5	103	2	62-125/13
563-58-6	1,1-Dichloropropene	20	19.8	99	20.1	101	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	20.3	102	19.7	99	3	64-129/11
106-93-4	1,2-Dibromoethane	20	20.0	100	20.0	100	0	81-124/10
107-06-2	1,2-Dichloroethane	20	20.0	100	19.9	100	1	74-122/10
78-87-5	1,2-Dichloropropane	20	20.2	101	20.5	103	1	75-123/10
142-28-9	1,3-Dichloropropane	20	20.4	102	20.5	103	0	81-127/11
108-20-3	Di-Isopropyl ether	20	18.6	93	19.1	96	3	69-126/10
594-20-7	2,2-Dichloropropane	20	20.4	102	20.3	102	0	66-130/12
124-48-1	Dibromochloromethane	20	21.1	106	20.9	105	1	76-124/10
75-71-8	Dichlorodifluoromethane	20	21.9	110	22.2	111	1	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.5	103	20.7	104	1	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	21.2	106	21.4	107	1	76-131/10
541-73-1	m-Dichlorobenzene	20	19.8	99	19.7	99	1	79-121/10
95-50-1	o-Dichlorobenzene	20	19.7	99	19.6	98	1	79-120/10
106-46-7	p-Dichlorobenzene	20	19.8	99	19.8	99	0	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	18.7	94	19.0	95	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	20.0	100	19.9	100	1	73-125/10
100-41-4	Ethylbenzene	20	20.1	101	20.2	101	0	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-BS	N56217.D	1	06/08/16	MV	n/a	n/a	VN1505
VN1505-BSD	N56218.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	93.5	117	93.5	117	0	71-145/12
87-68-3	Hexachlorobutadiene	20	20.0	100	19.9	100	1	70-130/12
98-82-8	Isopropylbenzene	20	20.2	101	20.2	101	0	77-125/10
99-87-6	p-Isopropyltoluene	20	20.5	103	20.5	103	0	76-126/10
108-10-1	4-Methyl-2-pentanone	80	91.2	114	91.8	115	1	70-142/11
74-83-9	Methyl bromide	20	18.0	90	18.2	91	1	65-124/13
74-87-3	Methyl chloride	20	20.2	101	20.3	102	0	47-143/20
74-95-3	Methylene bromide	20	20.7	104	20.6	103	0	80-125/10
75-09-2	Methylene chloride	20	20.3	102	20.5	103	1	65-124/15
78-93-3	Methyl ethyl ketone	80	90.4	113	91.4	114	1	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.3	92	18.5	93	1	73-120/10
91-20-3	Naphthalene	20	20.6	103	20.6	103	0	66-120/12
103-65-1	n-Propylbenzene	20	20.0	100	20.0	100	0	75-125/10
100-42-5	Styrene	20	21.4	107	21.2	106	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.5	98	19.8	99	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	20.2	101	19.9	100	1	79-126/10
71-55-6	1,1,1-Trichloroethane	20	20.7	104	20.8	104	0	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	20.5	103	20.6	103	0	78-127/10
79-00-5	1,1,2-Trichloroethane	20	19.8	99	19.9	100	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	19.4	97	19.2	96	1	70-128/12
96-18-4	1,2,3-Trichloropropane	20	20.4	102	20.2	101	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	19.8	99	19.5	98	2	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	20.0	100	19.9	100	1	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.3	102	20.3	102	0	79-130/10
127-18-4	Tetrachloroethylene	20	19.7	99	19.9	100	1	72-124/13
108-88-3	Toluene	20	19.8	99	19.8	99	0	78-121/10
79-01-6	Trichloroethylene	20	19.9	100	20.0	100	1	75-119/10
75-69-4	Trichlorofluoromethane	20	21.0	105	21.6	108	3	68-130/19
75-01-4	Vinyl chloride	20	20.8	104	20.8	104	0	57-137/18
1330-20-7	Xylene (total)	60	60.0	100	60.0	100	0	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	101%	80-123%
2037-26-5	Toluene-D8	100%	100%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1505-BS	N56217.D	1	06/08/16	MV	n/a	n/a	VN1505
VN1505-BSD	N56218.D	1	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1506-BS	N56245.D	1	06/09/16	MV	n/a	n/a	VN1506
VN1506-BSD	N56246.D	1	06/09/16	MV	n/a	n/a	VN1506

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

C45978-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	20	19.2	96	19.7	99	3	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	19.5	98	20.1	101	3	79-130/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	100%	80-123%
2037-26-5	Toluene-D8	99%	100%	88-112%
460-00-4	4-Bromofluorobenzene	102%	102%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45995-14MS	N56239.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14MSD	N56240.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14	N56238.D	10	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	C45995-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		800	799	100	800	818	102	2	55-147/17
71-43-2	Benzene	ND		200	185	93	200	171	86	8	76-120/10
108-86-1	Bromobenzene	ND		200	184	92	200	173	87	6	80-123/10
74-97-5	Bromochloromethane	ND		200	189	95	200	178	89	6	79-124/10
75-27-4	Bromodichloromethane	ND		200	184	92	200	171	86	7	75-121/10
75-25-2	Bromoform	ND		200	146	73	200	139	70	5	62-127/10
104-51-8	n-Butylbenzene	ND		200	184	92	200	173	87	6	74-129/10
135-98-8	sec-Butylbenzene	ND		200	188	94	200	177	89	6	75-128/11
98-06-6	tert-Butylbenzene	ND		200	184	92	200	174	87	6	74-127/11
108-90-7	Chlorobenzene	ND		200	182	91	200	169	85	7	79-119/10
75-00-3	Chloroethane	ND		200	168	84	200	161	81	4	60-115/14
67-66-3	Chloroform	3.8	J	200	184	90	200	173	85	6	75-122/10
95-49-8	o-Chlorotoluene	ND		200	175	88	200	176	88	1	76-125/12
106-43-4	p-Chlorotoluene	ND		200	188	94	200	167	84	12* [a]	76-126/11
75-15-0	Carbon disulfide	ND		200	165	83	200	158	79	4	51-130/13
56-23-5	Carbon tetrachloride	ND		200	197	99	200	185	93	6	72-128/13
75-34-3	1,1-Dichloroethane	ND		200	181	91	200	173	87	5	70-121/10
75-35-4	1,1-Dichloroethylene	ND		200	179	90	200	171	86	5	62-125/13
563-58-6	1,1-Dichloropropene	ND		200	186	93	200	174	87	7	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	181	91	200	180	90	1	64-129/11
106-93-4	1,2-Dibromoethane	ND		200	187	94	200	178	89	5	81-124/10
107-06-2	1,2-Dichloroethane	ND		200	185	93	200	174	87	6	74-122/10
78-87-5	1,2-Dichloropropane	ND		200	189	95	200	176	88	7	75-123/10
142-28-9	1,3-Dichloropropane	ND		200	190	95	200	180	90	5	81-127/11
108-20-3	Di-Isopropyl ether	ND		200	171	86	200	162	81	5	69-126/10
594-20-7	2,2-Dichloropropane	ND		200	180	90	200	170	85	6	66-130/12
124-48-1	Dibromochloromethane	ND		200	185	93	200	174	87	6	76-124/10
75-71-8	Dichlorodifluoromethane	ND		200	192	96	200	181	91	6	26-163/26
156-59-2	cis-1,2-Dichloroethylene	3.4	J	200	192	94	200	182	89	5	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		200	191	96	200	178	89	7	76-131/10
541-73-1	m-Dichlorobenzene	ND		200	183	92	200	170	85	7	79-121/10
95-50-1	o-Dichlorobenzene	ND		200	183	92	200	170	85	7	79-120/10
106-46-7	p-Dichlorobenzene	ND		200	183	92	200	171	86	7	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		200	166	83	200	158	79	5	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		200	176	88	200	165	83	6	73-125/10
100-41-4	Ethylbenzene	ND		200	187	94	200	174	87	7	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45995-14MS	N56239.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14MSD	N56240.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14	N56238.D	10	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Compound	C45995-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		800	842	105	800	852	107	1	71-145/12
87-68-3	Hexachlorobutadiene	ND		200	183	92	200	169	85	8	70-130/12
98-82-8	Isopropylbenzene	ND		200	186	93	200	174	87	7	77-125/10
99-87-6	p-Isopropyltoluene	ND		200	188	94	200	177	89	6	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		800	849	106	800	834	104	2	70-142/11
74-83-9	Methyl bromide	ND		200	157	79	200	149	75	5	65-124/13
74-87-3	Methyl chloride	ND		200	164	82	200	168	84	2	47-143/20
74-95-3	Methylene bromide	ND		200	193	97	200	182	91	6	80-125/10
75-09-2	Methylene chloride	ND		200	180	90	200	171	86	5	65-124/15
78-93-3	Methyl ethyl ketone	ND		800	823	103	800	855	107	4	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		200	163	82	200	156	78	4	73-120/10
91-20-3	Naphthalene	ND		200	194	97	200	188	94	3	66-120/12
103-65-1	n-Propylbenzene	ND		200	183	92	200	172	86	6	75-125/10
100-42-5	Styrene	ND		200	198	99	200	183	92	8	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		200	180	90	200	165	83	9	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	186	93	200	172	86	8	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		200	189	95	200	173	87	9	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	190	95	200	185	93	3	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		200	185	93	200	175	88	6	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		200	182	91	200	169	85	7	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		200	187	94	200	184	92	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		200	182	91	200	170	85	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		200	184	92	200	172	86	7	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		200	187	94	200	175	88	7	79-130/10
127-18-4	Tetrachloroethylene	508		200	640	66* [b]	200	603	48* [b]	6	72-124/13
108-88-3	Toluene	ND		200	185	93	200	172	86	7	78-121/10
79-01-6	Trichloroethylene	3.7	J	200	191	94	200	177	87	8	75-119/10
75-69-4	Trichlorofluoromethane	ND		200	188	94	200	177	89	6	68-130/19
75-01-4	Vinyl chloride	ND		200	170	85	200	176	88	3	57-137/18
1330-20-7	Xylene (total)	ND		600	559	93	600	519	87	7	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C45995-14	Limits
1868-53-7	Dibromofluoromethane	98%	99%	96%	80-123%
2037-26-5	Toluene-D8	99%	99%	100%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45995-14MS	N56239.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14MSD	N56240.D	10	06/08/16	MV	n/a	n/a	VN1505
C45995-14	N56238.D	10	06/08/16	MV	n/a	n/a	VN1505

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

C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6, C45978-7

CAS No.	Surrogate Recoveries	MS	MSD	C45995-14	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	96%	79-114%

(a) RPD exceeded laboratory acceptance limit; MS/MSD recoveries met acceptance criteria. AZ:R5
(b) Outside control limits due to high level in sample relative to spike amount. AZ:M3

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C45978
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C45972-2MS	N56267.D	1	06/09/16	MV	n/a	n/a	VN1506
C45972-2MSD	N56268.D	1	06/09/16	MV	n/a	n/a	VN1506
C45972-2	N56255.D	1	06/09/16	MV	n/a	n/a	VN1506

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

C45978-6

CAS No.	Compound	C45972-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-63-6	1,2,4-Trimethylbenzene	ND		20	18.2	91	20	19.4	97	6	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		20	18.4	92	20	19.7	99	7	79-130/10

CAS No.	Surrogate Recoveries	MS	MSD	C45972-2	Limits
1868-53-7	Dibromofluoromethane	99%	98%	99%	80-123%
2037-26-5	Toluene-D8	98%	99%	99%	88-112%
460-00-4	4-Bromofluorobenzene	102%	102%	96%	79-114%

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11400
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 05/31/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	0.20	<200
Lead	10	1	1.7		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP11400: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6

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: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11400 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/31/16

Metal	C45978-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron	110	12200	12500	96.7	75-125
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP11400: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6

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: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11400 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/31/16

Metal	C45978-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron	110	12600	12500	99.9	3.2	20
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP11400: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6

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: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11400 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/31/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	12700	12500	101.6	80-120
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11400: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11400 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 05/31/16

Metal	C45978-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron	110	93.0	15.1 (a)	0-10
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11400: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN19084	5.0	0.0	mg/l	250	250	100.0	75-125%
Nitrogen, Nitrate	GP9446/GN19127	0.10	0.0	mg/l	5	5.19	103.8	90-110%
Sulfate	GP9446/GN19127	0.50	0.0	mg/l	5	5.10	102.0	90-110%
Total Organic Carbon	GP9431/GN19109	1.0	0.0	mg/l	5	4.9	98.3	75-125%

Associated Samples:
Batch GP9431: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
Batch GP9446: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
Batch GN19084: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN19084	mg/l	250	250	0.0	
Nitrogen, Nitrate	GP9446/GN19127	mg/l	5	5.20	0.2	25%
Sulfate	GP9446/GN19127	mg/l	5	5.12	0.4	25%
Total Organic Carbon	GP9431/GN19109	mg/l	5	5.0	0.9	

Associated Samples:
Batch GP9431: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
Batch GP9446: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
Batch GN19084: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN19084	C45978-5	mg/l	234	238	1.7	0-25%

Associated Samples:
Batch GN19084: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP9446/GN19127	C45978-4	mg/l	0.13	5	5.2	101.4	80-120%
Sulfate	GP9446/GN19127	C45978-4	mg/l	1030	5	1530	10000.0(a)	80-120%
Total Organic Carbon	GP9431/GN19109	C45978-1	mg/l	1.6	5	6.7	101.5	75-125%

Associated Samples:
Batch GP9431: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
Batch GP9446: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information. AZ:M3

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C45978
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrate	GP9446/GN19127	C45978-4	mg/l	0.13	5	5.2	0.0	
Sulfate	GP9446/GN19127	C45978-4	mg/l	1030	5	1540	0.7	

Associated Samples:
Batch GP9446: C45978-1, C45978-2, C45978-3, C45978-4, C45978-5, C45978-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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e-Hardcopy 2.0
Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

SGS Accutest Job Number: C46047

Sampling Date: 06/02/16

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@atcassociates.com; justin.patton@atcassociates.com;
ATTN: Richard Byrd

Total number of pages in report: **40**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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Sample Summary

City of Tucson Environmental Services

Job No: C46047

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: P01152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C46047-1	06/02/16	08:00	LC	06/03/16	AQ	Ground Water	HQUST-524A
C46047-2	06/02/16	00:00	LC	06/03/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C46047
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	6/14/2016 9:52:21 PM

1 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 06/02/2016 and were received at Accutest on 06/03/2016 properly preserved, at 2.5 Deg. C and intact. These Samples received an Accutest job number of C46047. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VN1507

- Sample(s) C46007-6MS, C46007-6MSD were used as the QC samples indicated.
- Sample(s) C46047-1, C46047-2 have for Dichlorodifluoromethane a CCV outside of control limits (biased high); not detected in samples.
- Matrix Spike Recovery(s) for Trichloroethylene are outside control limits due to high level in sample relative to spike amount. The associated blank spike recoveries were acceptable.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP11433

- Sample(s) C45993-5FMS, C45993-5FMSD, C45993-5FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP11433-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9459

- Sample(s) C46047-1MS, C46047-1MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP9462

- Sample(s) C46118-2MS, C46118-2MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN19132

- Sample(s) C46047-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP9464

- Sample(s) C46047-1MS were used as the QC samples for Total Organic Carbon.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C46047
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/02/16

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C46047-1	**HQUST-524A**					
Alkalinity, Total as CaCO3		315	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		2.8	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		758	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C46047-2	**TRIP BLANK**					
Methylene chloride		8.7	5.0		ug/l	SW846 8260B

(a) AZ:D2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46047-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56288.D	1	06/10/16	MV	n/a	n/a	VN1507
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-524A		
Lab Sample ID:	C46047-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	96%		79-114%

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:	HQUST-524A		
Lab Sample ID:	C46047-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) CCV outside of control limits (biased high); not detected in sample. 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:	HQUST-524A		
Lab Sample ID:	C46047-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	06/07/16	06/07/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5926
(2) Prep QC Batch: MP11433

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46047-1	**Date Sampled:**	06/02/16
Matrix:	AQ - Ground Water	**Date Received:**	06/03/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	315	5.0	mg/l	1	06/07/16 09:40	DQ	SM2320 B-97
Nitrogen, Nitrate	2.8	0.10	mg/l	1	06/03/16 14:59	PH	EPA 300/SW846 9056A
Sulfate [a]	758	50	mg/l	100	06/09/16 16:11	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	06/10/16 10:00	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C46047-2	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N56289.D	1	06/10/16	MV	n/a	n/a	VN1507
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C46047-2	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	8.7	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-123%
2037-26-5	Toluene-D8	99%		88-112%
460-00-4	4-Bromofluorobenzene	97%		79-114%

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:	C46047-2	**Date Sampled:**	06/02/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/03/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) CCV outside of control limits (biased high); not detected in sample. 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: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, 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.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

PHOENIX

ACCUTEST® LABORATORIES

CHAIN OF CUSTODY

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

FED EX Tracking # 7832 6700 8149
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C C46047

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box 27210
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520-791-3175
Samplers's Name: Luis Clark

Project Information

Project Name: TCC / HQUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis

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	Alk, NO3, SO4	Fe (total)	TOC	8260 VOC								Matrix Codes / LAB USE ONLY
	HQUST-524A	6/2/16	0800	LC	GW	7									X	X	X	X								
	TRIP BLANK					2												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:

- [ ] 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 Luis Clark	6/2/16 0951	1 [illegible]	2 [illegible]	6/2/16 1400	2 Fedex
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3 FEDX	6/3/16 1000	3 [illegible]	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal # Y	Appropriate Bottle / Pres. Y / N	Headspace Y / N	On Ice Y / N	Cooler Temp.
5		5		Labels match Coc? Y / N	Separate Receiving Check List used: Y / N		1.5 / 2.5

INTACT

AR
SB

5.2
5

C46047: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C46047 **Client:** CITY OF TUCSON **Project:** TCC/HQUST

Date / Time Received: 6/3/2016 10:00:00 AM **Delivery Method:** FedEx **Airbill #'s:** 783267008149

Cooler Temps (Initial/Adjusted): #1: (1.5/2.5);

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. Therm ID:	IR3;		
3. Cooler media:	Ice (Bag)		
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

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: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-MB	N56276.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-MB	N56276.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	80-123%
2037-26-5	Toluene-D8	99%	88-112%

Method Blank Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-MB	N56276.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-BS	N56273.D	1	06/10/16	MV	n/a	n/a	VN1507
VN1507-BSD	N56274.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	86.7	108	89.4	112	3	55-147/17
71-43-2	Benzene	20	20.4	102	19.8	99	3	76-120/10
108-86-1	Bromobenzene	20	20.4	102	19.6	98	4	80-123/10
74-97-5	Bromochloromethane	20	21.2	106	20.5	103	3	79-124/10
75-27-4	Bromodichloromethane	20	21.1	106	20.2	101	4	75-121/10
75-25-2	Bromoform	20	18.8	94	17.8	89	5	62-127/10
104-51-8	n-Butylbenzene	20	20.6	103	19.8	99	4	74-129/10
135-98-8	sec-Butylbenzene	20	20.8	104	20.1	101	3	75-128/11
98-06-6	tert-Butylbenzene	20	20.4	102	19.9	100	2	74-127/11
108-90-7	Chlorobenzene	20	20.3	102	19.5	98	4	79-119/10
75-00-3	Chloroethane	20	18.5	93	18.7	94	1	60-115/14
67-66-3	Chloroform	20	20.2	101	19.8	99	2	75-122/10
95-49-8	o-Chlorotoluene	20	19.7	99	19.4	97	2	76-125/12
106-43-4	p-Chlorotoluene	20	20.6	103	19.9	100	3	76-126/11
75-15-0	Carbon disulfide	20	18.8	94	19.2	96	2	51-130/13
56-23-5	Carbon tetrachloride	20	22.3	112	21.3	107	5	72-128/13
75-34-3	1,1-Dichloroethane	20	20.3	102	20.0	100	1	70-121/10
75-35-4	1,1-Dichloroethylene	20	19.9	100	20.3	102	2	62-125/13
563-58-6	1,1-Dichloropropene	20	20.5	103	19.9	100	3	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	20.2	101	18.9	95	7	64-129/11
106-93-4	1,2-Dibromoethane	20	20.8	104	20.0	100	4	81-124/10
107-06-2	1,2-Dichloroethane	20	20.8	104	19.8	99	5	74-122/10
78-87-5	1,2-Dichloropropane	20	20.9	105	20.3	102	3	75-123/10
142-28-9	1,3-Dichloropropane	20	21.1	106	20.3	102	4	81-127/11
108-20-3	Di-Isopropyl ether	20	18.9	95	18.6	93	2	69-126/10
594-20-7	2,2-Dichloropropane	20	20.8	104	20.2	101	3	66-130/12
124-48-1	Dibromochloromethane	20	21.9	110	20.9	105	5	76-124/10
75-71-8	Dichlorodifluoromethane	20	18.4	92	17.7	89	4	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	21.2	106	20.7	104	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	22.3	112	21.4	107	4	76-131/10
541-73-1	m-Dichlorobenzene	20	20.4	102	19.6	98	4	79-121/10
95-50-1	o-Dichlorobenzene	20	20.3	102	19.5	98	4	79-120/10
106-46-7	p-Dichlorobenzene	20	20.4	102	19.6	98	4	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	18.6	93	18.6	93	0	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	20.7	104	19.8	99	4	73-125/10
100-41-4	Ethylbenzene	20	20.8	104	20.1	101	3	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-BS	N56273.D	1	06/10/16	MV	n/a	n/a	VN1507
VN1507-BSD	N56274.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	93.0	116	89.9	112	3	71-145/12
87-68-3	Hexachlorobutadiene	20	20.7	104	19.7	99	5	70-130/12
98-82-8	Isopropylbenzene	20	20.8	104	20.1	101	3	77-125/10
99-87-6	p-Isopropyltoluene	20	21.0	105	20.1	101	4	76-126/10
108-10-1	4-Methyl-2-pentanone	80	94.3	118	90.0	113	5	70-142/11
74-83-9	Methyl bromide	20	17.4	87	17.3	87	1	65-124/13
74-87-3	Methyl chloride	20	17.5	88	16.8	84	4	47-143/20
74-95-3	Methylene bromide	20	21.6	108	20.5	103	5	80-125/10
75-09-2	Methylene chloride	20	20.1	101	20.5	103	2	65-124/15
78-93-3	Methyl ethyl ketone	80	92.1	115	88.3	110	4	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.2	91	18.3	92	1	73-120/10
91-20-3	Naphthalene	20	21.2	106	20.2	101	5	66-120/12
103-65-1	n-Propylbenzene	20	20.3	102	19.6	98	4	75-125/10
100-42-5	Styrene	20	21.9	110	21.2	106	3	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.3	97	19.7	99	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	21.0	105	20.1	101	4	79-126/10
71-55-6	1,1,1-Trichloroethane	20	20.5	103	20.7	104	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	20.8	104	20.1	101	3	78-127/10
79-00-5	1,1,2-Trichloroethane	20	20.5	103	19.8	99	3	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	20.1	101	19.1	96	5	70-128/12
96-18-4	1,2,3-Trichloropropane	20	21.0	105	19.9	100	5	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	20.4	102	19.4	97	5	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	20.3	102	19.6	98	4	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	20.7	104	20.0	100	3	79-130/10
127-18-4	Tetrachloroethylene	20	20.6	103	19.8	99	4	72-124/13
108-88-3	Toluene	20	20.4	102	19.8	99	3	78-121/10
79-01-6	Trichloroethylene	20	20.9	105	20.1	101	4	75-119/10
75-69-4	Trichlorofluoromethane	20	20.7	104	20.2	101	2	68-130/19
75-01-4	Vinyl chloride	20	19.6	98	19.6	98	0	57-137/18
1330-20-7	Xylene (total)	60	62.2	104	59.8	100	4	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	100%	80-123%
2037-26-5	Toluene-D8	99%	99%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN1507-BS	N56273.D	1	06/10/16	MV	n/a	n/a	VN1507
VN1507-BSD	N56274.D	1	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46007-6MS	N56295.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6MSD	N56296.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6	N56280.D	5	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	C46007-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		400	493	123	400	478	120	3	55-147/17
71-43-2	Benzene	ND		100	102	102	100	101	101	1	76-120/10
108-86-1	Bromobenzene	ND		100	99.7	100	100	99.9	100	0	80-123/10
74-97-5	Bromochloromethane	ND		100	106	106	100	105	105	1	79-124/10
75-27-4	Bromodichloromethane	ND		100	101	101	100	101	101	0	75-121/10
75-25-2	Bromoform	ND		100	85.0	85	100	84.7	85	0	62-127/10
104-51-8	n-Butylbenzene	ND		100	96.7	97	100	97.9	98	1	74-129/10
135-98-8	sec-Butylbenzene	ND		100	101	101	100	102	102	1	75-128/11
98-06-6	tert-Butylbenzene	ND		100	101	101	100	101	101	0	74-127/11
108-90-7	Chlorobenzene	ND		100	98.3	98	100	98.0	98	0	79-119/10
75-00-3	Chloroethane	ND		100	101	101	100	91.8	92	10	60-115/14
67-66-3	Chloroform	ND		100	101	101	100	101	101	0	75-122/10
95-49-8	o-Chlorotoluene	ND		100	102	102	100	103	103	1	76-125/12
106-43-4	p-Chlorotoluene	ND		100	96.2	96	100	95.7	96	1	76-126/11
75-15-0	Carbon disulfide	ND		100	103	103	100	102	102	1	51-130/13
56-23-5	Carbon tetrachloride	ND		100	106	106	100	106	106	0	72-128/13
75-34-3	1,1-Dichloroethane	ND		100	103	103	100	106	106	3	70-121/10
75-35-4	1,1-Dichloroethylene	ND		100	105	105	100	105	105	0	62-125/13
563-58-6	1,1-Dichloropropene	ND		100	102	102	100	102	102	0	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	92.8	93	100	91.0	91	2	64-129/11
106-93-4	1,2-Dibromoethane	ND		100	100	100	100	99.6	100	0	81-124/10
107-06-2	1,2-Dichloroethane	ND		100	98.8	99	100	98.4	98	0	74-122/10
78-87-5	1,2-Dichloropropane	ND		100	105	105	100	105	105	0	75-123/10
142-28-9	1,3-Dichloropropane	ND		100	103	103	100	103	103	0	81-127/11
108-20-3	Di-Isopropyl ether	ND		100	97.8	98	100	101	101	3	69-126/10
594-20-7	2,2-Dichloropropane	ND		100	81.2	81	100	81.0	81	0	66-130/12
124-48-1	Dibromochloromethane	ND		100	103	103	100	103	103	0	76-124/10
75-71-8	Dichlorodifluoromethane	ND		100	91.4	91	100	75.4	75	19	26-163/26
156-59-2	cis-1,2-Dichloroethylene	116		100	239	123	100	235	119	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		100	103	103	100	102	102	1	76-131/10
541-73-1	m-Dichlorobenzene	ND		100	97.4	97	100	98.3	98	1	79-121/10
95-50-1	o-Dichlorobenzene	ND		100	97.7	98	100	98.0	98	0	79-120/10
106-46-7	p-Dichlorobenzene	ND		100	97.9	98	100	98.5	99	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	3.5	J	100	100	97	100	101	98	1	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		100	93.7	94	100	93.3	93	0	73-125/10
100-41-4	Ethylbenzene	ND		100	101	101	100	101	101	0	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46007-6MS	N56295.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6MSD	N56296.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6	N56280.D	5	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Compound	C46007-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		400	468	117	400	452	113	3	71-145/12
87-68-3	Hexachlorobutadiene	ND		100	90.3	90	100	92.3	92	2	70-130/12
98-82-8	Isopropylbenzene	ND		100	99.9	100	100	100	100	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		100	99.8	100	100	101	101	1	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		400	463	116	400	448	112	3	70-142/11
74-83-9	Methyl bromide	ND		100	89.8	90	100	82.7	83	8	65-124/13
74-87-3	Methyl chloride	ND		100	90.4	90	100	83.5	84	8	47-143/20
74-95-3	Methylene bromide	ND		100	104	104	100	103	103	1	80-125/10
75-09-2	Methylene chloride	ND		100	105	105	100	105	105	0	65-124/15
78-93-3	Methyl ethyl ketone	ND		400	482	121	400	469	117	3	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		100	94.7	95	100	93.5	94	1	73-120/10
91-20-3	Naphthalene	ND		100	98.1	98	100	97.1	97	1	66-120/12
103-65-1	n-Propylbenzene	ND		100	99.9	100	100	100	100	0	75-125/10
100-42-5	Styrene	ND		100	106	106	100	107	107	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		100	102	102	100	101	101	1	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	99.8	100	100	99.7	100	0	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		100	104	104	100	105	105	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	104	104	100	102	102	2	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		100	101	101	100	100	100	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		100	90.9	91	100	91.3	91	0	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		100	99.4	99	100	98.5	99	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		100	92.8	93	100	93.8	94	1	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		100	99.3	99	100	99.4	99	0	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		100	101	101	100	102	102	1	79-130/10
127-18-4	Tetrachloroethylene	ND		100	97.8	98	100	98.5	99	1	72-124/13
108-88-3	Toluene	ND		100	101	101	100	101	101	0	78-121/10
79-01-6	Trichloroethylene	274		100	399	125* [a]	100	390	116	2	75-119/10
75-69-4	Trichlorofluoromethane	ND		100	106	106	100	89.9	90	16	68-130/19
75-01-4	Vinyl chloride	ND		100	106	106	100	92.8	93	13	57-137/18
1330-20-7	Xylene (total)	ND		300	301	100	300	302	101	0	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C46007-6	Limits
1868-53-7	Dibromofluoromethane	101%	101%	98%	80-123%
2037-26-5	Toluene-D8	99%	99%	99%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46047
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46007-6MS	N56295.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6MSD	N56296.D	5	06/10/16	MV	n/a	n/a	VN1507
C46007-6	N56280.D	5	06/10/16	MV	n/a	n/a	VN1507

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

C46047-1, C46047-2

CAS No.	Surrogate Recoveries	MS	MSD	C46007-6	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	96%	79-114%

(a) Outside control limits due to high level in sample relative to spike amount. AZ:M3

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11433
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/07/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	-2.9	<200
Lead	10	1	1.7		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP11433: C46047-1

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: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11433 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/16

Metal	C45993-5F Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	13000	24300	12500	90.4	75-125
Lead	anr				
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin	anr				
Titanium	anr				
Vanadium	anr				
Zinc	anr				

Associated samples MP11433: C46047-1

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: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11433 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/16

Metal	C45993-5F Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	13000	24500	12500	92.0	0.8	20
Lead	anr					
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin	anr					
Titanium	anr					
Vanadium	anr					
Zinc	anr					

Associated samples MP11433: C46047-1

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: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11433
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/07/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	11300	12500	90.4	80-120
Lead	anr			
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin	anr			
Titanium	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP11433: C46047-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11433 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/07/16

Metal	C45993-5F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	13000	11700	10.1*(a)	0-10
Lead	anr			
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin	anr			
Titanium	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP11433: C46047-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN19132	5.0	0.0	mg/l	250	236	94.4	75-125%
Bromide	GP9462/GN19159	0.20	0.0	mg/l	5	4.84	96.8	90-110%
Chloride	GP9462/GN19159	0.50	0.0	mg/l	5	4.78	95.6	90-110%
Fluoride	GP9462/GN19159	0.10	0.0	mg/l	5	4.73	94.6	90-110%
Nitrogen, Nitrate	GP9459/GN19146	0.10	0.0	mg/l	5	5.12	102.4	90-110%
Nitrogen, Nitrate	GP9462/GN19159	0.10	0.0	mg/l	5	4.74	94.8	90-110%
Nitrogen, Nitrite	GP9462/GN19159	0.10	0.0	mg/l	5	4.67	93.4	90-110%
Sulfate	GP9459/GN19146	0.50	0.0	mg/l	5	5.11	102.2	90-110%
Sulfate	GP9462/GN19159	0.50	0.0	mg/l	5	4.78	95.6	90-110%
Total Organic Carbon	GP9464/GN19161	1.0	0.0	mg/l	5	4.8	97.8	75-125%

Associated Samples:
Batch GP9459: C46047-1
Batch GP9462: C46047-1
Batch GP9464: C46047-1
Batch GN19132: C46047-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN19132	mg/l	250	238	0.8	
Bromide	GP9462/GN19159	mg/l	5	4.84	0.0	25%
Chloride	GP9462/GN19159	mg/l	5	4.78	0.0	25%
Fluoride	GP9462/GN19159	mg/l	5	4.74	0.2	25%
Nitrogen, Nitrate	GP9459/GN19146	mg/l	5	5.12	0.0	25%
Nitrogen, Nitrate	GP9462/GN19159	mg/l	5	4.75	0.2	25%
Nitrogen, Nitrite	GP9462/GN19159	mg/l	5	4.76	1.9	25%
Sulfate	GP9459/GN19146	mg/l	5	5.18	1.4	25%
Sulfate	GP9462/GN19159	mg/l	5	4.82	0.8	25%
Total Organic Carbon	GP9464/GN19161	mg/l	5	4.9	2.2	

Associated Samples:
Batch GP9459: C46047-1
Batch GP9462: C46047-1
Batch GP9464: C46047-1
Batch GN19132: C46047-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN19132	C46047-1	mg/l	315	303	3.9	0-25%

Associated Samples:
Batch GN19132: C46047-1
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP9462/GN19159	C46118-2	mg/l	0.46	5	5.3	96.8	80-120%
Chloride	GP9462/GN19159	C46118-2	mg/l	146	5	150	80.0	80-120%
Fluoride	GP9462/GN19159	C46118-2	mg/l	0.12	5	5.4	105.6	80-120%
Nitrogen, Nitrate	GP9459/GN19146	C46047-1	mg/l	2.8	5	8.2	108.0	80-120%
Nitrogen, Nitrate	GP9462/GN19159	C46118-2	mg/l	0.021 U	5	4.8	96.0	80-120%
Nitrogen, Nitrite	GP9462/GN19159	C46118-2	mg/l	0.0076 U	5	4.8	96.0	80-120%
Sulfate	GP9462/GN19159	C46118-2	mg/l	6.5	5	11.4	98.0	80-120%
Total Organic Carbon	GP9464/GN19161	C46047-1	mg/l	1.6	5	6.5	96.4	75-125%

Associated Samples:
Batch GP9459: C46047-1
Batch GP9462: C46047-1
Batch GP9464: C46047-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46047
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP9462/GN19159	C46118-2	mg/l	0.46	5	5.4	1.9	
Chloride	GP9462/GN19159	C46118-2	mg/l	146	5	150	0.0	
Fluoride	GP9462/GN19159	C46118-2	mg/l	0.12	5	5.4	0.0	
Nitrogen, Nitrate	GP9459/GN19146	C46047-1	mg/l	2.8	5	8.2	0.0	
Nitrogen, Nitrate	GP9462/GN19159	C46118-2	mg/l	0.021 U	5	4.8	0.0	
Nitrogen, Nitrite	GP9462/GN19159	C46118-2	mg/l	0.0076 U	5	4.8	0.0	
Sulfate	GP9462/GN19159	C46118-2	mg/l	6.5	5	11.3	0.9	

Associated Samples:
Batch GP9459: C46047-1
Batch GP9462: C46047-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

SGS Accutest Job Number: C46360

Sampling Date: 06/28/16

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@atcassociates.com; justin.patton@atcassociates.com;
ATTN: Richard Byrd

Total number of pages in report: 67

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C46360

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: P01152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C46360-1	06/28/16	07:35	KV	06/29/16	AQ	Ground Water	HQUST-532A
C46360-2	06/28/16	08:10	KV	06/29/16	AQ	Ground Water	HQUST-533A
C46360-3	06/28/16	08:55	KV	06/29/16	AQ	Ground Water	CEP-519A
C46360-4	06/28/16	09:00	KV	06/29/16	AQ	Ground Water	CEP-519A
C46360-5	06/28/16	09:25	KV	06/29/16	AQ	Ground Water	CEP-520A
C46360-6	06/28/16	09:50	KV	06/29/16	AQ	Ground Water	HQUST-531A
C46360-7	06/28/16	00:00	KV	06/29/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

2

Client:	City of Tucson Environmental Services	**Job No**	C46360
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	7/8/2016 3:26:23 PM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 06/28/2016 and were received at Accutest on 06/29/2016 properly preserved, at 5.9 Deg. C and intact. These Samples received an Accutest job number of C46360. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VU1469

- Sample(s) C46338-3MS, C46338-3MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Dibromochloromethane, Styrene are outside laboratory control limits; but within marginal exceedance criteria.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Ethylbenzene, o-Chlorotoluene, o-Dichlorobenzene, p-Dichlorobenzene, trans-1,3-Dichloropropene, Xylene (total), 1,1,1,2-Tetrachloroethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Bromobenzene, Bromoform, Carbon disulfide, Chlorobenzene, Isopropylbenzene, m-Dichlorobenzene, p-Isopropyltoluene, Styrene, tert-Butylbenzene, Toluene, Benzene are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. The sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.
- RPD(s) for MSD for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,2-Dibromoethane, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, 4-Methyl-2-pentanone, Acetone, Bromobenzene, Bromochloromethane, Bromodichloromethane, Bromoform, Carbon disulfide, Chlorobenzene, Chloroethane, Chloroform, cis-1,2-Dichloroethylene, Di-Isopropyl ether, Dibromochloromethane, Isopropylbenzene, m-Dichlorobenzene, Methyl bromide, Methyl chloride, Methyl ethyl ketone, Methyl Tert Butyl Ether, n-Propylbenzene, p-Chlorotoluene, p-Isopropyltoluene, Styrene, Tert-Amyl Methyl Ether, tert-Butylbenzene, Toluene, trans-1,2-Dichloroethylene, Trichloroethylene, Trichlorofluoromethane, Vinyl chloride are outside laboratory control limits for sample C46338-3MSD.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP11561

- Sample(s) C46360-1DUP, C46360-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP11561-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9543

- Sample(s) C46361-1MS, C46361-1MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP9547

- Sample(s) C46410-3MS, C46410-3MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN19268

- Sample(s) C46360-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP9539

- Sample(s) C46360-1MS were used as the QC samples for Total Organic Carbon.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C46360
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/28/16

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C46360-1	**HQUST-532A**					
Alkalinity, Total as CaCO3		200	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.2	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		742	25		mg/l	EPA 300/SW846 9056A
C46360-2	**HQUST-533A**					
Methyl Tert Butyl Ether		2.0	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		455	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		499	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C46360-3	**CEP-519A**					
n-Butylbenzene		4.5	2.0		ug/l	SW846 8260B
Chloroform		0.62	0.50		ug/l	SW846 8260B
Isopropylbenzene		1.3	1.0		ug/l	SW846 8260B
n-Propylbenzene		3.8	2.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		51.6	2.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		18.9	2.0		ug/l	SW846 8260B
Xylene (total)		5.5	2.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		178	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		16.7	1.0		mg/l	EPA 300/SW846 9056A
Sulfate [a]		308	13		mg/l	EPA 300/SW846 9056A
C46360-4	**CEP-519A**					
n-Butylbenzene		5.6	2.0		ug/l	SW846 8260B
Chloroform		0.72	0.50		ug/l	SW846 8260B
Isopropylbenzene		1.6	1.0		ug/l	SW846 8260B
n-Propylbenzene		4.7	2.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		64.9	2.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		24.9	2.0		ug/l	SW846 8260B
Xylene (total)		6.7	2.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		176	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		18.2	1.0		mg/l	EPA 300/SW846 9056A
Sulfate [a]		310	13		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.8	1.0		mg/l	SM5310 C-00
C46360-5	**CEP-520A**					
Iron		1360	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		172	5.0		mg/l	SM2320 B-97

Summary of Hits

Job Number: C46360
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/28/16

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nitrogen, Nitrate		1.6	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		400	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		3.1	1.0		mg/l	SM5310 C-00
C46360-6	**HQUST-531A**					
Alkalinity, Total as CaCO3		228	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		11.8	1.0		mg/l	EPA 300/SW846 9056A
Sulfate [a]		773	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C46360-7	**TRIP BLANK**					

No hits reported in this sample.

(a) AZ:D2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C46360-1	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35673.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-532A		
Lab Sample ID:	C46360-1	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	94%		79-114%

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:	HQUST-532A		
Lab Sample ID:	C46360-1	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	HQUST-532A		
Lab Sample ID:	C46360-1	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C46360-1	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	200	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	6.2	0.10	mg/l	1	06/29/16 15:31	PH	EPA 300/SW846 9056A
Sulfate [a]	742	25	mg/l	50	07/06/16 20:28	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C46360-2	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35674.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-533A		
Lab Sample ID:	C46360-2	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	93%		79-114%

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:	HQUST-533A		
Lab Sample ID:	C46360-2	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	HQUST-533A		
Lab Sample ID:	C46360-2	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C46360-2	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	455	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	6.0	0.10	mg/l	1	06/29/16 15:48	PH	EPA 300/SW846 9056A
Sulfate [a]	499	25	mg/l	50	07/06/16 20:45	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C46360-3	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35675.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	4.5	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	0.62	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-519A		
Lab Sample ID:	C46360-3	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	1.3	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	3.8	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	51.6	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	18.9	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	5.5	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		80-123%
2037-26-5	Toluene-D8	105%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

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:	CEP-519A		
Lab Sample ID:	C46360-3	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	CEP-519A		
Lab Sample ID:	C46360-3	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C46360-3	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	178	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	16.7	1.0	mg/l	10	06/29/16 18:59	PH	EPA 300/SW846 9056A
Sulfate [a]	308	13	mg/l	25	07/06/16 21:03	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C46360-4	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35676.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	5.6	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	0.72	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-519A		
Lab Sample ID:	C46360-4	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	1.6	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	4.7	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	64.9	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	24.9	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	6.7	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		80-123%
2037-26-5	Toluene-D8	104%		88-112%
460-00-4	4-Bromofluorobenzene	97%		79-114%

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:	CEP-519A		
Lab Sample ID:	C46360-4	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	CEP-519A		
Lab Sample ID:	C46360-4	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C46360-4	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	176	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	18.2	1.0	mg/l	10	06/29/16 19:16	PH	EPA 300/SW846 9056A
Sulfate [a]	310	13	mg/l	25	07/06/16 21:55	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.8	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C46360-5	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35677.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	CEP-520A		
Lab Sample ID:	C46360-5	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	95%		79-114%

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:	CEP-520A		
Lab Sample ID:	C46360-5	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	CEP-520A		
Lab Sample ID:	C46360-5	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1360	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C46360-5	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	172	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	1.6	0.10	mg/l	1	06/29/16 16:40	PH	EPA 300/SW846 9056A
Sulfate [a]	400	25	mg/l	50	07/06/16 22:12	PH	EPA 300/SW846 9056A
Total Organic Carbon	3.1	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C46360-6	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35678.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	HQUST-531A		
Lab Sample ID:	C46360-6	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	93%		79-114%

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:	HQUST-531A		
Lab Sample ID:	C46360-6	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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:	HQUST-531A		
Lab Sample ID:	C46360-6	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	< 200	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C46360-6	**Date Sampled:**	06/28/16
Matrix:	AQ - Ground Water	**Date Received:**	06/29/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	228	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	11.8	1.0	mg/l	10	06/29/16 19:51	PH	EPA 300/SW846 9056A
Sulfate [a]	773	50	mg/l	100	07/06/16 22:29	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	07/05/16 11:30	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C46360-7	**Date Sampled:**	06/28/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35672.D	1	07/01/16	MV	n/a	n/a	VU1469
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [b]	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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:	C46360-7	**Date Sampled:**	06/28/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	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	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	93%		79-114%

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:	C46360-7	**Date Sampled:**	06/28/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/29/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:L2

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: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, 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.
L2	The associated blank spike recovery was below laboratory acceptance limits.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R9	Sample RPD exceeded the laboratory acceptance limit.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

SGS PHOENIX ACCUTEST

CHAIN OF CUSTODY

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

FED-EX Tracking #: 7766 3056 9157
Bottle Order Control #:
SGS Accutest Quote #:
SGS Accutest NC Job #: C46360

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box 27210
City: TUCSON State: AZ Zip: 85705
Project Contact: Richard Byrd
Phone #: 520-791-3175
Samplers's Name: Kayla Virgone

Project Information

Project Name: TCC/HQUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis: AlK, NO3, SO4; Fe (total); TOC; 8260 VOC

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	Number of preserved Bottles: HQ	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	AlK, NO3, SO4	Fe (total)	TOC	8260 VOC	LAB USE ONLY
1	HQUST-532A	6/28/16	0735	KV	GW	7									X	X	X	X	
2	HQUST-533A	6/28/16	0810	KV	GW	7									X	X	X	X	
3	CEP-519A	6/28/16	0855	KV	GW	7									X	X	X	X	
4	CEP-519A	6/28/16	0900	KV	GW	7									X	X	X	X	
5	CEP-520A	6/28/16	0925	KV	GW	7									X	X	X	X	
6	HQUST-531A	6/28/16	0950	KV	GW	7									X	X	X	X	
7	TRIP BLANK					2												X	

Turnaround Time (Business days)

Approved By / Date:

- [ ] 10 Day
- [X] 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	Kayla Virgone	6/28/16 1251				
2					6/28/16 1700	Fed-Ex
3	FEDEX	6/29/16 1000				
4						
5						

Custody Seal #: intact
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: 4.9/5.9 °C

5.2 5

C46360: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C46360 **Client:** CITY OF TUCSON **Project:** TCC/HQUST

Date / Time Received: 6/29/2016 10:00:00 AM **Delivery Method:** FedEx **Airbill #'s:** 776630569157

Cooler Temps (Initial/Adjusted): #1: (4.9/5.9);

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. Therm ID:	IR3;		
3. Cooler media:	Ice (Bag)		
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

C46360: Chain of Custody
Page 2 of 2

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: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-MB	U35666.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	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	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-MB	U35666.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	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	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	80-123%
2037-26-5	Toluene-D8	102%	88-112%

Method Blank Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-MB	U35666.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-BS	U35661.D	1	07/01/16	MV	n/a	n/a	VU1469
VU1469-BSD	U35664.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	73.7	92	70.4	88	5	55-147/17
71-43-2	Benzene	20	17.8	89	17.9	90	1	76-120/10
108-86-1	Bromobenzene	20	17.2	86	17.5	88	2	80-123/10
74-97-5	Bromochloromethane	20	18.6	93	18.9	95	2	79-124/10
75-27-4	Bromodichloromethane	20	17.6	88	17.5	88	1	75-121/10
75-25-2	Bromoform	20	14.0	70	12.9	65	8	62-127/10
104-51-8	n-Butylbenzene	20	17.6	88	17.9	90	2	74-129/10
135-98-8	sec-Butylbenzene	20	17.3	87	17.6	88	2	75-128/11
98-06-6	tert-Butylbenzene	20	17.3	87	17.1	86	1	74-127/11
108-90-7	Chlorobenzene	20	16.8	84	17.2	86	2	79-119/10
75-00-3	Chloroethane	20	19.9	100	20.3	102	2	60-115/14
67-66-3	Chloroform	20	17.7	89	18.0	90	2	75-122/10
95-49-8	o-Chlorotoluene	20	16.7	84	17.0	85	2	76-125/12
106-43-4	p-Chlorotoluene	20	17.1	86	17.3	87	1	76-126/11
75-15-0	Carbon disulfide	20	13.7	69	13.6	68	1	51-130/13
56-23-5	Carbon tetrachloride	20	17.9	90	18.4	92	3	72-128/13
75-34-3	1,1-Dichloroethane	20	18.0	90	18.1	91	1	70-121/10
75-35-4	1,1-Dichloroethylene	20	17.8	89	17.8	89	0	62-125/13
563-58-6	1,1-Dichloropropene	20	17.7	89	18.0	90	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	14.9	75	14.2	71	5	64-129/11
106-93-4	1,2-Dibromoethane	20	18.2	91	18.4	92	1	81-124/10
107-06-2	1,2-Dichloroethane	20	18.0	90	18.2	91	1	74-122/10
78-87-5	1,2-Dichloropropane	20	18.1	91	18.4	92	2	75-123/10
142-28-9	1,3-Dichloropropane	20	18.2	91	18.4	92	1	81-127/11
108-20-3	Di-Isopropyl ether	20	18.3	92	18.2	91	1	69-126/10
594-20-7	2,2-Dichloropropane	20	17.1	86	18.0	90	5	66-130/12
124-48-1	Dibromochloromethane	20	14.9	75* [a]	14.4	72* [a]	3	76-124/10
75-71-8	Dichlorodifluoromethane	20	17.5	88	18.4	92	5	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	18.9	95	19.2	96	2	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	19.3	97	19.3	97	0	76-131/10
541-73-1	m-Dichlorobenzene	20	16.6	83	16.8	84	1	79-121/10
95-50-1	o-Dichlorobenzene	20	16.7	84	17.0	85	2	79-120/10
106-46-7	p-Dichlorobenzene	20	16.6	83	16.9	85	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.2	86	17.4	87	1	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	14.9	75	15.0	75	1	73-125/10
100-41-4	Ethylbenzene	20	17.5	88	18.0	90	3	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-BS	U35661.D	1	07/01/16	MV	n/a	n/a	VU1469
VU1469-BSD	U35664.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	64.7	81	63.6	80	2	71-145/12
87-68-3	Hexachlorobutadiene	20	16.6	83	16.5	83	1	70-130/12
98-82-8	Isopropylbenzene	20	17.3	87	17.9	90	3	77-125/10
99-87-6	p-Isopropyltoluene	20	17.6	88	17.9	90	2	76-126/10
108-10-1	4-Methyl-2-pentanone	80	75.0	94	73.9	92	1	70-142/11
74-83-9	Methyl bromide	20	19.1	96	19.4	97	2	65-124/13
74-87-3	Methyl chloride	20	17.8	89	18.6	93	4	47-143/20
74-95-3	Methylene bromide	20	18.3	92	18.8	94	3	80-125/10
75-09-2	Methylene chloride	20	17.7	89	18.0	90	2	65-124/15
78-93-3	Methyl ethyl ketone	80	76.6	96	74.1	93	3	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.2	91	17.9	90	2	73-120/10
91-20-3	Naphthalene	20	16.0	80	14.8	74	8	66-120/12
103-65-1	n-Propylbenzene	20	16.9	85	17.1	86	1	75-125/10
100-42-5	Styrene	20	14.2	71* [a]	14.5	73	2	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.1	96	19.1	96	0	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	17.4	87	17.6	88	1	79-126/10
71-55-6	1,1,1-Trichloroethane	20	18.3	92	18.5	93	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	18.0	90	18.1	91	1	78-127/10
79-00-5	1,1,2-Trichloroethane	20	17.4	87	17.6	88	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	17.5	88	16.7	84	5	70-128/12
96-18-4	1,2,3-Trichloropropane	20	18.0	90	18.3	92	2	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	17.1	86	16.9	85	1	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	17.2	86	17.5	88	2	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	17.5	88	17.7	89	1	79-130/10
127-18-4	Tetrachloroethylene	20	17.3	87	17.3	87	0	72-124/13
108-88-3	Toluene	20	17.2	86	17.6	88	2	78-121/10
79-01-6	Trichloroethylene	20	17.7	89	18.1	91	2	75-119/10
75-69-4	Trichlorofluoromethane	20	19.3	97	19.5	98	1	68-130/19
75-01-4	Vinyl chloride	20	19.2	96	19.7	99	3	57-137/18
1330-20-7	Xylene (total)	60	48.5	81	49.8	83	3	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	106%	80-123%
2037-26-5	Toluene-D8	101%	101%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-BS	U35661.D	1	07/01/16	MV	n/a	n/a	VU1469
VU1469-BSD	U35664.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	103%	105%	79-114%

(a) Outside laboratory control limits; but within marginal exceedance criteria. AZ:L2

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1469-LCS	U35662.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	80-123%
2037-26-5	Toluene-D8	103%	88-112%
460-00-4	4-Bromofluorobenzene	98%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46338-3MS	U35704.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3MSD	U35705.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3	U35668.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	C46338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	19.3	J	80	95.1	95	80	77.0	72	21* [a]	55-147/17
71-43-2	Benzene	85.2		20	80.6	-23* [b]	20	82.1	-16* [b]	2	76-120/10
108-86-1	Bromobenzene	ND		20	17.5	88	20	15.7	79* [c]	11* [a]	80-123/10
74-97-5	Bromochloromethane	ND		20	19.0	95	20	16.8	84	12* [a]	79-124/10
75-27-4	Bromodichloromethane	ND		20	18.2	91	20	16.3	82	11* [a]	75-121/10
75-25-2	Bromoform	ND		20	13.1	66	20	11.4	57* [c]	14* [a]	62-127/10
104-51-8	n-Butylbenzene	0.21	J	20	17.6	87	20	15.9	78	10	74-129/10
135-98-8	sec-Butylbenzene	0.29	J	20	17.8	88	20	15.9	78	11	75-128/11
98-06-6	tert-Butylbenzene	ND		20	16.7	84	20	14.6	73* [c]	13* [a]	74-127/11
108-90-7	Chlorobenzene	ND		20	17.0	85	20	15.1	76* [c]	12* [a]	79-119/10
75-00-3	Chloroethane	ND		20	22.7	114	20	17.4	87	26* [a]	60-115/14
67-66-3	Chloroform	0.79	J	20	18.7	90	20	16.3	78	14* [a]	75-122/10
95-49-8	o-Chlorotoluene	ND		20	16.7	84	20	14.9	75* [c]	11	76-125/12
106-43-4	p-Chlorotoluene	ND		20	17.3	87	20	15.4	77	12* [a]	76-126/11
75-15-0	Carbon disulfide	ND		20	12.0	60	20	10	50* [c]	18* [a]	51-130/13
56-23-5	Carbon tetrachloride	ND		20	18.3	92	20	16.1	81	13	72-128/13
75-34-3	1,1-Dichloroethane	ND		20	18.2	91	20	15.9	80	13* [a]	70-121/10
75-35-4	1,1-Dichloroethylene	ND		20	17.4	87	20	15.4	77	12	62-125/13
563-58-6	1,1-Dichloropropene	ND		20	17.9	90	20	16.0	80	11	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	14.9	75	20	13.6	68	9	64-129/11
106-93-4	1,2-Dibromoethane	ND		20	18.3	92	20	16.4	82	11* [a]	81-124/10
107-06-2	1,2-Dichloroethane	ND		20	17.8	89	20	16.4	82	8	74-122/10
78-87-5	1,2-Dichloropropane	ND		20	18.5	93	20	16.9	85	9	75-123/10
142-28-9	1,3-Dichloropropane	ND		20	17.9	90	20	16.3	82	9	81-127/11
108-20-3	Di-Isopropyl ether	ND		20	17.7	89	20	15.7	79	12* [a]	69-126/10
594-20-7	2,2-Dichloropropane	ND		20	16.2	81	20	14.2	71	13* [a]	66-130/12
124-48-1	Dibromochloromethane	ND		20	14.6	73* [d]	20	13.0	65* [d]	12* [d]	76-124/10
75-71-8	Dichlorodifluoromethane	ND		20	17.6	88	20	14.1	71	22	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		20	19.8	99	20	17.4	87	13* [a]	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		20	17.8	89	20	16.1	81	10	76-131/10
541-73-1	m-Dichlorobenzene	ND		20	16.9	85	20	15.2	76* [c]	11* [a]	79-121/10
95-50-1	o-Dichlorobenzene	ND		20	17.1	86	20	15.4	77* [c]	10	79-120/10
106-46-7	p-Dichlorobenzene	ND		20	16.8	84	20	15.2	76* [c]	10	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		20	16.7	84	20	14.6	73	13* [a]	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		20	13.2	66* [c]	20	12.0	60* [c]	10	73-125/10
100-41-4	Ethylbenzene	7.2		20	22.9	79	20	20.9	69* [c]	9	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46338-3MS	U35704.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3MSD	U35705.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3	U35668.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Compound	C46338-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		80	65.9	82	80	58.7	73	12	71-145/12
87-68-3	Hexachlorobutadiene	ND		20	16.3	82	20	15.1	76	8	70-130/12
98-82-8	Isopropylbenzene	1.6		20	18.6	85	20	16.4	74* [c]	13* [a]	77-125/10
99-87-6	p-Isopropyltoluene	ND		20	16.6	83	20	14.7	74* [c]	12* [a]	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		80	74.3	93	80	66.2	83	12* [a]	70-142/11
74-83-9	Methyl bromide	ND		20	20.8	104	20	16.5	83	23* [a]	65-124/13
74-87-3	Methyl chloride	ND		20	20.2	101	20	15.2	76	28* [a]	47-143/20
74-95-3	Methylene bromide	ND		20	18.5	93	20	16.8	84	10	80-125/10
75-09-2	Methylene chloride	ND		20	18.2	91	20	16.2	81	12	65-124/15
78-93-3	Methyl ethyl ketone	3.7	J	80	78.1	93	80	67.6	80	14* [a]	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20	17.9	90	20	16.0	80	11* [a]	73-120/10
91-20-3	Naphthalene	ND		20	14.1	71	20	13.2	66	7	66-120/12
103-65-1	n-Propylbenzene	ND		20	16.9	85	20	15.1	76	11* [a]	75-125/10
100-42-5	Styrene	ND		20	3.4	17* [d]	20	1.6	8* [d]	72* [a]	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		20	18.7	94	20	16.5	83	13* [a]	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		20	17.5	88	20	15.5	78* [c]	12* [a]	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		20	19.0	95	20	16.5	83	14* [a]	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	18.2	91	20	16.4	82	10	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		20	17.4	87	20	15.7	79	10	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		20	16.3	82	20	15.5	78	5	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		20	18.0	90	20	16.1	81	11* [a]	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		20	16.4	82	20	15.3	77	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		20	10.7	54* [c]	20	8.9	45* [c]	18* [a]	76-124/10
108-67-8	1,3,5-Trimethylbenzene	1.2	J	20	14.5	67* [c]	20	12.1	55* [c]	18* [a]	79-130/10
127-18-4	Tetrachloroethylene	1.1		20	17.8	84	20	16.1	75	10	72-124/13
108-88-3	Toluene	0.53	J	20	17.3	84	20	15.4	74* [c]	12* [a]	78-121/10
79-01-6	Trichloroethylene	ND		20	18.3	92	20	16.3	82	12* [a]	75-119/10
75-69-4	Trichlorofluoromethane	0.84	J	20	21.6	104	20	16.7	79	26* [a]	68-130/19
75-01-4	Vinyl chloride	ND		20	21.3	107	20	16.3	82	27* [a]	57-137/18
1330-20-7	Xylene (total)	33.4		60	69.1	60* [c]	60	63.6	50* [c]	8	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C46338-3	Limits
1868-53-7	Dibromofluoromethane	108%	103%	108%	80-123%
2037-26-5	Toluene-D8	100%	99%	101%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46360
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46338-3MS	U35704.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3MSD	U35705.D	1	07/05/16	MV	n/a	n/a	VU1469
C46338-3	U35668.D	1	07/01/16	MV	n/a	n/a	VU1469

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

C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6, C46360-7

CAS No.	Surrogate Recoveries	MS	MSD	C46338-3	Limits
460-00-4	4-Bromofluorobenzene	104%	103%	100%	79-114%

(a) Outside laboratory control limits. AZ:R9
(b) Outside control limits due to high level in sample relative to spike amount. AZ:M3
(c) Outside laboratory control limits. AZ:M2
(d) Outside laboratory control limits. AZ:L2

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/01/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	-2.9	<200
Lead	10	1	1.7		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP11561: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6

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: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/01/16

Metal	C46360-1 Original	DUP	RPD	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	66.0	66.9	1.4	0-20
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6

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: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/01/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	12200	12500	97.6	80-120
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/01/16

Metal	C46360-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	66.0	79.1	19.8 (a)	0-10
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN19268	5.0	0.0	mg/l	250	242	97.0	75-125%
Bromide	GP9543/GN19264	0.20	0.0	mg/l	5	4.99	99.8	90-110%
Bromide	GP9547/GN19269	0.20	0.0	mg/l	5	5.07	101.4	90-110%
Chloride	GP9547/GN19269	0.50	0.0	mg/l	5	4.91	98.2	90-110%
Nitrogen, Nitrate	GP9543/GN19264	0.10	0.0	mg/l	5	4.86	97.2	90-110%
Nitrogen, Nitrate	GP9547/GN19269	0.10	0.0	mg/l	5	4.91	98.2	90-110%
Sulfate	GP9547/GN19269	0.50	0.0	mg/l	5	4.84	96.8	90-110%
Total Organic Carbon	GP9539/GN19259	1.0	0.0	mg/l	5	5.0	100.9	75-125%

Associated Samples:
Batch GP9539: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9543: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9547: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GN19268: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN19268	mg/l	250	248	2.5	
Bromide	GP9543/GN19264	mg/l	5	4.98	0.2	25%
Bromide	GP9547/GN19269	mg/l	5	5.03	0.8	25%
Chloride	GP9547/GN19269	mg/l	5	4.94	0.6	25%
Nitrogen, Nitrate	GP9543/GN19264	mg/l	5	4.88	0.4	25%
Nitrogen, Nitrate	GP9547/GN19269	mg/l	5	4.93	0.4	25%
Sulfate	GP9547/GN19269	mg/l	5	4.85	0.2	25%
Total Organic Carbon	GP9539/GN19259	mg/l	5	5.2	3.8	

Associated Samples:
Batch GP9539: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9543: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9547: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GN19268: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN19268	C46360-1	mg/l	200	202	1.0	0-25%

Associated Samples:
Batch GN19268: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
(*) Outside of QC limits

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP9543/GN19264	C46361-1	mg/l	0.21	5	5.2	99.8	80-120%
Bromide	GP9547/GN19269	C46410-3	mg/l	0.050	5	5.0	99.0	80-120%
Chloride	GP9547/GN19269	C46410-3	mg/l	36.6	5	42.2	112.0	80-120%
Nitrogen, Nitrate	GP9543/GN19264	C46361-1	mg/l	1.7	5	6.8	102.0	80-120%
Nitrogen, Nitrate	GP9547/GN19269	C46410-3	mg/l	6.7	5	12.0	106.0	80-120%
Sulfate	GP9547/GN19269	C46410-3	mg/l	17.6	5	22.6	100.0	80-120%
Total Organic Carbon	GP9539/GN19259	C46360-1	mg/l	0.94	5	5.9	98.6	75-125%

Associated Samples:
Batch GP9539: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9543: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9547: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46360
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP9543/GN19264	C46361-1	mg/l	0.21	5	5.2	0.0	
Bromide	GP9547/GN19269	C46410-3	mg/l	0.050	5	5.0	0.0	
Chloride	GP9547/GN19269	C46410-3	mg/l	36.6	5	42.3	0.2	
Nitrogen, Nitrate	GP9543/GN19264	C46361-1	mg/l	1.7	5	6.8	0.0	
Nitrogen, Nitrate	GP9547/GN19269	C46410-3	mg/l	6.7	5	12.0	0.0	
Sulfate	GP9547/GN19269	C46410-3	mg/l	17.6	5	22.4	0.9	

Associated Samples:
Batch GP9543: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
Batch GP9547: C46360-1, C46360-2, C46360-3, C46360-4, C46360-5, C46360-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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Automated Report

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

SGS Accutest Job Number: C46375

Sampling Date: 06/29/16

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
Lori.Ehman@tucsonaz.gov; richard.byrd@tucsonaz.gov;
norman.buxton@atcassociates.com; justin.patton@atcassociates.com;
ATTN: Richard Byrd

Total number of pages in report: **101**

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.

James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925) DoD ELAP (L-A-B L2242)

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August 9, 2016

Richard Byrd
City of Tucson – Env. Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726

Re: SGS Accutest Job # C46375 Reissue

Dear Mr. Byrd,

This is a reissued report for SGS Accutest Job # **C46375**, original report dated 7/11/2016.

The 8260 volatiles data has been revised to report to the MDL as per your request. Revised result pages have been incorporated into this revised report.

Please contact us at 408-588-0200 if we can be of further assistance in this matter, or if you have any questions regarding this data report.

Sincerely,

SGS Accutest Inc.

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

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SGS Accutest

Sample Summary

City of Tucson Environmental Services

Job No: C46375

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Project No: P01152

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C46375-1	06/29/16	07:50	LC	06/30/16	AQ	Ground Water	CEP-528A
C46375-2	06/29/16	08:10	LC	06/30/16	AQ	Ground Water	HQUST-526A
C46375-3	06/29/16	08:30	LC	06/30/16	AQ	Ground Water	HQUST-548
C46375-4	06/29/16	09:05	LC	06/30/16	AQ	Ground Water	CEP-518A
C46375-5	06/29/16	09:30	LC	06/30/16	AQ	Ground Water	HQUST-547
C46375-6	06/29/16	09:45	LC	06/30/16	AQ	Ground Water	HQUST-525A
C46375-7	06/29/16	10:05	LC	06/30/16	AQ	Ground Water	HQUST-523A
C46375-8	06/29/16	10:30	LC	06/30/16	AQ	Ground Water	HQUST-524A
C46375-9	06/29/16	00:00	LC	06/30/16	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C46375
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	7/11/2016 9:45:02 PM

8 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 06/29/2016 and were received at Accutest on 06/30/2016 properly preserved, at 3.1 Deg. C and intact. These Samples received an Accutest job number of C46375. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ **Batch ID:** VU1470

- Sample(s) C46381-18MS, C46381-18MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Bromoform, Dibromochloromethane, Styrene, trans-1,3-Dichloropropene, Xylene (total) are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.

Matrix: AQ **Batch ID:** VU1472

- Sample(s) C46393-1MS, C46393-1MSD were used as the QC samples indicated.

Matrix: AQ **Batch ID:** VV1396

- Sample(s) C46381-27MS, C46381-27MSD were used as the QC samples indicated.
- Matrix Spike Duplicate Recovery for cis-1,2-Dichloroethylene is outside control limits due to high level in sample relative to spike amount. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.
- RPD(s) for MSD for 1,2-Dichloropropane, Benzene, Bromodichloromethane, Bromoform, Chlorobenzene, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Styrene, Trichloroethylene are outside laboratory control limits for sample C46381-27MSD.

Matrix: AQ **Batch ID:** VV1397

- Sample(s) C46375-7MS, C46375-7MSD were used as the QC samples indicated.
- RPD(s) for BSD for Ethylbenzene, p-Dichlorobenzene, p-Isopropyltoluene, Styrene, Tert-Amyl Methyl Ether, Toluene, Trichloroethylene, Chloroform, Methyl Tert Butyl Ether, o-Dichlorobenzene, Hexachlorobutadiene, 1,1,1,2-Tetrachloroethane, Chlorobenzene, Bromochloromethane, Bromobenzene, Benzene, 1,3,5-Trimethylbenzene, 1,2,4-Trichlorobenzene, Methyl bromide, 1,1,1-Trichloroethane, cis-1,2-Dichloroethylene, cis-1,3-Dichloropropene, Xylene (total), Di-Isopropyl ether, 1,1-Dichloroethane exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria.
- Matrix Spike Duplicate Recovery(s) for Xylene (total), 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, n-Butylbenzene are outside laboratory control limits. Probable cause due to matrix interference.
- RPD(s) for MSD for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, n-Butylbenzene are outside laboratory control limits for sample C46375-7MSD.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP11561

- Sample(s) C46360-1DUP, C46360-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP11561-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP9557

- Sample(s) C46375-2MS, C46375-2MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate.
- Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ	**Batch ID:** GN19268

- Sample(s) C46360-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ	**Batch ID:** GP9552

- Sample(s) C46375-1MS were used as the QC samples for Total Organic Carbon.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: C46375
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/29/16

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C46375-1	**CEP-528A**					
Dichlorodifluoromethane		0.82	0.50	0.20	ug/l	SW846 8260B
cis-1,2-Dichloroethylene		2.4	0.50	0.20	ug/l	SW846 8260B
Tetrachloroethylene		2.3	0.50	0.30	ug/l	SW846 8260B
Trichloroethylene [a]		0.26 J	0.50	0.20	ug/l	SW846 8260B
Iron		13100	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		315	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [b]		28.5	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [b]		1110	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C46375-2	**HQUST-526A**					
Acetone [a]		7.4 J	20	4.0	ug/l	SW846 8260B
Benzene		2.9	1.0	0.20	ug/l	SW846 8260B
1,2-Dichloroethane		0.85	0.50	0.20	ug/l	SW846 8260B
Methyl Tert Butyl Ether [b]		126	5.0	1.0	ug/l	SW846 8260B
Iron		1670	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		414	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		1.2	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [c]		793	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.2	1.0		mg/l	SM5310 C-00
C46375-3	**HQUST-548**					
Methyl Tert Butyl Ether [a]		0.78 J	1.0	0.20	ug/l	SW846 8260B
Iron		577	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		293	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.5	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]		1110	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.3	1.0		mg/l	SM5310 C-00
C46375-4	**CEP-518A**					
n-Butylbenzene [b]		161	40	4.0	ug/l	SW846 8260B
sec-Butylbenzene [d]		28.9 J	40	4.0	ug/l	SW846 8260B
cis-1,2-Dichloroethylene [b]		14.5	10	4.0	ug/l	SW846 8260B
Ethylbenzene [b]		351	20	4.0	ug/l	SW846 8260B
Isopropylbenzene [b]		65.2	20	4.0	ug/l	SW846 8260B
p-Isopropyltoluene [d]		13.2 J	40	4.0	ug/l	SW846 8260B
Naphthalene [b]		657	100	10	ug/l	SW846 8260B
n-Propylbenzene [b]		201	40	4.0	ug/l	SW846 8260B
Styrene [d]		8.7 J	20	4.0	ug/l	SW846 8260B
1,2,4-Trimethylbenzene [b]		1350	40	4.0	ug/l	SW846 8260B

Summary of Hits

Job Number: C46375
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/29/16

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
1,3,5-Trimethylbenzene [b]	461	40	4.0	ug/l	SW846 8260B
Vinyl chloride [b]	16.2	10	4.0	ug/l	SW846 8260B
Xylene (total) [b]	436	40	9.2	ug/l	SW846 8260B
Iron	5510	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3	358	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate	1.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]	1110	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon [b]	12.8	5.0		mg/l	SM5310 C-00
C46375-5 HQUST-547					
Methyl Tert Butyl Ether	1.9	1.0	0.20	ug/l	SW846 8260B
Trichloroethylene [a]	0.22 J	0.50	0.20	ug/l	SW846 8260B
Iron	421	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3	242	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate	6.1	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]	969	25		mg/l	EPA 300/SW846 9056A
C46375-6 HQUST-525A					
Trichloroethylene [a]	0.40 J	0.50	0.20	ug/l	SW846 8260B
Iron	415	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3	236	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate	4.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]	846	25		mg/l	EPA 300/SW846 9056A
C46375-7 HQUST-523A					
n-Butylbenzene [e]	146	50	5.0	ug/l	SW846 8260B
sec-Butylbenzene [d]	25.8 J	50	5.0	ug/l	SW846 8260B
Ethylbenzene [b]	67.1	25	5.0	ug/l	SW846 8260B
Isopropylbenzene [d]	20.6 J	25	5.0	ug/l	SW846 8260B
p-Isopropyltoluene [d]	14.3 J	50	5.0	ug/l	SW846 8260B
Naphthalene [b]	344	130	13	ug/l	SW846 8260B
n-Propylbenzene [b]	70.7	50	5.0	ug/l	SW846 8260B
1,2,4-Trimethylbenzene [e]	771	50	5.0	ug/l	SW846 8260B
1,3,5-Trimethylbenzene [e]	267	50	5.0	ug/l	SW846 8260B
Toluene [d]	9.0 J	25	5.0	ug/l	SW846 8260B
Vinyl chloride [d]	6.3 J	13	5.0	ug/l	SW846 8260B
Xylene (total) [f]	279	50	12	ug/l	SW846 8260B
Iron	1660	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3	309	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate	2.5	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]	1030	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon [b]	11.6	10		mg/l	SM5310 C-00

Summary of Hits

Job Number: C46375
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 06/29/16

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C46375-8	**HQUST-524A**					
Acetone [a]		6.1 J	20	4.0	ug/l	SW846 8260B
Benzene [a]		0.58 J	1.0	0.20	ug/l	SW846 8260B
n-Butylbenzene [a]		1.1 J	2.0	0.20	ug/l	SW846 8260B
sec-Butylbenzene [a]		0.87 J	2.0	0.20	ug/l	SW846 8260B
Ethylbenzene [a]		0.27 J	1.0	0.20	ug/l	SW846 8260B
Naphthalene		11.5	5.0	0.50	ug/l	SW846 8260B
n-Propylbenzene [a]		0.35 J	2.0	0.20	ug/l	SW846 8260B
1,2,4-Trimethylbenzene [a]		0.72 J	2.0	0.20	ug/l	SW846 8260B
1,3,5-Trimethylbenzene [a]		0.25 J	2.0	0.20	ug/l	SW846 8260B
Xylene (total) [a]		0.87 J	2.0	0.46	ug/l	SW846 8260B
Iron		564	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		301	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		3.6	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [b]		840	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.9	1.0		mg/l	SM5310 C-00

C46375-9 **TRIP BLANK**

No hits reported in this sample.

(a) AZ:E4
(b) AZ:D2
(c) AZ:D2,M3
(d) AZ:D2 AZ:E4
(e) AZ:D2 AZ:M2,R9
(f) AZ:D2 AZ:M2

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C46375-1	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33931.D	1	07/05/16	KZ	n/a	n/a	VV1396
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	0.82	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	2.4	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C46375-1	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	2.3	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene [b]	0.26	0.50	0.20	ug/l	J
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

ND = Not detected MDL = Method Detection Limit
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:	CEP-528A		
Lab Sample ID:	C46375-1	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:T2,T6
(b) AZ:E4

ND = Not detected MDL = Method Detection Limit
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:	CEP-528A		
Lab Sample ID:	C46375-1	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	13100	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C46375-1	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	315	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	28.5	0.50	mg/l	5	06/30/16 18:12	PH	EPA 300/SW846 9056A
Sulfate [a]	1110	50	mg/l	100	06/30/16 17:55	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C46375-2	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35697.D	1	07/05/16	MV	n/a	n/a	VU1470
Run #2 [a]	U35733.D	5	07/06/16	MV	n/a	n/a	VU1472

	Purge Volume
Run #1	10.0 ml
Run #2	10.0 ml

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [b]	7.4	20	4.0	ug/l	J
71-43-2	Benzene	2.9	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	0.85	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether [c]	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C46375-2	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	126 [d]	5.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [c]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119%	116%	80-123%
2037-26-5	Toluene-D8	103%	102%	88-112%
460-00-4	4-Bromofluorobenzene	94%	94%	79-114%

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

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C46375-2	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:D2
(b) AZ:E4
(c) AZ:T2,T6
(d) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
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:	HQUST-526A		
Lab Sample ID:	C46375-2	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1670	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C46375-2	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	414	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	1.2	0.10	mg/l	1	06/30/16 15:13	PH	EPA 300/SW846 9056A
Sulfate [a]	793	50	mg/l	100	06/30/16 18:29	PH	EPA 300/SW846 9056A
Total Organic Carbon	2.2	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2,M3

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C46375-3	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U35698.D	1	07/05/16	MV	n/a	n/a	VU1470
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C46375-3	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether [a]	0.78	1.0	0.20	ug/l	J
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	119%		80-123%
2037-26-5	Toluene-D8	102%		88-112%
460-00-4	4-Bromofluorobenzene	92%		79-114%

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

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C46375-3	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:E4
(b) AZ:T2,T6

ND = Not detected MDL = Method Detection Limit
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:	HQUST-548		
Lab Sample ID:	C46375-3	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	577	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C46375-3	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	293	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	5.5	0.10	mg/l	1	06/30/16 15:31	PH	EPA 300/SW846 9056A
Sulfate [a]	1110	50	mg/l	100	06/30/16 18:47	PH	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C46375-4	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	U35699.D	20	07/05/16	MV	n/a	n/a	VU1470
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	400	80	ug/l	
71-43-2	Benzene	ND	20	4.0	ug/l	
108-86-1	Bromobenzene	ND	20	4.0	ug/l	
74-97-5	Bromochloromethane	ND	20	4.0	ug/l	
75-27-4	Bromodichloromethane	ND	10	4.0	ug/l	
75-25-2	Bromoform	ND	10	4.4	ug/l	
104-51-8	n-Butylbenzene	161	40	4.0	ug/l	
135-98-8	sec-Butylbenzene [b]	28.9	40	4.0	ug/l	J
98-06-6	tert-Butylbenzene	ND	40	5.6	ug/l	
108-90-7	Chlorobenzene	ND	10	4.0	ug/l	
75-00-3	Chloroethane	ND	10	4.0	ug/l	
67-66-3	Chloroform	ND	10	4.0	ug/l	
95-49-8	o-Chlorotoluene	ND	40	4.0	ug/l	
106-43-4	p-Chlorotoluene	ND	40	5.2	ug/l	
75-15-0	Carbon disulfide	ND	20	4.0	ug/l	
56-23-5	Carbon tetrachloride	ND	10	4.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	4.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	10	4.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	20	4.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	40	8.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	20	4.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	4.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	10	4.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	20	4.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	40	4.4	ug/l	
594-20-7	2,2-Dichloropropane	ND	20	4.0	ug/l	
124-48-1	Dibromochloromethane	ND	10	4.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	10	4.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	14.5	10	4.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	10	4.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	10	4.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	10	4.0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	CEP-518A		
Lab Sample ID:	C46375-4	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	10	4.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	10	4.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	10	6.0	ug/l	
100-41-4	Ethylbenzene	351	20	4.0	ug/l	
591-78-6	2-Hexanone	ND	200	40	ug/l	
87-68-3	Hexachlorobutadiene	ND	40	4.0	ug/l	
98-82-8	Isopropylbenzene	65.2	20	4.0	ug/l	
99-87-6	p-Isopropyltoluene [b]	13.2	40	4.0	ug/l	J
108-10-1	4-Methyl-2-pentanone	ND	200	20	ug/l	
74-83-9	Methyl bromide	ND	40	4.0	ug/l	
74-87-3	Methyl chloride	ND	20	6.0	ug/l	
74-95-3	Methylene bromide	ND	20	4.0	ug/l	
75-09-2	Methylene chloride	ND	100	40	ug/l	
78-93-3	Methyl ethyl ketone	ND	200	40	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	20	4.0	ug/l	
91-20-3	Naphthalene	657	100	10	ug/l	
103-65-1	n-Propylbenzene	201	40	4.0	ug/l	
100-42-5	Styrene [b]	8.7	20	4.0	ug/l	J
994-05-8	Tert-Amyl Methyl Ether [c]	ND	40	8.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	6.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	4.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	4.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	4.4	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	40	4.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	40	4.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	40	4.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	1350	40	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	461	40	4.0	ug/l	
127-18-4	Tetrachloroethylene	ND	10	6.0	ug/l	
108-88-3	Toluene	ND	20	4.0	ug/l	
79-01-6	Trichloroethylene	ND	10	4.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	4.0	ug/l	
75-01-4	Vinyl chloride	16.2	10	4.0	ug/l	
1330-20-7	Xylene (total)	436	40	9.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		80-123%
2037-26-5	Toluene-D8	101%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

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

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C46375-4	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:D2
(b) AZ:E4
(c) AZ:T2,T6

ND = Not detected MDL = Method Detection Limit
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:	CEP-518A		
Lab Sample ID:	C46375-4	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	5510	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C46375-4	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	358	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	1.0	0.10	mg/l	1	06/30/16 15:48	PH	EPA 300/SW846 9056A
Sulfate [a]	1110	50	mg/l	100	06/30/16 21:05	PH	EPA 300/SW846 9056A
Total Organic Carbon [a]	12.8	5.0	mg/l	5	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C46375-5	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33945.D	1	07/06/16	KZ	n/a	n/a	VV1397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	HQUST-547		
Lab Sample ID:	C46375-5	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.9	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene [b]	0.22	0.50	0.20	ug/l	J
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		80-123%
2037-26-5	Toluene-D8	104%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

ND = Not detected MDL = Method Detection Limit
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:	HQUST-547		
Lab Sample ID:	C46375-5	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:T2,T6
(b) AZ:E4

ND = Not detected MDL = Method Detection Limit
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:	HQUST-547		
Lab Sample ID:	C46375-5	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	421	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C46375-5	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	242	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	6.1	0.10	mg/l	1	06/30/16 16:05	PH	EPA 300/SW846 9056A
Sulfate [a]	969	25	mg/l	50	06/30/16 19:21	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C46375-6	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33946.D	1	07/06/16	KZ	n/a	n/a	VV1397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C46375-6	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene [b]	0.40	0.50	0.20	ug/l	J
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-123%
2037-26-5	Toluene-D8	105%		88-112%
460-00-4	4-Bromofluorobenzene	99%		79-114%

ND = Not detected MDL = Method Detection Limit
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:	HQUST-525A		
Lab Sample ID:	C46375-6	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:T2,T6
(b) AZ:E4

ND = Not detected MDL = Method Detection Limit
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:	HQUST-525A		
Lab Sample ID:	C46375-6	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	415	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C46375-6	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	236	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	4.4	0.10	mg/l	1	06/30/16 16:23	PH	EPA 300/SW846 9056A
Sulfate [a]	846	25	mg/l	50	06/30/16 19:39	PH	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C46375-7	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	V33947.D	25	07/06/16	KZ	n/a	n/a	VV1397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	500	100	ug/l	
71-43-2	Benzene	ND	25	5.0	ug/l	
108-86-1	Bromobenzene	ND	25	5.0	ug/l	
74-97-5	Bromochloromethane	ND	25	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	13	5.0	ug/l	
75-25-2	Bromoform	ND	13	5.5	ug/l	
104-51-8	n-Butylbenzene [b]	146	50	5.0	ug/l	
135-98-8	sec-Butylbenzene [c]	25.8	50	5.0	ug/l	J
98-06-6	tert-Butylbenzene	ND	50	7.0	ug/l	
108-90-7	Chlorobenzene	ND	13	5.0	ug/l	
75-00-3	Chloroethane	ND	13	5.0	ug/l	
67-66-3	Chloroform	ND	13	5.0	ug/l	
95-49-8	o-Chlorotoluene	ND	50	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	50	6.5	ug/l	
75-15-0	Carbon disulfide	ND	25	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	13	5.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	13	5.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	13	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	25	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	10	ug/l	
106-93-4	1,2-Dibromoethane	ND	25	5.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	13	5.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	13	5.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	25	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	50	5.5	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	13	5.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	13	5.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	13	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	13	5.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	13	5.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	13	5.0	ug/l	

ND = Not detected MDL = Method Detection Limit
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:	HQUST-523A		
Lab Sample ID:	C46375-7	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	13	5.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	13	5.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	13	7.5	ug/l	
100-41-4	Ethylbenzene	67.1	25	5.0	ug/l	
591-78-6	2-Hexanone	ND	250	50	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	5.0	ug/l	
98-82-8	Isopropylbenzene [c]	20.6	25	5.0	ug/l	J
99-87-6	p-Isopropyltoluene [c]	14.3	50	5.0	ug/l	J
108-10-1	4-Methyl-2-pentanone	ND	250	25	ug/l	
74-83-9	Methyl bromide	ND	50	5.0	ug/l	
74-87-3	Methyl chloride	ND	25	7.5	ug/l	
74-95-3	Methylene bromide	ND	25	5.0	ug/l	
75-09-2	Methylene chloride	ND	130	50	ug/l	
78-93-3	Methyl ethyl ketone	ND	250	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	25	5.0	ug/l	
91-20-3	Naphthalene	344	130	13	ug/l	
103-65-1	n-Propylbenzene	70.7	50	5.0	ug/l	
100-42-5	Styrene	ND	25	5.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [d]	ND	50	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	25	7.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	13	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	13	5.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	13	5.5	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	5.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene [b]	771	50	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene [b]	267	50	5.0	ug/l	
127-18-4	Tetrachloroethylene	ND	13	7.5	ug/l	
108-88-3	Toluene [c]	9.0	25	5.0	ug/l	J
79-01-6	Trichloroethylene	ND	13	5.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	13	5.0	ug/l	
75-01-4	Vinyl chloride [c]	6.3	13	5.0	ug/l	J
1330-20-7	Xylene (total) [e]	279	50	12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-123%
2037-26-5	Toluene-D8	105%		88-112%
460-00-4	4-Bromofluorobenzene	101%		79-114%

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

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C46375-7	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:D2
(b) AZ:M2,R9
(c) AZ:E4
(d) AZ:T2,T6
(e) AZ:M2

ND = Not detected MDL = Method Detection Limit
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:	HQUST-523A		
Lab Sample ID:	C46375-7	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	1660	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C46375-7	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	309	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	2.5	0.10	mg/l	1	06/30/16 16:40	PH	EPA 300/SW846 9056A
Sulfate [a]	1030	25	mg/l	50	06/30/16 19:56	PH	EPA 300/SW846 9056A
Total Organic Carbon [a]	11.6	10	mg/l	10	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46375-8	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33948.D	1	07/06/16	KZ	n/a	n/a	VV1397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	6.1	20	4.0	ug/l	J
71-43-2	Benzene [a]	0.58	1.0	0.20	ug/l	J
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene [a]	1.1	2.0	0.20	ug/l	J
135-98-8	sec-Butylbenzene [a]	0.87	2.0	0.20	ug/l	J
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46375-8	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene [a]	0.27	1.0	0.20	ug/l	J
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	11.5	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene [a]	0.35	2.0	0.20	ug/l	J
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene [a]	0.72	2.0	0.20	ug/l	J
108-67-8	1,3,5-Trimethylbenzene [a]	0.25	2.0	0.20	ug/l	J
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total) [a]	0.87	2.0	0.46	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	104%		79-114%

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

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46375-8	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:E4
(b) AZ:T2,T6

ND = Not detected MDL = Method Detection Limit
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:	HQUST-524A		
Lab Sample ID:	C46375-8	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Iron	564	200	ug/l	1	07/01/16	07/01/16	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5983
(2) Prep QC Batch: MP11561

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C46375-8	**Date Sampled:**	06/29/16
Matrix:	AQ - Ground Water	**Date Received:**	06/30/16
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	301	5.0	mg/l	1	07/07/16 09:35	DQ	SM2320 B-97
Nitrogen, Nitrate	3.6	0.10	mg/l	1	06/30/16 17:32	PH	EPA 300/SW846 9056A
Sulfate [a]	840	50	mg/l	100	06/30/16 22:15	PH	EPA 300/SW846 9056A
Total Organic Carbon	2.9	1.0	mg/l	1	07/07/16 12:52	EB	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C46375-9	**Date Sampled:**	06/29/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V33944.D	1	07/06/16	KZ	n/a	n/a	VV1397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	0.20	ug/l	
75-25-2	Bromoform	ND	0.50	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	0.50	0.20	ug/l	
75-00-3	Chloroethane	ND	0.50	0.20	ug/l	
67-66-3	Chloroform	ND	0.50	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	0.20	ug/l	

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C46375-9	**Date Sampled:**	06/29/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	5.0	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	0.50	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	0.20	ug/l	
75-01-4	Vinyl chloride	ND	0.50	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-123%
2037-26-5	Toluene-D8	103%		88-112%
460-00-4	4-Bromofluorobenzene	98%		79-114%

ND = Not detected MDL = Method Detection Limit
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:	C46375-9	**Date Sampled:**	06/29/16
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/30/16
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	MDL	Units	Q

(a) AZ:T2,T6

ND = Not detected MDL = Method Detection Limit
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: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, 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.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable.
R7	LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.
R9	Sample RPD exceeded the laboratory acceptance limit.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 7766 4032 7535
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C C46375

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. Box 27210
City: Tucson State: AZ Zip: 85726
Project Contact: Richard Byrd
Phone #: 520 791-3175
Samplers's Name: Luis Clark

Project Information

Project Name: HGUST
Street:
City: State:
Project #: PO 1152
EMAIL:
Client Purchase Order #:

Requested Analysis

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Na2SO4	MEOH	ENCORE	Alk, NO3, SO4	Fe (total)	TOC	8260 VOC								Matrix Codes / LAB USE ONLY
1	CEP-528A	6/29/16	0750	LC	GW	7									X	X	X	X								
2	HGUST-526A	6/29/16	0810	LC	GW	7									X	X	X	X								X
3	HGUST-548	6/29/16	0830	LC	GW	7									X	X	X	X								
4	CEP-518A	6/29/16	0905	LC	GW	7									X	X	X	X								
5	HGUST-547	6/29/16	0930	LC	GW	7									X	X	X	X								X
6	HGUST-525A	6/29/16	0945	LC	GW	7									X	X	X	X								
7	HGUST-523A	6/29/16	1005	LC	GW	7									X	X	X	X								
8	HGUST-524A	6/29/16	1030	LC	GW	7									X	X	X	X								
9	TRIP BLANK	6/29/16				2												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)

- 10 Day
- X 5 Day Standard
- 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
- Commercial "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	6/29/16 0930	1	2	6/29/16	2
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3 FedEx	6/30/16 0930	3	4		4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N	On Ice Y / N	Cooler Temp.
5		5	Intact	Labels match Coc? Y / N	Separate Receiving Check List used: Y / N		2.1/4.1°C

C46375: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: C46375 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 6/30/2016 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 776640327535

Cooler Temps (Initial/Adjusted): #1: (2.1/3.1);

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. Therm ID:	IR3;		
3. Cooler media:	Ice (Bag)		
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
sample#2- recvd 1 broken vial for TOC
sample#5- 1 vial label HQUST-548 on the COC it reads HQUST-547

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: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-MB	U35686.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-MB	U35686.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	80-123%
2037-26-5	Toluene-D8	102%	88-112%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-MB	U35686.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	79-114%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-MB	V33916.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-MB	V33916.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	80-123%
2037-26-5	Toluene-D8	104%	88-112%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-MB	V33916.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	79-114%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1472-MB	U35723.D	1	07/06/16	MV	n/a	n/a	VU1472

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

C46375-2

CAS No.	Compound	Result	RL	MDL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	108%	80-123%
2037-26-5	Toluene-D8	101%	88-112%
460-00-4	4-Bromofluorobenzene	93%	79-114%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-MB	V33943.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	4.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.20	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.20	ug/l	
75-25-2	Bromoform	ND	1.0	0.22	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.20	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.20	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	1.0	0.20	ug/l	
67-66-3	Chloroform	ND	1.0	0.20	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.20	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.26	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.20	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.20	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.40	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.20	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.20	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.20	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.20	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-MB	V33943.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	10	2.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.20	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	1.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.20	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	10	2.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.22	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	0.20	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	0.20	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.20	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.20	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.20	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	80-123%
2037-26-5	Toluene-D8	105%	88-112%

Method Blank Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-MB	V33943.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	101%	79-114%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-BS	U35683.D	1	07/05/16	MV	n/a	n/a	VU1470
VU1470-BSD	U35684.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	78.4	98	75.8	95	3	55-147/17
71-43-2	Benzene	20	18.1	91	18.2	91	1	76-120/10
108-86-1	Bromobenzene	20	17.9	90	17.8	89	1	80-123/10
74-97-5	Bromochloromethane	20	19.6	98	19.3	97	2	79-124/10
75-27-4	Bromodichloromethane	20	18.2	91	18.0	90	1	75-121/10
75-25-2	Bromoform	20	15.4	77	14.8	74	4	62-127/10
104-51-8	n-Butylbenzene	20	17.7	89	17.8	89	1	74-129/10
135-98-8	sec-Butylbenzene	20	17.5	88	17.5	88	0	75-128/11
98-06-6	tert-Butylbenzene	20	17.4	87	17.4	87	0	74-127/11
108-90-7	Chlorobenzene	20	17.4	87	17.4	87	0	79-119/10
75-00-3	Chloroethane	20	21.4	107	21.6	108	1	60-115/14
67-66-3	Chloroform	20	18.0	90	18.0	90	0	75-122/10
95-49-8	o-Chlorotoluene	20	17.0	85	16.9	85	1	76-125/12
106-43-4	p-Chlorotoluene	20	17.6	88	17.5	88	1	76-126/11
75-15-0	Carbon disulfide	20	13.4	67	13.6	68	1	51-130/13
56-23-5	Carbon tetrachloride	20	18.5	93	18.5	93	0	72-128/13
75-34-3	1,1-Dichloroethane	20	18.0	90	18.1	91	1	70-121/10
75-35-4	1,1-Dichloroethylene	20	17.8	89	18.0	90	1	62-125/13
563-58-6	1,1-Dichloropropene	20	18.1	91	18.1	91	0	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	15.6	78	15.2	76	3	64-129/11
106-93-4	1,2-Dibromoethane	20	19.2	96	18.6	93	3	81-124/10
107-06-2	1,2-Dichloroethane	20	18.5	93	18.3	92	1	74-122/10
78-87-5	1,2-Dichloropropane	20	18.7	94	18.4	92	2	75-123/10
142-28-9	1,3-Dichloropropane	20	19.0	95	18.7	94	2	81-127/11
108-20-3	Di-Isopropyl ether	20	18.2	91	18.2	91	0	69-126/10
594-20-7	2,2-Dichloropropane	20	17.2	86	17.1	86	1	66-130/12
124-48-1	Dibromochloromethane	20	15.9	80	15.5	78	3	76-124/10
75-71-8	Dichlorodifluoromethane	20	19.3	97	19.1	96	1	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	19.3	97	19.4	97	1	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	20.0	100	19.8	99	1	76-131/10
541-73-1	m-Dichlorobenzene	20	17.2	86	17.1	86	1	79-121/10
95-50-1	o-Dichlorobenzene	20	17.6	88	17.4	87	1	79-120/10
106-46-7	p-Dichlorobenzene	20	17.3	87	17.1	86	1	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	17.0	85	17.4	87	2	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	15.4	77	15.3	77	1	73-125/10
100-41-4	Ethylbenzene	20	18.0	90	18.0	90	0	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-BS	U35683.D	1	07/05/16	MV	n/a	n/a	VU1470
VU1470-BSD	U35684.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	67.7	85	64.6	81	5	71-145/12
87-68-3	Hexachlorobutadiene	20	17.0	85	16.9	85	1	70-130/12
98-82-8	Isopropylbenzene	20	17.9	90	17.9	90	0	77-125/10
99-87-6	p-Isopropyltoluene	20	17.9	90	17.8	89	1	76-126/10
108-10-1	4-Methyl-2-pentanone	80	78.5	98	74.9	94	5	70-142/11
74-83-9	Methyl bromide	20	21.0	105	20.9	105	0	65-124/13
74-87-3	Methyl chloride	20	19.2	96	19.0	95	1	47-143/20
74-95-3	Methylene bromide	20	19.4	97	19.0	95	2	80-125/10
75-09-2	Methylene chloride	20	18.1	91	18.2	91	1	65-124/15
78-93-3	Methyl ethyl ketone	80	79.6	100	77.1	96	3	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	18.3	92	1	73-120/10
91-20-3	Naphthalene	20	16.0	80	16.3	82	2	66-120/12
103-65-1	n-Propylbenzene	20	17.1	86	17.0	85	1	75-125/10
100-42-5	Styrene	20	14.8	74	14.7	74	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	19.4	97	19.5	98	1	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	18.1	91	18.1	91	0	79-126/10
71-55-6	1,1,1-Trichloroethane	20	18.5	93	18.7	94	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	19.0	95	18.2	91	4	78-127/10
79-00-5	1,1,2-Trichloroethane	20	18.3	92	17.8	89	3	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	17.6	88	17.9	90	2	70-128/12
96-18-4	1,2,3-Trichloropropane	20	19.3	97	18.6	93	4	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	17.6	88	17.5	88	1	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	17.6	88	17.4	87	1	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	17.9	90	17.7	89	1	79-130/10
127-18-4	Tetrachloroethylene	20	18.8	94	19.9	100	6	72-124/13
108-88-3	Toluene	20	17.7	89	17.7	89	0	78-121/10
79-01-6	Trichloroethylene	20	18.1	91	18.2	91	1	75-119/10
75-69-4	Trichlorofluoromethane	20	21.0	105	20.8	104	1	68-130/19
75-01-4	Vinyl chloride	20	21.3	107	20.9	105	2	57-137/18
1330-20-7	Xylene (total)	60	50.3	84	50.2	84	0	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	105%	105%	80-123%
2037-26-5	Toluene-D8	100%	100%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-BS	U35683.D	1	07/05/16	MV	n/a	n/a	VU1470
VU1470-BSD	U35684.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	103%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-BS	V33913.D	1	07/05/16	KZ	n/a	n/a	VV1396
VV1396-BSD	V33914.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	75.4	94	72.2	90	4	55-147/17
71-43-2	Benzene	20	20.1	101	20.1	101	0	76-120/10
108-86-1	Bromobenzene	20	21.1	106	21.1	106	0	80-123/10
74-97-5	Bromochloromethane	20	20.2	101	19.9	100	1	79-124/10
75-27-4	Bromodichloromethane	20	20.0	100	19.8	99	1	75-121/10
75-25-2	Bromoform	20	21.2	106	20.9	105	1	62-127/10
104-51-8	n-Butylbenzene	20	21.0	105	20.7	104	1	74-129/10
135-98-8	sec-Butylbenzene	20	21.2	106	20.8	104	2	75-128/11
98-06-6	tert-Butylbenzene	20	21.0	105	20.8	104	1	74-127/11
108-90-7	Chlorobenzene	20	20.7	104	20.6	103	0	79-119/10
75-00-3	Chloroethane	20	21.5	108	21.1	106	2	60-115/14
67-66-3	Chloroform	20	19.4	97	19.1	96	2	75-122/10
95-49-8	o-Chlorotoluene	20	21.3	107	21.2	106	0	76-125/12
106-43-4	p-Chlorotoluene	20	20.9	105	20.8	104	0	76-126/11
75-15-0	Carbon disulfide	20	16.1	81	15.8	79	2	51-130/13
56-23-5	Carbon tetrachloride	20	20.5	103	20.0	100	2	72-128/13
75-34-3	1,1-Dichloroethane	20	19.7	99	19.4	97	2	70-121/10
75-35-4	1,1-Dichloroethylene	20	18.6	93	18.1	91	3	62-125/13
563-58-6	1,1-Dichloropropene	20	19.8	99	19.5	98	2	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	19.6	98	19.4	97	1	64-129/11
106-93-4	1,2-Dibromoethane	20	20.7	104	20.3	102	2	81-124/10
107-06-2	1,2-Dichloroethane	20	20.1	101	20.0	100	0	74-122/10
78-87-5	1,2-Dichloropropane	20	20.6	103	20.6	103	0	75-123/10
142-28-9	1,3-Dichloropropane	20	21.3	107	21.1	106	1	81-127/11
108-20-3	Di-Isopropyl ether	20	19.6	98	19.4	97	1	69-126/10
594-20-7	2,2-Dichloropropane	20	19.6	98	19.0	95	3	66-130/12
124-48-1	Dibromochloromethane	20	20.7	104	20.4	102	1	76-124/10
75-71-8	Dichlorodifluoromethane	20	18.7	94	17.3	87	8	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	20.7	104	20.5	103	1	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	21.1	106	20.9	105	1	76-131/10
541-73-1	m-Dichlorobenzene	20	20.9	105	21.0	105	0	79-121/10
95-50-1	o-Dichlorobenzene	20	20.9	105	21.0	105	0	79-120/10
106-46-7	p-Dichlorobenzene	20	20.9	105	20.8	104	0	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	18.0	90	18.0	90	0	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	20.4	102	20.1	101	1	73-125/10
100-41-4	Ethylbenzene	20	20.9	105	20.6	103	1	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-BS	V33913.D	1	07/05/16	KZ	n/a	n/a	VV1396
VV1396-BSD	V33914.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	84.6	106	82.3	103	3	71-145/12
87-68-3	Hexachlorobutadiene	20	20.7	104	20.1	101	3	70-130/12
98-82-8	Isopropylbenzene	20	20.9	105	20.6	103	1	77-125/10
99-87-6	p-Isopropyltoluene	20	21.4	107	21.0	105	2	76-126/10
108-10-1	4-Methyl-2-pentanone	80	81.0	101	79.4	99	2	70-142/11
74-83-9	Methyl bromide	20	20.4	102	20.3	102	0	65-124/13
74-87-3	Methyl chloride	20	17.4	87	17.3	87	1	47-143/20
74-95-3	Methylene bromide	20	20.5	103	20.4	102	0	80-125/10
75-09-2	Methylene chloride	20	17.9	90	17.8	89	1	65-124/15
78-93-3	Methyl ethyl ketone	80	76.7	96	74.6	93	3	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	18.8	94	18.5	93	2	73-120/10
91-20-3	Naphthalene	20	21.6	108	21.3	107	1	66-120/12
103-65-1	n-Propylbenzene	20	20.9	105	20.6	103	1	75-125/10
100-42-5	Styrene	20	21.5	108	21.2	106	1	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	20.0	100	19.7	99	2	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	20.8	104	20.8	104	0	79-126/10
71-55-6	1,1,1-Trichloroethane	20	19.9	100	19.7	99	1	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	21.5	108	21.1	106	2	78-127/10
79-00-5	1,1,2-Trichloroethane	20	20.6	103	20.4	102	1	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	20.1	101	20.1	101	0	70-128/12
96-18-4	1,2,3-Trichloropropane	20	21.1	106	20.8	104	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	20.5	103	20.5	103	0	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	20.9	105	20.9	105	0	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	21.3	107	21.1	106	1	79-130/10
127-18-4	Tetrachloroethylene	20	20.9	105	20.4	102	2	72-124/13
108-88-3	Toluene	20	20.7	104	20.4	102	1	78-121/10
79-01-6	Trichloroethylene	20	20.2	101	20.0	100	1	75-119/10
75-69-4	Trichlorofluoromethane	20	21.4	107	20.3	102	5	68-130/19
75-01-4	Vinyl chloride	20	20.9	105	20.4	102	2	57-137/18
1330-20-7	Xylene (total)	60	61.5	103	60.8	101	1	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	97%	80-123%
2037-26-5	Toluene-D8	103%	103%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1396-BS	V33913.D	1	07/05/16	KZ	n/a	n/a	VV1396
VV1396-BSD	V33914.D	1	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1472-BS	U35719.D	1	07/06/16	MV	n/a	n/a	VU1472
VU1472-BSD	U35721.D	1	07/06/16	MV	n/a	n/a	VU1472

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

C46375-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	20	18.4	92	20.0	100	8	73-120/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	105%	101%	80-123%
2037-26-5	Toluene-D8	100%	99%	88-112%
460-00-4	4-Bromofluorobenzene	102%	100%	79-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-BS	V33940.D	1	07/06/16	KZ	n/a	n/a	VV1397
VV1397-BSD	V33941.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	67.4	84	73.4	92	9	55-147/17
71-43-2	Benzene	20	18.0	90	20.1	101	11* [a]	76-120/10
108-86-1	Bromobenzene	20	19.3	97	21.5	108	11* [a]	80-123/10
74-97-5	Bromochloromethane	20	18.3	92	20.5	103	11* [a]	79-124/10
75-27-4	Bromodichloromethane	20	17.8	89	19.7	99	10	75-121/10
75-25-2	Bromoform	20	17.8	89	19.5	98	9	62-127/10
104-51-8	n-Butylbenzene	20	19.1	96	21.0	105	9	74-129/10
135-98-8	sec-Butylbenzene	20	19.2	96	21.3	107	10	75-128/11
98-06-6	tert-Butylbenzene	20	19.1	96	21.2	106	10	74-127/11
108-90-7	Chlorobenzene	20	18.5	93	20.7	104	11* [a]	79-119/10
75-00-3	Chloroethane	20	19.0	95	21.9	110	14	60-115/14
67-66-3	Chloroform	20	17.6	88	19.8	99	12* [a]	75-122/10
95-49-8	o-Chlorotoluene	20	19.3	97	21.5	108	11	76-125/12
106-43-4	p-Chlorotoluene	20	19.2	96	21.5	108	11	76-126/11
75-15-0	Carbon disulfide	20	14.3	72	16.2	81	12	51-130/13
56-23-5	Carbon tetrachloride	20	18.1	91	20.2	101	11	72-128/13
75-34-3	1,1-Dichloroethane	20	17.8	89	20.1	101	12* [a]	70-121/10
75-35-4	1,1-Dichloroethylene	20	16.7	84	18.7	94	11	62-125/13
563-58-6	1,1-Dichloropropene	20	17.7	89	19.7	99	11	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	20	17.1	86	19.0	95	11	64-129/11
106-93-4	1,2-Dibromoethane	20	18.6	93	20.4	102	9	81-124/10
107-06-2	1,2-Dichloroethane	20	18.0	90	19.9	100	10	74-122/10
78-87-5	1,2-Dichloropropane	20	18.6	93	20.6	103	10	75-123/10
142-28-9	1,3-Dichloropropane	20	19.4	97	21.2	106	9	81-127/11
108-20-3	Di-Isopropyl ether	20	17.8	89	20.1	101	12* [a]	69-126/10
594-20-7	2,2-Dichloropropane	20	17.6	88	19.7	99	11	66-130/12
124-48-1	Dibromochloromethane	20	18.2	91	20.0	100	9	76-124/10
75-71-8	Dichlorodifluoromethane	20	15.8	79	18.1	91	14	26-163/26
156-59-2	cis-1,2-Dichloroethylene	20	18.6	93	21.2	106	13* [a]	75-128/10
10061-01-5	cis-1,3-Dichloropropene	20	18.6	93	20.7	104	11* [a]	76-131/10
541-73-1	m-Dichlorobenzene	20	18.9	95	20.9	105	10	79-121/10
95-50-1	o-Dichlorobenzene	20	18.8	94	21.0	105	11* [a]	79-120/10
106-46-7	p-Dichlorobenzene	20	18.8	94	21.1	106	12* [a]	79-120/10
156-60-5	trans-1,2-Dichloroethylene	20	16.4	82	18.4	92	11	67-116/11
10061-02-6	trans-1,3-Dichloropropene	20	17.8	89	19.6	98	10	73-125/10
100-41-4	Ethylbenzene	20	18.7	94	20.8	104	11* [a]	78-123/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-BS	V33940.D	1	07/06/16	KZ	n/a	n/a	VV1397
VV1397-BSD	V33941.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	76.2	95	82.4	103	8	71-145/12
87-68-3	Hexachlorobutadiene	20	18.3	92	20.8	104	13* [a]	70-130/12
98-82-8	Isopropylbenzene	20	18.8	94	20.8	104	10	77-125/10
99-87-6	p-Isopropyltoluene	20	19.2	96	21.4	107	11* [a]	76-126/10
108-10-1	4-Methyl-2-pentanone	80	73.2	92	79.2	99	8	70-142/11
74-83-9	Methyl bromide	20	18.1	91	21.0	105	15* [a]	65-124/13
74-87-3	Methyl chloride	20	15.9	80	18.2	91	13	47-143/20
74-95-3	Methylene bromide	20	18.5	93	20.3	102	9	80-125/10
75-09-2	Methylene chloride	20	16.3	82	18.5	93	13	65-124/15
78-93-3	Methyl ethyl ketone	80	69.9	87	76.8	96	9	66-145/12
1634-04-4	Methyl Tert Butyl Ether	20	17.0	85	19.3	97	13* [a]	73-120/10
91-20-3	Naphthalene	20	18.8	94	21.2	106	12	66-120/12
103-65-1	n-Propylbenzene	20	19.0	95	21.1	106	10	75-125/10
100-42-5	Styrene	20	19.0	95	21.4	107	12* [a]	73-126/10
994-05-8	Tert-Amyl Methyl Ether	20	17.9	90	20.3	102	13* [a]	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	20	18.5	93	20.7	104	11* [a]	79-126/10
71-55-6	1,1,1-Trichloroethane	20	17.9	90	20.3	102	13* [a]	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	20	19.2	96	21.2	106	10	78-127/10
79-00-5	1,1,2-Trichloroethane	20	18.7	94	20.4	102	9	79-122/10
87-61-6	1,2,3-Trichlorobenzene	20	17.9	90	20.1	101	12	70-128/12
96-18-4	1,2,3-Trichloropropane	20	19.0	95	20.6	103	8	66-127/10
120-82-1	1,2,4-Trichlorobenzene	20	18.1	91	20.4	102	12* [a]	72-125/11
95-63-6	1,2,4-Trimethylbenzene	20	19.1	96	21.1	106	10	76-124/10
108-67-8	1,3,5-Trimethylbenzene	20	19.4	97	21.6	108	11* [a]	79-130/10
127-18-4	Tetrachloroethylene	20	18.4	92	20.3	102	10	72-124/13
108-88-3	Toluene	20	18.6	93	20.7	104	11* [a]	78-121/10
79-01-6	Trichloroethylene	20	18.2	91	20.3	102	11* [a]	75-119/10
75-69-4	Trichlorofluoromethane	20	18.2	91	21.7	109	18	68-130/19
75-01-4	Vinyl chloride	20	17.9	90	21.3	107	17	57-137/18
1330-20-7	Xylene (total)	60	54.9	92	61.2	102	11* [a]	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	100%	80-123%
2037-26-5	Toluene-D8	103%	102%	88-112%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VV1397-BS	V33940.D	1	07/06/16	KZ	n/a	n/a	VV1397
VV1397-BSD	V33941.D	1	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	79-114%

(a) RPD exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria. AZ:R7

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1470-LCS	U35685.D	1	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-123%
2037-26-5	Toluene-D8	102%	88-112%
460-00-4	4-Bromofluorobenzene	97%	79-114%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VU1472-LCS	U35720.D	1	07/06/16	MV	n/a	n/a	VU1472

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

C46375-2

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	80-123%
2037-26-5	Toluene-D8	104%	88-112%
460-00-4	4-Bromofluorobenzene	98%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-27MS	V33934.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27MSD	V33935.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27 [a]	V33922.D	1000	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	C46381-27 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	58800		80000	139000	100	80000	147000	110	6	55-147/17
71-43-2	Benzene	ND		20000	18900	95	20000	21000	105	11* [b]	76-120/10
108-86-1	Bromobenzene	ND		20000	20500	103	20000	22700	114	10	80-123/10
74-97-5	Bromochloromethane	ND		20000	19200	96	20000	21300	107	10	79-124/10
75-27-4	Bromodichloromethane	ND		20000	18800	94	20000	20900	105	11* [b]	75-121/10
75-25-2	Bromoform	ND		20000	18300	92	20000	20500	103	11* [b]	62-127/10
104-51-8	n-Butylbenzene	ND		20000	20100	101	20000	21900	110	9	74-129/10
135-98-8	sec-Butylbenzene	ND		20000	20500	103	20000	22300	112	8	75-128/11
98-06-6	tert-Butylbenzene	ND		20000	20400	102	20000	22300	112	9	74-127/11
108-90-7	Chlorobenzene	244	J	20000	19700	97	20000	21900	108	11* [b]	79-119/10
75-00-3	Chloroethane	ND		20000	20500	103	20000	22300	112	8	60-115/14
67-66-3	Chloroform	246	J	20000	19100	94	20000	21100	104	10	75-122/10
95-49-8	o-Chlorotoluene	ND		20000	20800	104	20000	22600	113	8	76-125/12
106-43-4	p-Chlorotoluene	ND		20000	20100	101	20000	22100	111	9	76-126/11
75-15-0	Carbon disulfide	ND		20000	15500	78	20000	16500	83	6	51-130/13
56-23-5	Carbon tetrachloride	ND		20000	19300	97	20000	20900	105	8	72-128/13
75-34-3	1,1-Dichloroethane	2520		20000	21700	96	20000	23900	107	10	70-121/10
75-35-4	1,1-Dichloroethylene	1110		20000	19000	89	20000	20600	97	8	62-125/13
563-58-6	1,1-Dichloropropene	ND		20000	18500	93	20000	20300	102	9	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		20000	18800	94	20000	19600	98	4	64-129/11
106-93-4	1,2-Dibromoethane	ND		20000	19400	97	20000	21500	108	10	81-124/10
107-06-2	1,2-Dichloroethane	13600		20000	32900	97	20000	36100	113	9	74-122/10
78-87-5	1,2-Dichloropropane	ND		20000	19500	98	20000	21700	109	11* [b]	75-123/10
142-28-9	1,3-Dichloropropane	ND		20000	20200	101	20000	22300	112	10	81-127/11
108-20-3	Di-Isopropyl ether	ND		20000	19100	96	20000	21000	105	9	69-126/10
594-20-7	2,2-Dichloropropane	ND		20000	16800	84	20000	17800	89	6	66-130/12
124-48-1	Dibromochloromethane	ND		20000	19200	96	20000	21200	106	10	76-124/10
75-71-8	Dichlorodifluoromethane	ND		20000	18000	90	20000	18400	92	2	26-163/26
156-59-2	cis-1,2-Dichloroethylene	54900		20000	77200	112	20000	86000	156* [c]	11* [b]	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		20000	18800	94	20000	21200	106	12* [b]	76-131/10
541-73-1	m-Dichlorobenzene	ND		20000	20100	101	20000	22000	110	9	79-121/10
95-50-1	o-Dichlorobenzene	ND		20000	20100	101	20000	21900	110	9	79-120/10
106-46-7	p-Dichlorobenzene	ND		20000	20100	101	20000	22200	111	10	79-120/10
156-60-5	trans-1,2-Dichloroethylene	283	J	20000	17500	86	20000	19400	96	10	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		20000	18200	91	20000	20200	101	10	73-125/10
100-41-4	Ethylbenzene	1700		20000	21400	99	20000	23600	110	10	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-27MS	V33934.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27MSD	V33935.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27 [a]	V33922.D	1000	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Compound	C46381-27 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		80000	80200	100	80000	88400	111	10	71-145/12
87-68-3	Hexachlorobutadiene	ND		20000	19400	97	20000	20900	105	7	70-130/12
98-82-8	Isopropylbenzene	ND		20000	19800	99	20000	21800	109	10	77-125/10
99-87-6	p-Isopropyltoluene	ND		20000	20500	103	20000	22400	112	9	76-126/10
108-10-1	4-Methyl-2-pentanone	28200		80000	104000	95	80000	115000	109	10	70-142/11
74-83-9	Methyl bromide	ND		20000	19300	97	20000	20800	104	7	65-124/13
74-87-3	Methyl chloride	ND		20000	17600	88	20000	18600	93	6	47-143/20
74-95-3	Methylene bromide	ND		20000	19400	97	20000	21400	107	10	80-125/10
75-09-2	Methylene chloride	5970	J	20000	23500	88	20000	25700	99	9	65-124/15
78-93-3	Methyl ethyl ketone	88900		80000	167000	98	80000	186000	121	11	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		20000	18300	92	20000	20000	100	9	73-120/10
91-20-3	Naphthalene	ND		20000	20800	104	20000	22300	112	7	66-120/12
103-65-1	n-Propylbenzene	ND		20000	20200	101	20000	22100	111	9	75-125/10
100-42-5	Styrene	ND		20000	20000	100	20000	22300	112	11* [b]	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		20000	19100	96	20000	21100	106	10	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		20000	19600	98	20000	21500	108	9	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		20000	19600	98	20000	21400	107	9	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		20000	20800	104	20000	22300	112	7	78-127/10
79-00-5	1,1,2-Trichloroethane	1810		20000	21400	98	20000	23600	109	10	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		20000	19300	97	20000	21100	106	9	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		20000	19900	100	20000	21700	109	9	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		20000	19700	99	20000	21100	106	7	72-125/11
95-63-6	1,2,4-Trimethylbenzene	458	J	20000	20900	102	20000	22700	111	8	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		20000	20800	104	20000	22700	114	9	79-130/10
127-18-4	Tetrachloroethylene	4090		20000	23200	96	20000	25500	107	9	72-124/13
108-88-3	Toluene	13900		20000	33400	98	20000	37100	116	10	78-121/10
79-01-6	Trichloroethylene	12900		20000	32100	96	20000	35900	115	11* [b]	75-119/10
75-69-4	Trichlorofluoromethane	ND		20000	20900	105	20000	22300	112	6	68-130/19
75-01-4	Vinyl chloride	25500		20000	44200	94	20000	47800	112	8	57-137/18
1330-20-7	Xylene (total)	6050		60000	63700	96	60000	70400	107	10	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C46381-27	Limits
1868-53-7	Dibromofluoromethane	101%	101%	101%	80-123%
2037-26-5	Toluene-D8	103%	103%	105%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-27MS	V33934.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27MSD	V33935.D	1000	07/05/16	KZ	n/a	n/a	VV1396
C46381-27 [a]	V33922.D	1000	07/05/16	KZ	n/a	n/a	VV1396

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

C46375-1

CAS No.	Surrogate Recoveries	MS	MSD	C46381-27	Limits
460-00-4	4-Bromofluorobenzene	99%	98%	98%	79-114%

(a) Dilution required due to nature of sample matrix.
(b) Outside laboratory control limits. AZ:R9
(c) Outside control limits due to high level in sample relative to spike amount. AZ:M3

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-18MS	U35706.D	10	07/05/16	MV	n/a	n/a	VU1470
C46381-18MSD	U35740.D	10	07/06/16	MV	n/a	n/a	VU1470
C46381-18 [a]	U35691.D	10	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	C46381-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		800	784	98	800	806	101	0	55-147/17
71-43-2	Benzene	3.2	J	200	186	91	200	173	85	1	76-120/10
108-86-1	Bromobenzene	ND		200	180	90	200	170	85	1	80-123/10
74-97-5	Bromochloromethane	ND		200	193	97	200	190	95	4	79-124/10
75-27-4	Bromodichloromethane	ND		200	165	83	200	162	81	1	75-121/10
75-25-2	Bromoform	ND		200	95.0	48* [b]	200	96.9	48* [b]	6	62-127/10
104-51-8	n-Butylbenzene	ND		200	180	90	200	154	77	2	74-129/10
135-98-8	sec-Butylbenzene	ND		200	180	90	200	153	77	3	75-128/11
98-06-6	tert-Butylbenzene	ND		200	179	90	200	158	79	3	74-127/11
108-90-7	Chlorobenzene	ND		200	178	89	200	164	82	0	79-119/10
75-00-3	Chloroethane	ND		200	207	104	200	198	99	4	60-115/14
67-66-3	Chloroform	3.0	J	200	183	90	200	176	87	6	75-122/10
95-49-8	o-Chlorotoluene	ND		200	173	87	200	161	81	1	76-125/12
106-43-4	p-Chlorotoluene	ND		200	178	89	200	165	83	1	76-126/11
75-15-0	Carbon disulfide	ND		200	111	56	200	105	53	6	51-130/13
56-23-5	Carbon tetrachloride	ND		200	182	91	200	156	78	1	72-128/13
75-34-3	1,1-Dichloroethane	6.4	J	200	188	91	200	179	86	5	70-121/10
75-35-4	1,1-Dichloroethylene	12.3		200	194	91	200	167	77	3	62-125/13
563-58-6	1,1-Dichloropropene	ND		200	182	91	200	156	78	1	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		200	154	77	200	152	76	6	64-129/11
106-93-4	1,2-Dibromoethane	ND		200	189	95	200	178	89	0	81-124/10
107-06-2	1,2-Dichloroethane	49.8		200	234	92	200	222	86	1	74-122/10
78-87-5	1,2-Dichloropropane	ND		200	185	93	200	176	88	1	75-123/10
142-28-9	1,3-Dichloropropane	ND		200	188	94	200	178	89	1	81-127/11
108-20-3	Di-Isopropyl ether	ND		200	183	92	200	181	91	5	69-126/10
594-20-7	2,2-Dichloropropane	ND		200	154	77	200	159	80	6	66-130/12
124-48-1	Dibromochloromethane	ND		200	122	61* [b]	200	122	61* [b]	3	76-124/10
75-71-8	Dichlorodifluoromethane	ND		200	178	89	200	156	78	1	26-163/26
156-59-2	cis-1,2-Dichloroethylene	152		200	350	99	200	329	89	3	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		200	176	88	200	175	88	2	76-131/10
541-73-1	m-Dichlorobenzene	ND		200	173	87	200	162	81	1	79-121/10
95-50-1	o-Dichlorobenzene	ND		200	175	88	200	167	84	2	79-120/10
106-46-7	p-Dichlorobenzene	ND		200	174	87	200	165	83	2	79-120/10
156-60-5	trans-1,2-Dichloroethylene	2.0	J	200	173	86	200	160	79	5	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		200	137	69* [b]	200	134	67* [b]	2	73-125/10
100-41-4	Ethylbenzene	6.5	J	200	190	92	200	168	81	1	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-18MS	U35706.D	10	07/05/16	MV	n/a	n/a	VU1470
C46381-18MSD	U35740.D	10	07/06/16	MV	n/a	n/a	VU1470
C46381-18 [a]	U35691.D	10	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Compound	C46381-18 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		800	673	84	800	652	82	2	71-145/12
87-68-3	Hexachlorobutadiene	ND		200	168	84	200	142	71	6	70-130/12
98-82-8	Isopropylbenzene	ND		200	179	90	200	157	79	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		200	181	91	200	157	79	2	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		800	766	96	800	760	95	2	70-142/11
74-83-9	Methyl bromide	ND		200	196	98	200	190	95	4	65-124/13
74-87-3	Methyl chloride	ND		200	183	92	200	173	87	1	47-143/20
74-95-3	Methylene bromide	ND		200	190	95	200	184	92	1	80-125/10
75-09-2	Methylene chloride	ND		200	180	90	200	178	89	3	65-124/15
78-93-3	Methyl ethyl ketone	ND		800	783	98	800	797	100	0	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		200	183	92	200	184	92	5	73-120/10
91-20-3	Naphthalene	ND		200	165	83	200	161	81	8	66-120/12
103-65-1	n-Propylbenzene	ND		200	175	88	200	154	77	1	75-125/10
100-42-5	Styrene	ND		200	123	62* [b]	200	124	62* [b]	2	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		200	193	97	200	193	97	4	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		200	181	91	200	170	85	1	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		200	187	94	200	168	84	3	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		200	190	95	200	183	92	3	78-127/10
79-00-5	1,1,2-Trichloroethane	3.3	J	200	184	90	200	173	85	0	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		200	178	89	200	168	84	7	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		200	186	93	200	180	90	1	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		200	174	87	200	164	82	4	72-125/11
95-63-6	1,2,4-Trimethylbenzene	ND		200	178	89	200	164	82	0	76-124/10
108-67-8	1,3,5-Trimethylbenzene	ND		200	181	91	200	163	82	1	79-130/10
127-18-4	Tetrachloroethylene	4.1	J	200	180	88	200	154	75	0	72-124/13
108-88-3	Toluene	19.9		200	198	89	200	178	79	0	78-121/10
79-01-6	Trichloroethylene	26.9		200	212	93	200	191	82	1	75-119/10
75-69-4	Trichlorofluoromethane	ND		200	200	100	200	192	96	3	68-130/19
75-01-4	Vinyl chloride	67.9		200	270	101	200	257	95	2	57-137/18
1330-20-7	Xylene (total)	14.4	J	600	522	85	600	468	76* [b]	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C46381-18	Limits
1868-53-7	Dibromofluoromethane	104%	109%	106%	80-123%
2037-26-5	Toluene-D8	101%	99%	102%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46381-18MS	U35706.D	10	07/05/16	MV	n/a	n/a	VU1470
C46381-18MSD	U35740.D	10	07/06/16	MV	n/a	n/a	VU1470
C46381-18 [a]	U35691.D	10	07/05/16	MV	n/a	n/a	VU1470

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

C46375-2, C46375-3, C46375-4

CAS No.	Surrogate Recoveries	MS	MSD	C46381-18	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	95%	79-114%

(a) Sample vial contained floating product. Results may not be reproducible.
(b) Outside laboratory control limits. AZ:M2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46393-1MS	U35741.D	100	07/06/16	MV	n/a	n/a	VU1472
C46393-1MSD	U35742.D	100	07/06/16	MV	n/a	n/a	VU1472
C46393-1	U35736.D	100	07/06/16	MV	n/a	n/a	VU1472

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

C46375-2

CAS No.	Compound	C46393-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	ND		2000	1700	85	2000	1800	90	6	73-120/10

CAS No.	Surrogate Recoveries	MS	MSD	C46393-1	Limits
1868-53-7	Dibromofluoromethane	103%	105%	120%	80-123%
2037-26-5	Toluene-D8	101%	101%	99%	88-112%
460-00-4	4-Bromofluorobenzene	102%	102%	92%	79-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46375-7MS [a]	V33961.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7MSD [a]	V33962.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7 [a]	V33947.D	25	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	C46375-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		2000	1690	85	2000	1520	76	11	55-147/17
71-43-2	Benzene	ND		500	426	85	500	409	82	4	76-120/10
108-86-1	Bromobenzene	ND		500	446	89	500	440	88	1	80-123/10
74-97-5	Bromochloromethane	ND		500	423	85	500	402	80	5	79-124/10
75-27-4	Bromodichloromethane	ND		500	417	83	500	396	79	5	75-121/10
75-25-2	Bromoform	ND		500	399	80	500	380	76	5	62-127/10
104-51-8	n-Butylbenzene	146		500	586	88	500	500	71* [b]	16* [c]	74-129/10
135-98-8	sec-Butylbenzene	25.8	J	500	464	88	500	432	81	7	75-128/11
98-06-6	tert-Butylbenzene	ND		500	549	110	500	513	103	7	74-127/11
108-90-7	Chlorobenzene	ND		500	431	86	500	413	83	4	79-119/10
75-00-3	Chloroethane	ND		500	460	92	500	416	83	10	60-115/14
67-66-3	Chloroform	ND		500	418	84	500	391	78	7	75-122/10
95-49-8	o-Chlorotoluene	ND		500	441	88	500	396	79	11	76-125/12
106-43-4	p-Chlorotoluene	ND		500	435	87	500	423	85	3	76-126/11
75-15-0	Carbon disulfide	ND		500	339	68	500	307	61	10	51-130/13
56-23-5	Carbon tetrachloride	ND		500	428	86	500	396	79	8	72-128/13
75-34-3	1,1-Dichloroethane	ND		500	421	84	500	395	79	6	70-121/10
75-35-4	1,1-Dichloroethylene	ND		500	390	78	500	355	71	9	62-125/13
563-58-6	1,1-Dichloropropene	ND		500	417	83	500	390	78	7	68-116/11
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	405	81	500	373	75	8	64-129/11
106-93-4	1,2-Dibromoethane	ND		500	431	86	500	406	81	6	81-124/10
107-06-2	1,2-Dichloroethane	ND		500	430	86	500	405	81	6	74-122/10
78-87-5	1,2-Dichloropropane	ND		500	435	87	500	414	83	5	75-123/10
142-28-9	1,3-Dichloropropane	ND		500	451	90	500	423	85	6	81-127/11
108-20-3	Di-Isopropyl ether	ND		500	424	85	500	392	78	8	69-126/10
594-20-7	2,2-Dichloropropane	ND		500	375	75	500	342	68	9	66-130/12
124-48-1	Dibromochloromethane	ND		500	422	84	500	405	81	4	76-124/10
75-71-8	Dichlorodifluoromethane	ND		500	386	77	500	331	66	15	26-163/26
156-59-2	cis-1,2-Dichloroethylene	ND		500	436	87	500	414	83	5	75-128/10
10061-01-5	cis-1,3-Dichloropropene	ND		500	420	84	500	406	81	3	76-131/10
541-73-1	m-Dichlorobenzene	ND		500	433	87	500	421	84	3	79-121/10
95-50-1	o-Dichlorobenzene	ND		500	432	86	500	419	84	3	79-120/10
106-46-7	p-Dichlorobenzene	ND		500	434	87	500	420	84	3	79-120/10
156-60-5	trans-1,2-Dichloroethylene	ND		500	382	76	500	358	72	6	67-116/11
10061-02-6	trans-1,3-Dichloropropene	ND		500	401	80	500	379	76	6	73-125/10
100-41-4	Ethylbenzene	67.1		500	497	86	500	464	79	7	78-123/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46375-7MS [a]	V33961.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7MSD [a]	V33962.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7 [a]	V33947.D	25	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Compound	C46375-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		2000	1850	93	2000	1670	84	10	71-145/12
87-68-3	Hexachlorobutadiene	ND		500	403	81	500	367	73	9	70-130/12
98-82-8	Isopropylbenzene	20.6	J	500	452	86	500	423	80	7	77-125/10
99-87-6	p-Isopropyltoluene	14.3	J	500	450	87	500	424	82	6	76-126/10
108-10-1	4-Methyl-2-pentanone	ND		2000	1870	94	2000	1670	84	11	70-142/11
74-83-9	Methyl bromide	ND		500	424	85	500	392	78	8	65-124/13
74-87-3	Methyl chloride	ND		500	391	78	500	345	69	13	47-143/20
74-95-3	Methylene bromide	ND		500	436	87	500	412	82	6	80-125/10
75-09-2	Methylene chloride	ND		500	387	77	500	358	72	8	65-124/15
78-93-3	Methyl ethyl ketone	ND		2000	1660	83	2000	1560	78	6	66-145/12
1634-04-4	Methyl Tert Butyl Ether	ND		500	403	81	500	372	74	8	73-120/10
91-20-3	Naphthalene	344		500	790	89	500	723	76	9	66-120/12
103-65-1	n-Propylbenzene	70.7		500	500	86	500	468	79	7	75-125/10
100-42-5	Styrene	ND		500	448	90	500	426	85	5	73-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		500	422	84	500	394	79	7	77-126/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		500	432	86	500	409	82	5	79-126/10
71-55-6	1,1,1-Trichloroethane	ND		500	425	85	500	396	79	7	73-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	443	89	500	428	86	3	78-127/10
79-00-5	1,1,2-Trichloroethane	ND		500	443	89	500	411	82	7	79-122/10
87-61-6	1,2,3-Trichlorobenzene	ND		500	421	84	500	393	79	7	70-128/12
96-18-4	1,2,3-Trichloropropane	ND		500	448	90	500	409	82	9	66-127/10
120-82-1	1,2,4-Trichlorobenzene	ND		500	420	84	500	395	79	6	72-125/11
95-63-6	1,2,4-Trimethylbenzene	771		500	1190	84	500	1020	50* [b]	15* [c]	76-124/10
108-67-8	1,3,5-Trimethylbenzene	267		500	733	93	500	646	76* [b]	13* [c]	79-130/10
127-18-4	Tetrachloroethylene	ND		500	421	84	500	401	80	5	72-124/13
108-88-3	Toluene	9.0	J	500	435	85	500	414	81	5	78-121/10
79-01-6	Trichloroethylene	ND		500	427	85	500	412	82	4	75-119/10
75-69-4	Trichlorofluoromethane	ND		500	449	90	500	417	83	7	68-130/19
75-01-4	Vinyl chloride	6.3	J	500	437	86	500	393	77	11	57-137/18
1330-20-7	Xylene (total)	279		1500	1540	84	1500	1420	76* [b]	8	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C46375-7	Limits
1868-53-7	Dibromofluoromethane	102%	99%	101%	80-123%
2037-26-5	Toluene-D8	104%	102%	105%	88-112%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C46375
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C46375-7MS [a]	V33961.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7MSD [a]	V33962.D	25	07/06/16	KZ	n/a	n/a	VV1397
C46375-7 [a]	V33947.D	25	07/06/16	KZ	n/a	n/a	VV1397

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

C46375-5, C46375-6, C46375-7, C46375-8, C46375-9

CAS No.	Surrogate Recoveries	MS	MSD	C46375-7	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	101%	79-114%

(a) AZ:D2
(b) Outside laboratory control limits. AZ:M2
(c) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

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: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/01/16

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	27		
Antimony	6.0	1.2	1.2		
Arsenic	10	1.6	2.5		
Barium	200	.2	.5		
Beryllium	5.0	.2	.6		
Boron	100	1.8	3.2		
Cadmium	2.0	.2	.3		
Calcium	5000	28	69		
Chromium	10	.4	.6		
Cobalt	5.0	.3	.4		
Copper	10	1.2	1.8		
Iron	200	5.3	11	-2.9	<200
Lead	10	1	1.7		
Magnesium	5000	16	23		
Manganese	15	.2	.2		
Molybdenum	20	.5	.6		
Nickel	5.0	.4	.6		
Potassium	10000	35	35		
Selenium	10	1.7	3.3		
Silicon	100	2.4	2.4		
Silver	5.0	.5	1.5		
Sodium	10000	11	25		
Strontium	10	.1	.2		
Thallium	10	1.7	4.8		
Tin	50	.8	1.3		
Titanium	10	.8	.8		
Vanadium	10	.6	.6		
Zinc	20	.5	3.1		

Associated samples MP11561: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8

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: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 07/01/16

Metal	C46360-1 Original	DUP	RPD	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	66.0	66.9	1.4	0-20
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8

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: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/01/16

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	12200	12500	97.6	80-120
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP11561 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 07/01/16

Metal	C46360-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	66.0	79.1	19.8 (a)	0-10
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11561: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN19268	5.0	0.0	mg/l	250	242	97.0	75-125%
Nitrogen, Nitrate	GP9557/GN19285	0.10	0.0	mg/l	5	4.97	99.4	90-110%
Sulfate	GP9557/GN19285	0.50	0.13	mg/l	5	5.04	100.8	90-110%
Total Organic Carbon	GP9552/GN19279	1.0	0.0	mg/l	5	4.9	98.5	75-125%

Associated Samples:
Batch GP9552: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
Batch GP9557: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
Batch GN19268: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN19268	mg/l	250	248	2.5	
Nitrogen, Nitrate	GP9557/GN19285	mg/l	5	4.96	0.2	25%
Sulfate	GP9557/GN19285	mg/l	5	5.00	0.8	25%
Total Organic Carbon	GP9552/GN19279	mg/l	5	5.0	1.7	

Associated Samples:
Batch GP9552: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
Batch GP9557: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
Batch GN19268: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN19268	C46360-1	mg/l	200	202	1.0	0-25%

Associated Samples:
Batch GN19268: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
(*) Outside of QC limits

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate	GP9557/GN19285	C46375-2	mg/l	1.2	5	6.2	100.0	80-120%
Sulfate	GP9557/GN19285	C46375-2	mg/l	793	5	1200	7340.0(a)	80-120%
Total Organic Carbon	GP9552/GN19279	C46375-1	mg/l	1.6	5	6.4	95.6	75-125%

Associated Samples:
Batch GP9552: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
Batch GP9557: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information. AZ:M3

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C46375
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Nitrogen, Nitrate	GP9557/GN19285	C46375-2	mg/l	1.2	5	6.2	0.0	
Sulfate	GP9557/GN19285	C46375-2	mg/l	793	5	1160	0.0	

Associated Samples:
Batch GP9557: C46375-1, C46375-2, C46375-3, C46375-4, C46375-5, C46375-6, C46375-7, C46375-8
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APPENDIX D

VAPOR SAMPLE LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: December 28, 2015

Client:	Richard Byrd	Work Order #:	15L024
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	12/22/2015

Dear Client:

Airtech Environmental Laboratories received two (2) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: December 28, 2015

Client:	Richard Byrd	Work Order #:	15L024
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	12/22/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15L024-01	HQUST-AIR-EFF	8260B AZ Vapor	12/21/2015	14:15
		8015 GRO		
15L024-02	HQUST-AIR-INF	8260B AZ Vapor	12/21/2015	14:00
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: December 28, 2015

Client:	Richard Byrd	Work Order #:	15L024
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	12/22/2015

Case Narrative

All samples and QC associated with your samples met the quality control objectives. Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. The analyte was not detected in the sample.

L2: The associated blank spike recovery was below the laboratory acceptance limits. The analyte was not detected in the sample.

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	01	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	12/23/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	L5
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	12/23/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	12/23/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	12/23/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	12/23/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	12/23/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	12/23/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	12/23/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	12/23/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	12/23/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	12/23/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	12/23/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	12/23/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	12/23/2015	8260B AZ Vapor	L2
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	12/23/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	12/23/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	12/23/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	12/23/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.6	%REC, 70-130%
Surr: Toluene-d8	23.2	92.8	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.1	96.6	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	01	Matrix:	Air in bag

Analyses	Result (ug/l)	Limit (ug/l)	Result (ppmv)	Limit (ppmv)	Qual	DF	Date Analyzed
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	12/23/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.2	109	%REC, 70-130%
Surr: Toluene-d8	25.9	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.4	97.6	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	02	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	12/23/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	L5
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**2.0**	**1.0**	**0.41**	**0.20**	1	12/23/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**1.8**	**1.0**	**0.37**	**0.20**	1	12/23/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	12/23/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	12/23/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	12/23/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	12/23/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	12/23/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	12/23/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	12/23/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	12/23/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	12/23/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	12/23/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	12/23/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	12/23/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	12/23/2015	8260B AZ Vapor	L2
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	12/23/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	12/23/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	12/23/2015	8260B AZ Vapor	
Xylenes, Total	**3.2**	**3.0**	**0.74**	**0.69**	1	12/23/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	23.9	95.5	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.8	99.2	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	02	Matrix:	Air in bag

	ug/l		ppmv				
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Date Analyzed**
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	943	100	219	23.3	T3	1	12/23/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	%REC, 70-130%
Surr: Toluene-d8	26.7	107	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.1	100	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021223

Analyses	ug/l Result	ug/l Limit	ppmv Result	ppmv Limit	DF	Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**8260B AZ**					Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	12/23/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	12/23/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	12/23/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	12/23/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	12/23/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	12/23/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	12/23/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	12/23/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	12/23/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	12/23/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	12/23/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	12/23/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	12/23/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	12/23/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	12/23/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	12/23/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	12/23/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	12/23/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	12/23/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	12/23/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	12/23/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	12/23/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	12/23/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	12/23/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	23.8	95.3	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.4	102	%REC, 70-130%

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 12/23/2015 Batch: MS021223 Analyst: PS

Method: 8260B AZ Vapor Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD	Qualifier LCS	Qualifier LCSD	RPD	LCS/LCSD LIMIT
VOLATILE ORGANICS IN WATER	ug/l	%	ug/l	%	ug/l	%			<30%	%
Dichlorodifluoromethane(F-12)	20.0	79.8	19.9	79.8	25.0	0.1				31.5-131.4
Chloromethane	20.1	80.4	20.4	81.6	25.0	1.4				62.1-130
Vinyl Chloride	24.9	99.7	26.0	104	25.0	4.0				70-130
Bromomethane	47.4	190	48.5	194	25.0	2.4				38.1-204.3
Chloroethane	26.2	105	27.8	111	25.0	6.0				64.4-130.9
Trichlorofluoromethane (F-11)	34.7	139	33.1	132	25.0	4.9				70-130
1,1-Dichloroethene	28.3	113	29.2	117	25.0	2.9				70-130
Methylene Chloride	23.4	93.6	23.6	94.6	25.0	1.0				70-130
trans-1,2-Dichloroethene	28.1	112	28.8	115	25.0	2.5				70-130
Methyl tert-butyl ether (MTBE)	25.6	102	26.3	105	25.0	3.0				67.3-130
1,1-Dichloroethane	27.1	109	27.6	110	25.0	1.7				70-130
cis-1,2-Dichloroethene	29.4	118	30.0	120	25.0	2.0				70-130
Chloroform	27.3	109	27.8	111	25.0	1.8				70-130
1,1,1-Trichloroethane	29.6	118	30.1	120	25.0	1.7				70-130
Carbon tetrachloride	31.5	126	31.8	127	25.0	1.0				70-130
Benzene	24.7	99.0	25.4	102	25.0	2.7				70-130
1,2-Dichloroethane	33.1	132	33.9	135	25.0	2.4	L5	L5		70-130
Trichloroethene	25.8	103	26.3	105	25.0	1.9				70-130
1,2-Dichloropropane	26.4	106	26.8	107	25.0	1.4				70-130
Bromodichloromethane	28.3	113	28.8	115	25.0	1.9				70-130
cis-1,3-Dichloropropene	26.0	104	26.5	106	25.0	1.9				70-130
Toluene	25.8	103	26.3	105	25.0	2.2				70-130
trans-1,3-Dichloropropene	28.1	113	28.5	114	25.0	1.2				70-130
1,1,2-Trichloroethane	23.7	94.9	24.6	98.6	25.0	3.8				70-130
Tetrachloroethene	22.9	91.6	23.3	93.2	25.0	1.7				70-130
Dibromochloromethane	25.9	104	26.4	106	25.0	1.8				70-130
1,2-Dibromoethane	24.4	97.5	24.6	98.3	25.0	0.8				70-130
Chlorobenzene	24.6	98.4	25.1	100	25.0	1.9				70-130
Ethylbenzene	26.1	104	26.8	107	25.0	2.7				70-130
Xylene, total	77.2	103	77.9	104	75.0	0.8				70-130
Bromoform	26.7	107	26.4	106	25.0	0.9				70-130
1,1,2,2-Tetrachloroethane	23.2	92.8	23.1	92.4	25.0	0.4				70-130
1,3,5-Trimethylbenzene	25.6	103	25.7	103	25.0	0.4				70-130
1,2,4-Trimethylbenzene	24.2	96.9	24.4	97.4	25.0	0.6				70-130
1,3-Dichlorobenzene	23.7	94.8	23.5	93.9	25.0	0.9				70-130
1,4-Dichlorobenzene	24.3	97.4	24.3	97.0	25.0	0.4				70-130
1,2-Dichlorobenzene	23.9	95.4	23.5	93.9	25.0	1.6				70-130
Naphthalene	16.7	66.9	17.8	71.3	25.0	6.4	L2			70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.1	101	25.6	102	70 -130 %
Surr: Toluene-d8	24.3	97.0	24.4	97.5	70 -130 %
Surr: 4-Bromofluorobenzene	26.6	107	26.1	104	70 -130 %

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021223

Source Sample: 15L024-02 Analyst: PS

Analyses 8260B AZ	Sample	Dup	DF	RPD,<30%	Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**ug/l**	**ug/l**	**DF**				
1,1,1-Trichloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	2.0	2.3	1	13.4	12/23/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	1.8	2.1	1	16.2	12/23/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	12/23/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	12/23/2015	8260B AZ Vapor	
Toluene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	12/23/2015	8260B AZ Vapor	
Xylenes, Total	3.2	3.5	1	7.5	12/23/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	25.0	99.9	70-130%
Surr: Toluene-d8	23.9	95.5	24.3	97.2	70-130%
Surr: 4-Bromofluorobenzene	24.8	99.2	25.5	102	70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021223

Analyses	Result	ug/l Limit	Result	ppmv Limit	DF	Date Analyzed	Method	Qual
Gasoline Range Organics		**8015 by GC/MS**					Analyst:	PS
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	1	12/23/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	%REC, 70-130%
Surr: Toluene-d8	26.6	106	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.3	105	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 12/23/2015 Batch: MS021223 PS

Method: 8015 by GC/MS Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD %	Qualifier LCS	Qualifier LCSD	Qualifier RPD	Date Analyzed	LCS/LCSD LIMIT
Gasoline Range Organics	**ug/l**	**%**	**ug/l**	**%**	**ug/l**				<30%		%
GRO, C^6 - C^{10}	521	104	566	113	500	8.3				12/23/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	25.2	101	27.6	110	25.0	70 -130 %					
Surr: Toluene-d8	27.6	110	27.5	110	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	26.1	104	25.9	103	25.0	70 -130 %					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	15L024	Collection:	12/21/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021223

Method: 8015 by GC/MS **Source Sample: 15L024-02**

Analyses	Sample	Dup	DF	RPD,<30%	Data Analyzed	Qual
VOLATILE ORGANICS IN AIR	**ug/l**	**ug/l**	**DF**	**RPD,<30%**	Analyst: PS	
GRO, C^6 - C^{10}	943	1,119	1	17.1	12/23/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	27.8	111	70-130%
Surr: Toluene-d8	26.7	107	27.2	109	70-130%
Surr: 4-Bromofluorobenzene	25.1	100	25.8	103	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL)

Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer: City of Tucson Env. Services	Page 1 of 1	AEL Lab #
Address: 4004 S Park AVE	Sampler: J. Morley Phone:	15L024
	Project Name: Houst Project Number: P01152	
City, State, Zip: Tucson, AZ 85714	Project location:	
Contact: Richard Byld	P.O. Number:	
Phone: 520-837-3710 Fax:	Fax Results: Y N	
E-Mail Address: Richard.Byld@tucsonaz.gov	E-Mail Results: (Y) N	

Sample Receipt	Turn Around Request	Sample Type
Temperature_____ °C	_____ 24 Hours _____ 48 Hours	SVE: soil vapor extraction GW: ground water
Custody Seals: Yes_____ No_____	_____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	_____ 5 working Day	I: indoor air
Total # of Containers:_____	_____ Standard 10 Working Days	S: soil vapor
		W: water

Sample Information

AEL Lab #	Serial # Canister	Serial # Grab	Canister (L) or bag	Grab (Min)	Client's Sample Identification	Sampled Date	Sampled Time	Sample Type	Number of Containers	TO-15 full list	TO-15 TPH(GRO)	TO-15 Selet List	8260B AZ Vapor full list	8260B Vapor select list	8015 GRO	8260B Water			DFA tracer cmpd. as TIC
01			6 1 bag	1 2 5	Houst Air-Eff	12-21-15	14:15	S	1				X		X				
02			6 1 bag	1 2 5	Houst-Air-Inf	12-21-15	14:00	S	1				X		X				
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															
			6 1 bag	1 2 5															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12-22-15	10:00	John Morley	James Jane-Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: January 11, 2016

Client:	Richard Byrd	Work Order #:	16A002
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	1/5/2016

Dear Client:

Airtech Environmental Laboratories received two (2) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: January 11, 2016

Client:	Richard Byrd	Work Order #:	16A002
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	1/5/2016

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
16A002-01	HQUST-AIR-EFF	8260B AZ Vapor	1/5/2016	11:15
		8015 GRO		
16A002-02	HQUST-AIR-INF	8260B AZ Vapor	1/5/2016	11:00
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: January 11, 2016

Client:	Richard Byrd	Work Order #:	16A002
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	1/5/2016

Case Narrative

All samples and QC associated with your samples met the quality control objectives.
Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	01	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	1/6/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	1/6/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	1/6/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	1/6/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	1/6/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	1/6/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	1/6/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	1/6/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	1/6/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	1/6/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	1/6/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	1/6/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	1/6/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	1/6/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	1/6/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	1/6/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	1/6/2016	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	1/6/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.5	%REC, 70-130%
Surr: Toluene-d8	24.2	96.8	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.4	97.5	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

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Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	01	Matrix:	Air in bag

Analyses	Result (ug/l)	Limit (ug/l)	Result (ppmv)	Limit (ppmv)	Qual	DF	Date Analyzed
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	1/6/2016

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.6	115	%REC, 70-130%
Surr: Toluene-d8	26.7	107	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.8	107	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	02	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	1/6/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**1.6**	**1.0**	**0.32**	**0.20**	1	1/6/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**1.6**	**1.0**	**0.32**	**0.20**	1	1/6/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	1/6/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	1/6/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	1/6/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	1/6/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	1/6/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	1/6/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	1/6/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	1/6/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	1/6/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
Ethylbenzene	**1.3**	**1.0**	**0.29**	**0.23**	1	1/6/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	1/6/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	1/6/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	1/6/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	1/6/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	1/6/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	1/6/2016	8260B AZ Vapor	
Xylenes, Total	**3.4**	**3.0**	**0.79**	**0.69**	1	1/6/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.4	%REC, 70-130%
Surr: Toluene-d8	24.8	99.3	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.2	101	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

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Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	02	Matrix:	Air in bag

Analyses	Result (ug/l)	Limit (ug/l)	Result (ppmv)	Limit (ppmv)	Qual	DF	Date Analyzed
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	284	100	66	23.3	T3	1	1/6/2016

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	%REC, 70-130%
Surr: Toluene-d8	27.2	109	%REC, 70-130%
Surr: 4-Bromofluorobenzene	27.8	111	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

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Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020106

Analyses	ug/l Result	ug/l Limit	ppmv Result	ppmv Limit	DF	Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**8260B AZ**					Analyst: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	1/6/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	1/6/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	1/6/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	1/6/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	1/6/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	1/6/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	1/6/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	1/6/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	1/6/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	1/6/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	1/6/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	1/6/2016	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	1/6/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	1/6/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	1/6/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	1/6/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	1/6/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	1/6/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	1/6/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	1/6/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	1/6/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	1/6/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	1/6/2016	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	1/6/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.8	95.1	%REC, 70-130%
Surr: Toluene-d8	23.7	94.6	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.0	95.8	%REC, 70-130%

Airtech Environmental Laboratories (AEL)

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Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 1/6/2016 Batch: MS020106 Analyst: YM

Method: 8260B AZ Vapor Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD	Qualifier LCS	Qualifier LCSD	RPD	LCS/LCSD LIMIT
VOLATILE ORGANICS IN WATER	ug/l	%	ug/l	%	ug/l	%			<30%	%
Dichlorodifluoromethane(F-12)	23.8	95.0	26.0	104	25.0	9.1				31.5-131.4
Chloromethane	24.1	96.4	24.9	99.6	25.0	3.3				62.1-130
Vinyl Chloride	24.2	96.8	26.2	105	25.0	7.9				70-130
Bromomethane	41.2	164.7	46.9	188	25.0	13.0				38.1-204.3
Chloroethane	23.3	93.1	24.5	97.8	25.0	5.0				64.4-130.9
Trichlorofluoromethane (F-11)	23.3	93.2	25.2	101	25.0	7.8				70-130
1,1-Dichloroethene	23.3	93.0	25.4	101	25.0	8.7				70-130
Methylene Chloride	22.7	90.9	24.2	96.9	25.0	6.4				70-130
trans-1,2-Dichloroethene	23.5	94.0	25.6	102	25.0	8.5				70-130
Methyl tert-butyl ether (MTBE)	22.0	87.8	22.5	90.0	25.0	2.4				67.3-130
1,1-Dichloroethane	23.1	92.2	25.2	101	25.0	8.8				70-130
cis-1,2-Dichloroethene	23.3	93.1	25.0	100	25.0	7.2				70-130
Chloroform	22.9	91.6	24.5	97.8	25.0	6.5				70-130
1,1,1-Trichloroethane	23.4	93.4	25.2	101	25.0	7.6				70-130
Carbon tetrachloride	23.5	94.1	25.4	102	25.0	7.8				70-130
Benzene	22.7	90.6	24.2	97.0	25.0	6.8				70-130
1,2-Dichloroethane	22.7	90.8	24.1	96.2	25.0	5.8				70-130
Trichloroethene	23.4	93.4	24.6	98.4	25.0	5.2				70-130
1,2-Dichloropropane	22.9	91.7	24.6	98.6	25.0	7.2				70-130
Bromodichloromethane	23.2	92.8	24.4	97.4	25.0	4.9				70-130
cis-1,3-Dichloropropene	23.8	95.0	24.7	98.8	25.0	3.9				70-130
Toluene	23.0	91.9	24.0	96.0	25.0	4.3				70-130
trans-1,3-Dichloropropene	23.7	94.9	24.3	97.0	25.0	2.2				70-130
1,1,2-Trichloroethane	22.7	90.8	22.8	91.2	25.0	0.4				70-130
Tetrachloroethene	22.3	89.4	23.3	93.4	25.0	4.4				70-130
Dibromochloromethane	23.0	92.1	23.6	94.4	25.0	2.5				70-130
1,2-Dibromoethane	23.5	93.8	23.3	93.2	25.0	0.6				70-130
Chlorobenzene	23.2	92.7	24.7	98.9	25.0	6.4				70-130
Ethylbenzene	23.3	93.2	25.0	100	25.0	7.0				70-130
Xylene, total	71.4	95.3	76.6	102	75.0	7.0				70-130
Bromoform	22.9	91.6	23.3	93.0	25.0	1.5				70-130
1,1,2,2-Tetrachloroethane	22.8	91.3	23.0	92.2	25.0	0.9				70-130
1,3,5-Trimethylbenzene	24.0	96.2	26.1	104	25.0	8.1				70-130
1,2,4-Trimethylbenzene	24.0	96.0	25.7	103	25.0	7.0				70-130
1,3-Dichlorobenzene	23.5	94.1	25.1	100	25.0	6.4				70-130
1,4-Dichlorobenzene	23.4	93.5	25.0	100	25.0	6.9				70-130
1,2-Dichlorobenzene	22.9	91.6	24.5	97.9	25.0	6.6				70-130
Naphthalene	25.0	99.9	24.9	99.6	25.0	0.3				60.4-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.9	95.7	23.5	93.8	70 -130 %
Surr: Toluene-d8	24.7	98.8	23.9	95.4	70 -130 %
Surr: 4-Bromofluorobenzene	24.3	97.2	23.9	95.4	70 -130 %

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020106

Source Sample: 16A002-02 Analyst: YM

Analyses 8260B AZ	Sample	Dup	DF	RPD,<30%	Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**ug/l**	**ug/l**	**DF**				
1,1,1-Trichloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	1.6	1.5	1	5.8	1/6/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	1.6	1.5	1	7.3	1/6/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Ethylbenzene	1.3	1.2	1	8.3	1/6/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	1/6/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	1/6/2016	8260B AZ Vapor	
Toluene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	1/6/2016	8260B AZ Vapor	
Xylenes, Total	3.4	3.2	1	7.6	1/6/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.4	25.3	101	70-130%
Surr: Toluene-d8	24.8	99.3	25.1	100	70-130%
Surr: 4-Bromofluorobenzene	25.2	101	25.6	102	70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020106

Analyses	Result	ug/l Limit	Result	ppmv Limit	DF	Date Analyzed	Method	Qual
Gasoline Range Organics		**8015 by GC/MS**					Analyst:	YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	1	1/6/2016	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.3	113	%REC, 70-130%
Surr: Toluene-d8	26.1	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.5	106	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 1/6/2016 Batch: MS020106 Analyst: YM

Method: 8015 by GC/MS Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD %	Qualifier LCS	Qualifier LCSD	Qualifier RPD	Date Analyzed	LCS/LCSD LIMIT
Gasoline Range Organics	**ug/l**	**%**	**ug/l**	**%**	**ug/l**				<30%		%
GRO, C^6 - C^{10}	455	91	476	95	500	4.5				1/6/2016	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	28.9	116	28.2	113	25.0	70 -130 %					
Surr: Toluene-d8	27.7	111	27.1	108	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	28.0	112	27.3	109	25.0	70 -130 %					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16A002	Collection:	1/5/2016
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020106

Method: 8015 by GC/MS **Source Sample: 16A002-02**

Analyses	Sample	Dup	DF	RPD,<30%	Data Analyzed	Qual
VOLATILE ORGANICS IN AIR	**ug/l**	**ug/l**	**DF**	**RPD,<30%**	Analyst: YM	
GRO, C^6 - C^{10}	284	228	1	21.6	1/6/2016	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	30.1	120	70-130%
Surr: Toluene-d8	27.2	109	27.7	111	70-130%
Surr: 4-Bromofluorobenzene	27.8	111	27.8	111	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL) Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer : City of Tucson Environmental Services	Page____ of ____		AEL Lab #
Address: 4004 S. Park ave	Sampler: J. Manley	Phone:	16A002
	Project Name: HQUST	Project Number: P01152	
City, State, Zip: Tucson, AZ 85714	Project location: TUCSON AZ		
Contact: Richard Byrd	P.O. Number:		
Phone: 520-837-3710 Fax:	Fax Results: Y N		
E-Mail Address: Richard.byrd@tucsonaz.gov	E-Mail Results: (Y) N		

Sample Receipt	Turn Around Request	Please fill the information below:
Temperature____ °C	____ 24 Hours ____ 48 Hours	Sample Type
Custody Seals: Yes____ No____	____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes____ No____	____ 5 working Day	I: indoor air
Total # of Containers:____	____ Standard 10 Working Days	S: soil extraction vapor
		GW: ground water

Sample Information

AEL Lab #	Serial # Canister	Serial # Regulator	Canister Model (L)	Client's Sample Identification	Sampled Date	Sampled Time	Number of containers	Sample Type	TO-15 full list	TO-15 BTEX	TO-15 TPH(GRO)	8260B AZ Vapor full list	8260B AZ Vapor BTEX	8015 GRO	8260B Water			
01			6, 1, bag	HQUST-AIR-EFF	1-5-16	11:15	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	1-5-16	11:00	1	S				X		X				
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
1-5-16	14:15	John Manley	

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: February 25, 2016

Client:	Richard Byrd	Work Order #:	16B021
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	2/17/2016

Dear Client:

Airtech Environmental Laboratories received two (2) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: February 25, 2016

Client:	Richard Byrd	Work Order #:	16B021
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	2/17/2016

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
16B021-01	HQUST-AIR-EFF	8260B AZ Vapor	2/16/2016	1452
		8015 GRO		
16B021-02	HQUST-AIR-INF	8260B AZ Vapor	2/16/2016	1454
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: February 25, 2016

Client:	Richard Byrd	Work Order #:	16B021
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	2/17/2016

Case Narrative

All samples and QC associated with your samples met the quality control objectives.
Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	01	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	2/17/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	2/17/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	2/17/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	2/17/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	2/17/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	2/17/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	2/17/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	2/17/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	2/17/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	2/17/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	2/17/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	2/17/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	2/17/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	2/17/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	2/17/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	2/17/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	2/17/2016	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	2/17/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.9	95.8	%REC, 70-130%
Surr: Toluene-d8	23.9	95.6	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.1	96.3	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	01	Matrix:	Air in bag

Analyses	Result (ug/l)	Limit (ug/l)	Result (ppmv)	Limit (ppmv)	Qual	DF	Date Analyzed
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	2/17/2016

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.9	95.6	%REC, 70-130%
Surr: Toluene-d8	25.0	100	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.2	105	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	02	Matrix:	Air in bag

	ug/l		ppmv			Date		
Analyses	**Result**	**Limit**	**Result**	**Limit**	**DF**	**Analyzed**	**Method**	**Qual**
VOLATILE ORGANICS IN AIR						Analyst: PS		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	2/17/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**5.8**	**1.0**	**1.17**	**0.20**	1	2/17/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**5.3**	**1.0**	**1.07**	**0.20**	1	2/17/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	2/17/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	2/17/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	2/17/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	2/17/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	2/17/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	2/17/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	2/17/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	2/17/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	2/17/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
Ethylbenzene	**3.2**	**1.0**	**0.74**	**0.23**	1	2/17/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	2/17/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	2/17/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	2/17/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	2/17/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	2/17/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	2/17/2016	8260B AZ Vapor	
Xylenes, Total	**6.2**	**3.0**	**1.44**	**0.69**	1	2/17/2016	8260B AZ Vapor	
Surrogate	ug/l	%REC.	LIMIT					
Surr: Dibromofluoromethane	24.2	96.6	%REC, 70-130%					
Surr: Toluene-d8	23.8	95.1	%REC, 70-130%					
Surr: 4-Bromofluorobenzene	24.2	96.8	%REC, 70-130%					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	02	Matrix:	Air in bag

	ug/l		ppmv				
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Date Analyzed**
Gasoline Range Organics		**8015 by GC/MS**					Analyst: PS
GRO, C^6 - C^{10}	839	100	195	23.3	T3	1	2/17/2016

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.5	%REC, 70-130%
Surr: Toluene-d8	24.9	99.5	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.3	105	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020217

Analyses	ug/l Result	ug/l Limit	ppmv Result	ppmv Limit	DF	Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**8260B AZ**					Analyst: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	2/17/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	2/17/2016	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	2/17/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	2/17/2016	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	2/17/2016	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	2/17/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	2/17/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	2/17/2016	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	2/17/2016	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	2/17/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	2/17/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	2/17/2016	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	2/17/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	2/17/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	2/17/2016	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	2/17/2016	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	2/17/2016	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	2/17/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	2/17/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	2/17/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	2/17/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	2/17/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	2/17/2016	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	2/17/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.0	%REC, 70-130%
Surr: Toluene-d8	24.4	97.4	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.4	97.7	%REC, 70-130%

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 2/17/2016 Batch: MS020217 Analyst: YM

Method: 8260B AZ Vapor Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD	Qualifier LCS	Qualifier LCSD	RPD	LCS/LCSD LIMIT
VOLATILE ORGANICS IN WATER	ug/l	%	ug/l	%	ug/l	%			<30%	%
Dichlorodifluoromethane(F-12)	23.5	94.0	23.4	93.4	25.0	0.6				31.5-131.4
Chloromethane	21.4	85.6	21.8	87.1	25.0	1.8				62.1-130
Vinyl Chloride	22.4	89.8	23.0	92.0	25.0	2.4				70-130
Bromomethane	22.7	90.6	23.3	93.2	25.0	2.8				38.1-204.3
Chloroethane	22.0	88.1	23.1	92.4	25.0	4.8				64.4-130.9
Trichlorofluoromethane (F-11)	24.5	98.1	25.1	100	25.0	2.3				70-130
1,1-Dichloroethene	23.1	92.3	23.5	94.0	25.0	1.8				70-130
Methylene Chloride	24.9	99.5	25.3	101	25.0	1.7				70-130
trans-1,2-Dichloroethene	23.0	92.0	23.5	94.0	25.0	2.2				70-130
Methyl tert-butyl ether (MTBE)	25.6	102	26.1	104	25.0	1.9				67.3-130
1,1-Dichloroethane	22.8	91.4	23.7	94.7	25.0	3.6				70-130
cis-1,2-Dichloroethene	23.3	93.3	23.9	95.6	25.0	2.5				70-130
Chloroform	23.8	95.2	24.2	96.7	25.0	1.5				70-130
1,1,1-Trichloroethane	24.8	99.1	25.2	101	25.0	1.6				70-130
Carbon tetrachloride	26.0	104	26.6	106	25.0	2.1				70-130
Benzene	23.1	92.2	23.6	94.3	25.0	2.2				70-130
1,2-Dichloroethane	24.3	97.2	24.5	98.2	25.0	1.0				70-130
Trichloroethene	25.9	104	26.4	106	25.0	1.9				70-130
1,2-Dichloropropane	25.0	99.8	25.8	103	25.0	3.3				70-130
Bromodichloromethane	26.5	106	27.0	108	25.0	1.7				70-130
cis-1,3-Dichloropropene	25.2	101	25.6	102	25.0	1.5				70-130
Toluene	24.2	96.9	24.7	99.0	25.0	2.1				70-130
trans-1,3-Dichloropropene	26.4	106	26.9	107	25.0	1.7				70-130
1,1,2-Trichloroethane	28.2	113	28.5	114	25.0	1.3				70-130
Tetrachloroethene	28.7	115	29.2	117	25.0	1.8				70-130
Dibromochloromethane	27.5	110	27.5	110	25.0	0.1				70-130
1,2-Dibromoethane	27.6	111	28.1	112	25.0	1.7				70-130
Chlorobenzene	25.2	101	25.5	102	25.0	1.1				70-130
Ethylbenzene	24.2	96.7	24.9	99.4	25.0	2.8				70-130
Xylene, total	75.5	101	77.1	103	75.0	2.1				70-130
Bromoform	29.2	117	28.8	115	25.0	1.3				70-130
1,1,2,2-Tetrachloroethane	27.3	109	26.7	107	25.0	2.1				70-130
1,3,5-Trimethylbenzene	24.2	97.0	24.3	97.3	25.0	0.3				70-130
1,2,4-Trimethylbenzene	23.8	95.4	24.2	96.6	25.0	1.3				70-130
1,3-Dichlorobenzene	25.4	102	25.8	103	25.0	1.5				70-130
1,4-Dichlorobenzene	25.6	102	25.8	103	25.0	1.0				70-130
1,2-Dichlorobenzene	26.1	104	26.5	106	25.0	1.4				70-130
Naphthalene	26.7	107	28.1	113	25.0	5.1				60.4-130
Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT					
Surr: Dibromofluoromethane	23.0	92.1	23.2	93.0	70 -130 %					
Surr: Toluene-d8	23.3	93.2	23.3	93.4	70 -130 %					
Surr: 4-Bromofluorobenzene	23.3	93.2	23.4	93.4	70 -130 %					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	TFS-10-INF-2
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020217

Source Sample: 16B017-02

Analyst: YM

Analyses 8260B AZ	Sample	Dup			Date Analyzed	Method	Qual
VOLATILE ORGANICS IN AIR	**ug/l**	**ug/l**	**DF**	RPD,<30%			
1,1,1-Trichloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,2,4-Trimethylbenzene	4.2	4.4	1	4.7	2/17/2016	8260B AZ Vapor	
1,3-Dichlorobenzene	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
1,3,5-Trimethylbenzene	1.7	1.8	1	5.2	2/17/2016	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Ethylbenzene	2.2	2.3	1	3.1	2/17/2016	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	2/17/2016	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	2/17/2016	8260B AZ Vapor	
Toluene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	2/17/2016	8260B AZ Vapor	
Xylenes, Total	12.5	12.9	1	2.6	2/17/2016	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.3	97.0	24.4	97.7	70-130%
Surr: Toluene-d8	24.2	96.6	23.8	95.1	70-130%
Surr: 4-Bromofluorobenzene	24.2	96.8	23.7	94.8	70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020217

Analyses	Result	ug/l Limit	Result	ppmv Limit	DF	Date Analyzed	Method	Qual
Gasoline Range Organics		**8015 by GC/MS**					Analyst:	YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	1	2/17/2016	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.3	97.0	%REC, 70-130%
Surr: Toluene-d8	25.5	102	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.9	107	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 2/17/2016 Batch: MS020217 Analyst: YM

Method: 8015 by GC/MS Analyses	LCS Result	LCS REC	LCSD Result	LCSD REC	Spiked Level	RPD %	Qualifier LCS	Qualifier LCSD	Qualifier RPD	Date Analyzed	LCS/LCSD LIMIT
Gasoline Range Organics	**ug/l**	**%**	**ug/l**	**%**	**ug/l**				<30%		%
GRO, C^6 - C^{10}	436	87.1	472	94.4	500	8.1				2/17/2016	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	23.3	93.0	23.1	92.5	25.0	70 -130 %					
Surr: Toluene-d8	24.3	97.0	25.8	103	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	26.2	105	27.5	110	25.0	70 -130 %					

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	TFS-10-INF-2
Project:	HQUST	Project Number:	P01152
Lab Order:	16B021	Collection:	2/16/2016
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020217

Method: 8015 by GC/MS **Source Sample: 16B017-02**

Analyses	Sample		Dup				Data Analyzed	Qual
VOLATILE ORGANICS IN AIR	**ug/l**		**ug/l**		**DF**	**RPD,<30%**	Analyst: YM	
GRO, C^6 - C^{10}	<	100	<	100	1	0.0	2/17/2016	
Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT			
Surr: Dibromofluoromethane	24.2	96.9	24.4	97.6	70-130%			
Surr: Toluene-d8	25.3	101	24.9	99.5	70-130%			
Surr: 4-Bromofluorobenzene	26.3	105	25.8	103	70-130%			
		% REC		% REC				

Airtech Environmental Laboratories (AEL) Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer : City of Tucson Environmental Services	Page_____ of _____		AEL Lab #
Address: 4004 S. Park ave	Sampler: Norman Buxton	Phone:	16B021
	Project Name: HQUST	Project Number: P01152	
City, State, Zip: Tucson, AZ 85714	Project location:		
Contact: Richard Byrd	P.O. Number:		
Phone: 520-837-3710 Fax:	Fax Results: Y N		
E-Mail Address: Richard.byrd@tucsonaz.gov	E-Mail Results: Y N		

Sample Receipt	Turn Around Request	Please fill the information below:
Temperature_____ °C	_____ 24 Hours _____ 48 Hours	Sample Type
Custody Seals: Yes_____ No_____	_____ 72 Hours	A: ambient air WW: waste water
Custody Seals Intact: Yes_____ No_____	_____ 5 working Day	I: indoor air
Total # of Containers:_____	_____ Standard 10 Working Days	S: soil extraction vapor
		GW: ground water

Sample Information

AEL Lab #	Serial # Canister	Serial # Regulator	Canister Model (L)	Client's Sample Identification	Sampled Date	Sampled Time	Number of containers	Sample Type	TO-15 full list	TO-15 BTEX	TO-15 TPH(GRO)	8260B AZ Vapor full list	8260B AZ Vapor BTEX	8015 GRO	8260B Water			
01			6, 1, bag	HQUST-AIR-EFF	2/16/16	1452	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	2/16/16	1454	1	S				X		X				
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															

Analyses Requested

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
2/17/16	0855	[signature]	Jamie Jones - Airtech

APPENDIX E

ADEQ REPORTING FORMS

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Tank Programs Division
Underground Storage Tank (UST) Program

DOCUMENT SUBMITTAL FORM

ADEQ use only

☑ use form as COVER SHEET when submitting the documents listed below.
☑ use only for the documents listed below.
☑ all requested information must be provided.

UST FACILITY INFORMATION:

City of Tucson Police/Fire Station
Facility Name

0-005176
Facility ID

260 South Stone Avenue
Street Address

3208.01
LUST Number(s)

Tucson
City

85701
Zip Code

Pima
County

PERSON RESPONSIBLE FOR SUBMITTING DOCUMENT:

Pat Tapia
Name

4004 South Park Avenue, Building #1, Tucson 85726
Street Address City Zip Code

(520) 791-3175
Telephone (daytime)

PERSON CATEGORY (check just one) — **ADEQ ID #**

☒ UST owner — 005176
☐ UST operator
☐ UST volunteer/ Property owner

RELEASE OR CORRECTIVE ACTION DOCUMENT: (check all that are attached) [A.A.C. = Arizona Administrative Code]

DOCUMENT	A.A.C. CITATION	DOCUMENT	A.A.C. CITATION
☐ 14 day report (suspected release)	**R18-12-251(E)**	☐ Site characterization report (SCR)	**R18-12-262(D)**
☐ 90 day report (suspected release)	**R18-12-251(F)**	☒ Periodic site status report	**R18-12-263(G)**
☐ 14 day report (confirmed release)	**R18-12-260(C)**	☐ Tier 2 risk evaluation	**R18-12-263.01(B)(2)**
☐ 90 day report (confirmed release)	**R18-12-261(D)**	☐ Tier 3 risk evaluation	**R18-12-263.01(B)(3)**
☐ LUST site classification form	**R18-12-261.01(E)**	☐ Corrective action plan (CAP)	**R18-12-263.02(B)**
☐ Free Product Report	**R18-12-261.02(C)**	☐ Corrective action completion report w/LUST case closure request	**R18-12-263.03(D)**

CERTIFICATION STATEMENT OF UST OWNER, OPERATOR OR VOLUNTEER:

"I hereby certify, under penalty of law, that this submittal and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."

Pat L Tapia
Signature of UST owner, operator or volunteer

August 12, 2016
Date

Pat Tapia
Name of UST owner, operator or volunteer (printed)

Interim Director of Environmental Services
Title

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

Periodic Site Status Report

DATE FORM COMPLETED: 07/06/16 (mm/dd/yy)

Site classification form attached? (yes) / no

Required attachments submitted? (yes) / no / NA

ADEQ use only

Date Received:

FACILITY ID: 0-005176 **LUST NUMBER:** 3208.01 **OTHER LUST(S) AT FACILITY:**

1. Has the ADEQ approved the site characterization report for the subject release? (YES) • NO • •
   If you checked "yes" include date of ADEQ approval and proceed to #2 below. DATE: 08/25/08
   If you checked "no" stop here, corrective action status information is not required at this time.

2. Has a corrective action plan (CAP) been requested? YES • (NO) • •
   If you checked "no" proceed to #3 below.
   If you checked "yes" are you are proceeding with remedial corrective actions prior to CAP approval? YES • NO • •
   If you are proceeding, include date ADEQ was notified in accordance with A.A.C. R18-12-263.02(E) DATE: _____

3. Type(s) of remedial corrective action technology currently being performed. For each system in use, enter the date the system became operational.

Soil	Date	Groundwater	Date
Over-excavation		Natural attenuation (monitored)	
Vapor extraction	04/08/13	Air sparging	
Thermal desorption		Extract and treat	06/11/09
Bioremediation		Free product recovery	07/23/07
Land farming (on site)		Bioremediation	
Other (describe below)		Other (describe below)	

If "Other" please describe (include dates the systems became operational - attach additional pages as necessary):

4. For each of the remedial corrective action technologies checked in #3 above, attach any monitoring and laboratory results collected since submittal of the last status report form. See Report

5. For the remedial corrective action technologies checked in #3 above, attach a site plan showing their locations and any monitoring and sample collection locations, if not previously submitted. See Report

6. Check the time frame that most accurately estimates when the response activities, including remediation and verification monitoring, will demonstrate that the concentration of each chemical of concern is projected to be at or below the applicable corrective action standard.

   • • (0 - 2 years) • • 2 - 5 years • • 5 - 10 years • • greater than 10 years

7. Attach the *LUST Site Classification Form* as required and described under R18-12-261.01.

Please note that the above information is required **once every 12 months** from the date the ADEQ approves the site characterization report for the subject release **unless** otherwise stated within an ADEQ approved corrective action plan. If you have any questions regarding this form, contact the UST Help Desk at (602) 771-4303, or toll free within Arizona at 800-234-5677 extension 4303.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

LUST Site Classification Form

DATE FORM COMPLETED: 07/06/16 (mm/dd/yy)

ADEQ use only
DATE RECEIVED:

FACILITY ID: 0-005176 **LUST NUMBER:** 3208.01 **OTHER LUST(S) AT FACILITY:** _____

RELEASE INFORMATION: [leave blank if an initial site characterization report is attached]

Component	Location	Product	Quantity
☐ tank ☐ spill ☐ piping ☐ overfill	Unknown	☒ gasoline ☒ diesel ☐ used oil ☐ jet fuel ☐ other: _____	Unknown gallons

GEOLOGIC INFORMATION: [leave blank if an initial site characterization report is attached] [bgs = below ground surface]

Lithology: (indicate the scenario that most closely matches site conditions, attach site specific lithologic log if available)

☒ alternating silt/sand/gravel ☐ sands ☐ alluvium overlying river run gravel ☐ alluvium overlying bedrock

Depth To Bedrock: Unknown feet bgs known / estimated Bedrock type: ☒ igneous ☐ sedimentary ☐ metamorphic

HYDROLOGIC INFORMATION: [leave blank if an initial site characterization report is attached]

Groundwater Depth: 45-74 feet bgs (known) / estimated Aquifer type: ☒ unconfined ☐ confined ☐ perched

Groundwater Flow Direction: NW Gradient: 0.009 (known) / estimated

(ex: SW, NNW, ENE)

STATUS OF CORRECTIVE ACTION ACTIVITIES:[leave blank if an initial site characterization report is attached]

	on-site	off-site	extent defined	remediation complete
Vapors:	yes / (no) / unk	yes / (no) / unk	yes / no / (NA)	yes / no / (NA)
Soil:	(yes) / no / unk	yes / (no) / unk	(yes) / no / NA	yes / (no) / NA
Groundwater:	(yes) / no / unk	(yes) / no / unk	(yes) / no / NA	yes / (no) / NA
Surfacewater:	yes / (no) / unk	yes / (no) / unk	yes / no / (NA)	yes / no / (NA)
Free Product:	(yes) / no / unk	(yes) / no / unk	(yes) / no / NA	yes / (no) / NA

[unk = unknown] [NA = not applicable]

RECEPTOR INFORMATION:

On-site land use: ☐ residential ☒ non-residential

Nearest public/private well:	3,000 (feet) / miles	☐ no threat	☐ threatened	☐ impacted	☒ unknown
Nearest surfacewater:	_____ feet / miles	☒ no threat	☐ threatened	☐ impacted	☐ unknown

GROUNDWATER QUALITY:

☐ potable ☐ naturally non-potable ☐ artificially non-potable, regional ☒ artificially non-potable, locally

SITE CLASSIFICATION: (see *RBCA Site Classification Determination Worksheet*)

Current: 1 2 (3) 4 Previous: 1 2 (3) 4